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**目录**

[**Method and device for transmitting information on physical uplink control channel** 24](#_Toc469677912)

[**Method, apparatus and system for updating metadata file** 30](#_Toc469677913)

[**Method for improving synchronization and information transmission in a communication system** 35](#_Toc469677914)

[**Method and apparatus for establishing cell reselection list** 39](#_Toc469677915)

[**Method for predicting bandwidth extension frequency band signal, and decoding device** 43](#_Toc469677916)

[**Method and radio network controller for transmitting information** 48](#_Toc469677917)

[**Paging processing method, communication apparatus, and communication system** 51](#_Toc469677918)

[**PLMN selection method, mobile terminal, BSC and core network device** 55](#_Toc469677919)

[**System and method of processing antenna configuration information** 60](#_Toc469677920)

[**Method and eNodeB for forwarding downlink and uplink packets based on S1 handover** 64](#_Toc469677921)

[**Method for improving synchronization and information transmission in a communication system** 70](#_Toc469677922)

[**Uplink transmission power determining method and user equipment** 75](#_Toc469677923)

[**Method, device, and system for controlling IPTV (internet protocol television) content reporting configuring updates** 79](#_Toc469677924)

[**Method, base station, and user terminal for implementing uplink resource indication** 84](#_Toc469677925)

[**Method for transmitting sounding reference signal and method and device for indicating configuration** 89](#_Toc469677926)

[**Method, device and system for processing reverse single radio voice call continuity** 92](#_Toc469677927)

[**Method, device and system for assigning ACK channels to users** 98](#_Toc469677928)

[**Handover method and system in relay network, relay node, control base station and base station** 102](#_Toc469677929)

[**Method, apparatus, and system for measuring aggregated carrier cell** 107](#_Toc469677930)

[**Method and apparatus for bearer processing** 111](#_Toc469677931)

[**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier** 116](#_Toc469677932)

[**Method, apparatus and system for transmitting information** 121](#_Toc469677933)

[**Method, apparatus and system for random access** 125](#_Toc469677934)

[**System and method of radio bearer management for multiple point transmission** 129](#_Toc469677935)

[**Method and communication system for storing address of network anchor point to network server** 133](#_Toc469677936)

[**Handover control method, apparatuses and communication system** 142](#_Toc469677937)

[**System and method for multiplexing control and data channels in a multiple input, multiple output communications system** 148](#_Toc469677938)

[**System and method for assigning backhaul resources** 153](#_Toc469677939)

[**Method and base station for transmitting a data block** 157](#_Toc469677940)

[**Method and apparatus for allocating and transmitting time and frequency resource for resource request indicator** 162](#_Toc469677941)

[**Method, terminal, base station, and system for adjusting control parameters** 168](#_Toc469677942)

[**Adaptive audio signal coding** 173](#_Toc469677943)

[**Method, system and device for negotiating security capability when terminal moves** 177](#_Toc469677944)

[**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets** 180](#_Toc469677945)

[**Method, device and system for realizing broadcast TV** 185](#_Toc469677946)

[**Method, apparatus, and system for energy saving management in network management system** 190](#_Toc469677947)

[**Method and apparatus for allocating resources and processing confirmation information** 194](#_Toc469677948)

[**Cell access control method and user equipment** 199](#_Toc469677949)

[**Method and apparatus for non-access stratum message processing during handover in evolved network** 203](#_Toc469677950)

[**Method for reporting and obtaining channel state information, eNodeB, and user equipment** 208](#_Toc469677951)

[**Policy control method and system, and relevant apparatus** 212](#_Toc469677952)

[**Mobile communication system, base station apparatus, and mobile station apparatus** 217](#_Toc469677953)

[**User equipment, method for determining resource, method for reporting resource, and system for distributing resource** 223](#_Toc469677954)

[**Method, apparatus, and network system for terminal to traverse private network to communicate with server in IMS core network** 228](#_Toc469677955)

[**Apparatus, system, and method for signaling a quantity of antenna ports in a wireless communication system** 233](#_Toc469677956)

[**Method, base station, and system of configuring relay link resources** 237](#_Toc469677957)

[**Method and apparatus for determining transmit power** 242](#_Toc469677958)

[**Method, system, and device for network selection** 247](#_Toc469677959)

[**User detachment when a handover or change occurs in heterogeneous network** 252](#_Toc469677960)

[**Method for triggering communication between group of MTC devices and MTC server, and MTC device** 257](#_Toc469677961)

[**Closed subscriber group information processing method, access control method, system, and device** 262](#_Toc469677962)

[**Method for connecting mobile station to base station, mobile station, base station, multi-carrier mobile communication system, and random access channel mapping method** 267](#_Toc469677963)

[**Method, device and system for scheduling data flow** 273](#_Toc469677964)

[**System and method for channel state information feedback in wireless communications systems** 277](#_Toc469677965)

[**Very short pitch detection and coding** 282](#_Toc469677966)

[**Conditional uplink timing alignment in a mobile station device of a radio communication system** 286](#_Toc469677967)

[**Method and device for information transfer** 291](#_Toc469677968)

[**Connection establishment method and user equipment** 295](#_Toc469677969)

[**Method for reporting power headroom report and user equipment** 302](#_Toc469677970)

[**Method, base station, and terminal for generating reference signal** 307](#_Toc469677971)

[**Mobile station device and method, base station device and method, and mobile station device operating frequency band mapping method** 311](#_Toc469677972)

[**Precoding processing method and user equipment** 320](#_Toc469677973)

[**Method, user equipment and application server for adding media stream to a multimedia session** 325](#_Toc469677974)

[**Method and system for control of discontinuous reception (DRX) by a mobile device in a wireless communications network supporting voice-over-internet-protocol (VoIP)** 330](#_Toc469677975)

[**Mobile communication system, base station apparatus, and mobile station apparatus** 334](#_Toc469677976)

[**Scheduling method and device** 340](#_Toc469677977)

[**Power control method and device** 344](#_Toc469677978)

[**Method and apparatus for reporting radio bearer loss information** 347](#_Toc469677979)

[**Negotiating security capabilities during movement of UE** 350](#_Toc469677980)

[**Method and device for accessing and obtaining user equipment context and user equipment identity** 355](#_Toc469677981)

[**Interworking method and interworking control unit, method and system for implementing simulation services** 358](#_Toc469677982)

[**Method, device and system for assigning ACK channels to users** 361](#_Toc469677983)

[**Method, apparatus and system for resource immediate assignment** 365](#_Toc469677984)

[**Method, apparatus and system for paging processing and information displaying** 369](#_Toc469677985)

[**Spectrum flatness control for bandwidth extension** 373](#_Toc469677986)

[**Method and apparatus for updating a key in an active state** 378](#_Toc469677987)

[**Multimedia session call control method and application server** 382](#_Toc469677988)

[**Pulse encoding and decoding method and pulse codec** 388](#_Toc469677989)

[**Wireless communication system, base station device, mobile station device, and communication method** 394](#_Toc469677990)

[**Method, apparatus, and system for measuring aggregated carrier cell** 401](#_Toc469677991)

[**Method and eNodeB for forwarding downlink and uplink packets based on S1 handover** 405](#_Toc469677992)

[**Method and system for establishing emergency call** 411](#_Toc469677993)

[**Access control method, access control apparatus and communication system** 414](#_Toc469677994)

[**De-registration method, Home NodeB (HNB), and Home NodeB gateway (HNB GW)** 420](#_Toc469677995)

[**Facilitating synchronization between a base station and a user equipment** 423](#_Toc469677996)

[**Method and device of sending and receiving precoding information** 427](#_Toc469677997)

[**Generic access network and method for implementing services by using generic access network** 430](#_Toc469677998)

[**Method and system for setting up a bearer** 437](#_Toc469677999)

[**Traffic bearer mapping method and communication device** 443](#_Toc469678000)

[**Precoding codebook and feedback representation** 449](#_Toc469678001)

[**Mobile communication system, base station apparatus, and mobile station apparatus** 453](#_Toc469678002)

[**Method, equipment and mobile communication system for realizing explicit call transfer** 459](#_Toc469678003)

[**Pulse encoding and decoding method and pulse codec** 464](#_Toc469678004)

[**Cell load balancing method and devices thereof** 469](#_Toc469678005)

[**Synchronization method, communication handover method, radio network and node** 473](#_Toc469678006)

[**Tunnel management method, tunnel management apparatus, and communications system** 477](#_Toc469678007)

[**Handover method and system in relay network, relay node, control base station and base station** 482](#_Toc469678008)

[**Mobile communication system, base station apparatus and mobile station apparatus** 487](#_Toc469678009)

[**Method and apparatus for binding redundancy versions with a system frame number and subframe numbers** 494](#_Toc469678010)

[**Control method, system and function entity for reporting bearer event of signaling IP flow** 498](#_Toc469678011)

[**Method, equipment and mobile communication system for realizing explicit call transfer** 503](#_Toc469678012)

[**Process method about the service connection between the wireless local area network and user terminal** 508](#_Toc469678013)

[**Handover method, communication device and communication system** 512](#_Toc469678014)

[**Method, system, terminal, and server for transferring video call between access networks** 517](#_Toc469678015)

[**Tunnel management method, tunnel management apparatus, and communications system** 523](#_Toc469678016)

[**Method and apparatus for selecting downlink primary carrier for transmitting data** 528](#_Toc469678017)

[**Paging processing method, communication apparatus, and communication system** 532](#_Toc469678018)

[**Method, apparatus, and system for access control handover of user between base stations** 536](#_Toc469678019)

[**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier** 541](#_Toc469678020)

[**Precoding processing method and user equipment** 546](#_Toc469678021)

[**Method for providing information in a cellular wireless communication system** 552](#_Toc469678022)

[**Method and system for synchronization in communication system** 555](#_Toc469678023)

[**Relay transmission method and network node** 560](#_Toc469678024)

[**Method, apparatus and system for processing priority services** 565](#_Toc469678025)

[**Radio communication system and method using spatial diversity and spatial multiplexing modes** 570](#_Toc469678026)

[**Method, apparatus, and system for routing user plane data in mobile network** 576](#_Toc469678027)

[**Method, apparatus, and system for service control via I1 interface** 583](#_Toc469678028)

[**Information processing method, device, and system** 587](#_Toc469678029)

[**Method, apparatus and system for determining resource indices** 590](#_Toc469678030)

[**Mobile station apparatus, mobile communication system and communication method** 595](#_Toc469678031)

[**Method for signalling in a wireless communication system** 602](#_Toc469678032)

[**Method for improving synchronization and information transmission in a communication system** 605](#_Toc469678033)

[**Method, system and device for recovering invalid downlink data tunnel between networks** 609](#_Toc469678034)

[**Method, device and user equipment for transmitting multi-cell scheduling information** 613](#_Toc469678035)

[**Method and device for accessing and obtaining user equipment context and user equipment identity** 617](#_Toc469678036)

[**Location intercept method and apparatus** 622](#_Toc469678037)

[**Method for reporting and obtaining channel state information, eNodeB, and user equipment** 626](#_Toc469678038)

[**Session processing method, device, and communication system** 629](#_Toc469678039)

[**Method, device and system of handover** 633](#_Toc469678040)

[**Method, system and device for negotiating security capability when terminal moves** 644](#_Toc469678041)

[**Method and system for allocating communication resources** 647](#_Toc469678042)

[**Subframe processing method and device** 651](#_Toc469678043)

[**Method and device for generating demodulation reference signal sequences** 654](#_Toc469678044)

[**Method, apparatus and system for transmitting information** 659](#_Toc469678045)

[**Handover control method, apparatus and system** 662](#_Toc469678046)

[**Handover method and system in relay network, relay node, control base station and base station** 668](#_Toc469678047)

[**Uplink control information transmission** 673](#_Toc469678048)

[**Method, apparatus and system for transmitting information** 676](#_Toc469678049)

[**Method, apparatus, and system for measuring aggregated carrier cell** 680](#_Toc469678050)

[**Method for triggering terminal to send sounding reference signal, terminal, and base station** 684](#_Toc469678051)

[**Method, user equipment and server for multimedia session transfer** 688](#_Toc469678052)

[**User equipment, method for determining resource, method for reporting resource, and system for distributing resource** 693](#_Toc469678053)

[**Method and apparatus for maintaining traffic continuity** 698](#_Toc469678054)

[**Method and apparatus for notification of emitted energy** 703](#_Toc469678055)

[**Method and apparatus for physical cell identifier communication and selection** 707](#_Toc469678056)

[**Method and device for establishing or modifying local IP access bearer** 711](#_Toc469678057)

[**Method, apparatus, and system for controlling execution of an automatic process** 717](#_Toc469678058)

[**Energy saving management method for base station, apparatus and system** 722](#_Toc469678059)

[**Method and apparatus for transmitting precoding martrix index and performing precoding** 726](#_Toc469678060)

[**Method, apparatus and system for transmitting information** 729](#_Toc469678061)

[**Method and system for control of discontinuous reception (DRX) by a mobile device in a wireless communications network supporting voice-over-internet-protocol (VoIP)** 733](#_Toc469678062)

[**Method and device for realizing IP multimedia subsystem disaster tolerance** 738](#_Toc469678063)

[**Method, apparatus and system for informing a serving cell handover** 744](#_Toc469678064)

[**Method and apparatus for establishing cell reselection list** 748](#_Toc469678065)

[**Multi-network access control method, communication system, and relevant devices** 752](#_Toc469678066)

[**Method, device and system for sending and receiving messages** 758](#_Toc469678067)

[**De-registration method, home NodeB (HNB), and home NodeB gateway (HNB GW)** 762](#_Toc469678068)

[**Method for falling back to 2G/3G network, relevant device and communication system** 765](#_Toc469678069)

[**Method and apparatus for supporting time shift playback in adaptive HTTP streaming transmission solution** 769](#_Toc469678070)

[**Cell load balancing method, cell load measuring method, and devices thereof** 774](#_Toc469678071)

[**Method and system for transferring user equipment in mobile communication system** 779](#_Toc469678072)

[**Method and apparatus for non-access stratum message processing during handover in evolved network** 786](#_Toc469678073)

[**Method, system and device for negotiating security capability when terminal moves** 792](#_Toc469678074)

[**System and method for name binding for multiple packet data network access** 796](#_Toc469678075)

[**Method and network device for creating and deleting resources** 799](#_Toc469678076)

[**Wireless communication system, base station apparatus and mobile station apparatus** 805](#_Toc469678077)

[**Wireless transmission device and wireless transmission method** 811](#_Toc469678078)

[**Using DHCPv6 and AAA for mobile station prefix delegation and enhanced neighbor discovery** 817](#_Toc469678079)

[**Power control method and device** 822](#_Toc469678080)

[**Mobile communication system, base station device, mobile station device, and mobile communication method** 825](#_Toc469678081)

[**Data processing during a mobile handover operation** 832](#_Toc469678082)

[**Method and system for maintaining session continuity when changes occur at the terminal during a session** 837](#_Toc469678083)

[**Handover processing method and device** 844](#_Toc469678084)

[**Quantity of antennas designating a time-frequency resource block** 848](#_Toc469678085)

[**Mobile communication method, mobile communication system and access entity** 852](#_Toc469678086)

[**Method and device for accessing and obtaining user equipment context and user equipment identity** 858](#_Toc469678087)

[**Measurement control method, user equipment and network-side device** 863](#_Toc469678088)

[**Method and apparatus for negotiating security during handover between different radio access technologies** 866](#_Toc469678089)

[**Systems and methods for generating sequences that are nearest to a set of sequences with minimum average cross-correlation** 870](#_Toc469678090)

[**Communication terminal apparatus, communication control apparatus, communication system, and communication method** 875](#_Toc469678091)

[**Method, system and apparatus for heterogeneous addressing mapping** 883](#_Toc469678092)

[**Method and system for session modification** 889](#_Toc469678093)

[**Systems and methods for maintaining constant closed subscriber group cell reselection radius** 894](#_Toc469678094)

[**Method and apparatus of determining a set of zero correlation zone lengths** 899](#_Toc469678095)

[**Method, device, and system for configuring multicast broadcast single frequency network resources** 902](#_Toc469678096)

[**System, method and apparatus for implementing multimedia call continuity** 905](#_Toc469678097)

[**Method, equipment for submitting a measurement report** 911](#_Toc469678098)

[**Method and device for determining search space, and method and device for determining candidate control channel resources** 916](#_Toc469678099)

[**Method for changing session media, method for establishing a call, and equipment thereof** 922](#_Toc469678100)

[**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets** 928](#_Toc469678101)

[**Quantity of antennas designating a time-frequency resource block** 933](#_Toc469678102)

[**Mobile station apparatus, mobile communication system, and communication method** 937](#_Toc469678103)

[**Method and apparatus for determining transmit power** 944](#_Toc469678104)

[**Method for implementing RBT interworking, media gateway control function device, and application server** 949](#_Toc469678105)

[**Method and device for determining search space, and method and device for determining candidate control channel resources** 955](#_Toc469678106)

[**Radio communication system and mobile station device** 961](#_Toc469678107)

[**Method, base station, and user terminal for implementing uplink resource indication** 966](#_Toc469678108)

[**Method and apparatus for mobility management, and user equipment** 971](#_Toc469678109)

[**Method, system and apparatus for session association** 976](#_Toc469678110)

[**Method and system for synchronization in communication system** 980](#_Toc469678111)

[**Method and apparatus for creating IP-CAN session** 985](#_Toc469678112)

[**Method, system, and device for user detachment when a handover or change occurs in heterogeneous network** 995](#_Toc469678113)

[**Method of bearer deletion, device, and system** 1000](#_Toc469678114)

[**Method, base station, and user terminal for implementing uplink resource indication** 1005](#_Toc469678115)

[**Method and system for session modification** 1010](#_Toc469678116)

[**Method for changing session media, method for establishing a call, and equipment thereof** 1015](#_Toc469678117)

[**Method for generating codebook, method and apparatus for data transmission** 1022](#_Toc469678118)

[**Method and system for transferring user equipment in mobile communication system** 1027](#_Toc469678119)

[**Method, system and entity of realizing event detection** 1035](#_Toc469678120)

[**Method, apparatus, and system for voice call fallback to circuit switched domain** 1040](#_Toc469678121)

[**Process method about the service connection between the wireless local area network and user terminal** 1049](#_Toc469678122)

[**Method, apparatus, and system for acquiring load information** 1054](#_Toc469678123)

[**Method and apparatus for bearer processing** 1060](#_Toc469678124)

[**Apparatus for collecting charging information of a data service and charging method thereof** 1065](#_Toc469678125)

[**Random access method, evolved node B, and terminal equipment** 1070](#_Toc469678126)

[**Method and system for handover between different types of access systems** 1075](#_Toc469678127)

[**Method and system for allocating communication resources** 1079](#_Toc469678128)

[**Method, apparatus and system for estimating channels** 1083](#_Toc469678129)

[**Method, device and system for implementing optimized inter-RAT handover** 1088](#_Toc469678130)

[**Method, system and apparatus for notifying as of user state** 1095](#_Toc469678131)

[**System, apparatus and methods for broadcasting and transmitting ETWS message** 1099](#_Toc469678132)

[**Method and apparatus for generating time-frequency patterns for reference signal in an OFDM wireless communication system** 1104](#_Toc469678133)

[**Method, system, and scheduling server for content delivery** 1108](#_Toc469678134)

[**Method, user equipment and server for multimedia session transfer** 1113](#_Toc469678135)

[**Dispatching method, dispatching apparatus and dispatching system** 1118](#_Toc469678136)

[**Method, terminal, server and system for processing notification message** 1122](#_Toc469678137)

[**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier** 1127](#_Toc469678138)

[**Cell access control method and user equipment** 1132](#_Toc469678139)

[**Information carrying synchronization code and method for frame timing synchronization** 1136](#_Toc469678140)

[**Method, device and system for implementing speech recognition function** 1139](#_Toc469678141)

[**Method for providing information in a cellular wireless communication system** 1142](#_Toc469678142)

[**Method, system, and device for establishing association-control relations** 1146](#_Toc469678143)

[**Method, device, and system for transferring service control signalling path** 1151](#_Toc469678144)

[**Random access method, evolved node B, and terminal equipment** 1155](#_Toc469678145)

[**Method, system and apparatus for setting up multimedia call** 1161](#_Toc469678146)

[**Method, application server and user equipment for transferring media streams of multimedia session** 1166](#_Toc469678147)

[**CS domain call terminating system, method and network device** 1170](#_Toc469678148)

[**Method and device for providing services for user** 1174](#_Toc469678149)

[**Method and system for intelligent routing** 1180](#_Toc469678150)

[**Mobility management entity information deleting method and device** 1184](#_Toc469678151)

[**Method and apparatus for bearer processing** 1189](#_Toc469678152)

[**Method and apparatus for sending control signaling** 1195](#_Toc469678153)

[**Method of authentication in IP multimedia subsystem** 1200](#_Toc469678154)

[**Method, apparatus and system for establishing S1 signaling connection in an evolved network** 1208](#_Toc469678155)

[**Mobility management entity information deleting method and device** 1213](#_Toc469678156)

[**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets** 1218](#_Toc469678157)

[**Method, base station, and user terminal for implementing uplink resource indication** 1222](#_Toc469678158)

[**Method, apparatus and system for updating PCC rules** 1227](#_Toc469678159)

[**Control method, system and function entity for reporting bearer event of signaling IP flow** 1232](#_Toc469678160)

[**Calling methods and systems for video phone** 1237](#_Toc469678161)

[**Method, device, and system for transferring service control signalling path** 1243](#_Toc469678162)

[**Method, system and device for realizing user identity association** 1247](#_Toc469678163)

[**Measurement control method, user equipment and network-side device** 1253](#_Toc469678164)

[**Method and device of network resource release processing** 1257](#_Toc469678165)

[**Resource configuration method, device, and system** 1263](#_Toc469678166)

[**Method and network element for obtaining IP-can session policy control information** 1267](#_Toc469678167)

[**Streaming media network system, streaming media service realization method and streaming media service enabler** 1271](#_Toc469678168)

[**Data processing method and device** 1276](#_Toc469678169)

[**Inter-network tunnel switching method and inter-network interconnection device** 1282](#_Toc469678170)

[**System, method, and apparatus for providing multimedia session continuity** 1288](#_Toc469678171)

[**Method and system for setting up a bearer** 1295](#_Toc469678172)

[**Method, apparatus and system for determining resource indices** 1302](#_Toc469678173)

[**Resource release control method, communication system and device** 1306](#_Toc469678174)

[**Method and apparatus for service identifying and routing in multimedia broadcast/multicast service system** 1311](#_Toc469678175)

[**Method and apparatus for mapping and detecting control channel** 1315](#_Toc469678176)

[**Method for allocating time and frequency resource for resource request indicator, method for transmitting resource request indicator and device thereof** 1320](#_Toc469678177)

[**Method of location positioning and verification of an AP, system, and home register** 1325](#_Toc469678178)

[**De-registration method, home NodeB (HNB), and home NodeB gateway (HNB GW)** 1331](#_Toc469678179)

[**Method and system for transmitting IP message, negotiating bandwidth saving capability and saving network bandwidth** 1334](#_Toc469678180)

[**Method, apparatus and system for transmitting user equipment information in a multimedia subsystem** 1339](#_Toc469678181)

[**Method, apparatus and network system for making terminating network domain selection** 1343](#_Toc469678182)

[**Method and device for obtaining media description information of IPTV services** 1348](#_Toc469678183)

[**System and apparatus for mobile CS users to access IMS network and registration method for accessing** 1353](#_Toc469678184)

[**Method and apparatus for updating key in an active state** 1360](#_Toc469678185)

[**Medium resource reservation method, service package information obtaining method and apparatus** 1365](#_Toc469678186)

[**Data re-transferring method based on bit transformation** 1369](#_Toc469678187)

[**Method of session processing in an IMS and interrogating-call state control function** 1372](#_Toc469678188)

[**Method and apparatus for creating IP-CAN session** 1377](#_Toc469678189)

[**Encoding and detecting cell-specific information in a telecommunication system** 1387](#_Toc469678190)

[**Method, apparatus and system for obtaining location area information during handover between heterogeneous networks** 1391](#_Toc469678191)

[**Communication system, network handover processing method and apparatus** 1394](#_Toc469678192)

[**Method, system and device for converting session control signaling** 1398](#_Toc469678193)

[**Method for roaming user to establish security association with visited network application server** 1403](#_Toc469678194)

[**Method and apparatus for controlling power of uplink physical channel** 1407](#_Toc469678195)

[**Method and apparatus for non-access stratum message processing during handover in evolved network** 1412](#_Toc469678196)

[**Method for bearer control and deletion, data distribution, and modification** 1417](#_Toc469678197)

[**Method and apparatus for sending control signaling** 1422](#_Toc469678198)

[**Method, apparatus and system for controlling multicast bearer resources** 1425](#_Toc469678199)

[**Measurement control method, user equipment and network-side device** 1428](#_Toc469678200)

[**Method for simplifying the process of transmitting message** 1431](#_Toc469678201)

[**Method and system for synchronization in communication system** 1435](#_Toc469678202)

[**Method and system for charging of push to talk over cellular service and communication system** 1439](#_Toc469678203)

[**Synchronization method, communication handover method, radio network and node** 1443](#_Toc469678204)

[**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets** 1447](#_Toc469678205)

[**Method and apparatus for allocating and processing sequences in communication system** 1451](#_Toc469678206)

[**Method and communication system for storing address of network anchor point to network server** 1455](#_Toc469678207)

[**Method and system for setting up a bearer** 1464](#_Toc469678208)

[**Method, device and system for assigning ACK channels to users** 1471](#_Toc469678209)

[**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier** 1476](#_Toc469678210)

[**Resource allocation method for MIMO-OFDM of multi-user access systems** 1481](#_Toc469678211)

[**Method and apparatus for determining transmit power** 1484](#_Toc469678212)

[**Method and apparatus for determining transmit power** 1489](#_Toc469678213)

[**Method, system and apparatus for protecting a BSF entity from attack** 1494](#_Toc469678214)

[**Method, apparatus, and system for disaster recovery of IMS** 1498](#_Toc469678215)

[**Cell access control method and user equipment** 1505](#_Toc469678216)

[**Method, system, and apparatus for preventing bidding down attacks during motion of user equipment** 1509](#_Toc469678217)

[**Method and device for realizing push service of GAA** 1512](#_Toc469678218)

[**Interworking network element, interworking system between the CSI terminal and the IMS terminal and the method thereof** 1516](#_Toc469678219)

[**Method, device and system for assigning ACK channels to users** 1521](#_Toc469678220)

[**Method for managing local terminal equipment accessing a network** 1526](#_Toc469678221)

[**Method, apparatus, and system for implementing policy and charging control** 1531](#_Toc469678222)

[**Method and apparatus for transporting/receiving notification messages via file delivery over unidirectional protocol** 1535](#_Toc469678223)

[**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier** 1540](#_Toc469678224)

[**Method and apparatus for controlling power of uplink physical channel** 1545](#_Toc469678225)

[**Method, system and apparatus for using IMS communication service identifier** 1550](#_Toc469678226)

[**Apparatus, system and method for short message routing control** 1554](#_Toc469678227)

[**Method, apparatus and system for obtaining location area information during handover between heterogeneous networks** 1560](#_Toc469678228)

[**Method for notifying changes of cell information in multimedia broadcast/multicast service** 1563](#_Toc469678229)

[**Packet network system with session changing function and implementation method and device thereof** 1568](#_Toc469678230)

[**Method, system and apparatus for forking transmission of short message service** 1574](#_Toc469678231)

[**Method and apparatus of domain selection for routing control** 1578](#_Toc469678232)

[**Method and device for multiplexing broadcast service channel and non-broadcast service channel** 1583](#_Toc469678233)

[**Method, apparatus and system for implementing conference service** 1588](#_Toc469678234)

[**Method and device for service time division multiplexing** 1592](#_Toc469678235)

[**System, method and apparatus for establishing interactive media session based on IP multimedia subsystem** 1599](#_Toc469678236)

[**Method and device for service time division multiplexing** 1603](#_Toc469678237)

[**Resource release control method, communication system and device** 1607](#_Toc469678238)

[**Method for improving synchronization and information transmission in a communication system** 1612](#_Toc469678239)

[**Mobile communication method, mobile communication system and access entity** 1617](#_Toc469678240)

[**System and method for implementing multimedia ring back tone service** 1623](#_Toc469678241)

[**Method, system and device for recovering invalid downlink data tunnel between networks** 1628](#_Toc469678242)

[**Method and system for idle mode signaling reduction** 1632](#_Toc469678243)

[**Method for measuring different frequencies/systems in MBMS and a device for setting measuring time** 1638](#_Toc469678244)

[**Method and system for establishing tunnel in WLAN** 1641](#_Toc469678245)

[**Decision-making method, decision-making system, and policy decision function** 1646](#_Toc469678246)

[**Method and system for implementing communications** 1650](#_Toc469678247)

[**Dispatching method, dispatching apparatus and dispatching system** 1654](#_Toc469678248)

[**Method for handling emergency service in network communication** 1658](#_Toc469678249)

[**Method and system for providing multicast services** 1662](#_Toc469678250)

[**Method of user access authorization in wireless local area network** 1667](#_Toc469678251)

[**Method and system for processing bearer under ISR mechanism** 1671](#_Toc469678252)

[**Method and device for realizing IP multimedia subsystem disaster tolerance** 1676](#_Toc469678253)

[**Method and device for information transfer** 1682](#_Toc469678254)

[**Interactive method for reporting location report by target user equipment in location service** 1686](#_Toc469678255)

[**Method, system and apparatus for transferring short messages in an IMS** 1689](#_Toc469678256)

[**Method and device of network resource release processing** 1693](#_Toc469678257)

[**Method, terminal, and system for cell reselection** 1698](#_Toc469678258)

[**Method and system for establishing emergency call** 1701](#_Toc469678259)

[**Method for providing on-line charging and device and system thereof** 1704](#_Toc469678260)

[**Method and apparatus for announcement for session** 1709](#_Toc469678261)

[**Method and device of network resource release processing** 1712](#_Toc469678262)

[**Method, network system and destination network for transmitting QoS during a handover process between systems** 1718](#_Toc469678263)

[**Method and apparatus for updating a key in an active state** 1723](#_Toc469678264)

[**Method, system and device for realizing user identity association** 1727](#_Toc469678265)

[**Method and apparatus for controlling power of uplink physical channel** 1733](#_Toc469678266)

[**Method, codebook, and base station for precoding** 1738](#_Toc469678267)

[**Method and apparatus for transporting/receiving notification messages via file delivery over unidirectional protocol** 1748](#_Toc469678268)

[**Method for controlling charging of packet data service** 1753](#_Toc469678269)

[**Method and apparatus for voice activity detection, and encoder** 1757](#_Toc469678270)

[**Method and apparatus for sequence distributing and sequence processing in communication system** 1762](#_Toc469678271)

[**Method of authentication in IP multimedia subsystem** 1767](#_Toc469678272)

[**Service transmission method for multimedia broadcast/multicast service** 1774](#_Toc469678273)

[**Handling method after updating of privacy profile of target user equipment** 1777](#_Toc469678274)

[**Control method, system and function entity for reporting bearer event of signaling IP flow** 1782](#_Toc469678275)

[**Method for reducing load of traffic plane function** 1788](#_Toc469678276)

[**Disposal method of location information request in location service** 1792](#_Toc469678277)

[**Method for verifying the validity of a user** 1796](#_Toc469678278)

[**Method and communication system for implementing calling tapping at flash** 1800](#_Toc469678279)

[**Method for acquiring multimedia broadcast/multicast service access information** 1804](#_Toc469678280)

[**System, method and apparatus for establishing interactive media session based on IP Multimedia Subsystem** 1809](#_Toc469678281)

[**System and method for implementing multimedia ring back tone service** 1814](#_Toc469678282)

[**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets** 1818](#_Toc469678283)

[**Method and system for WLAN user equipment accessing new operation network** 1822](#_Toc469678284)

[**System for managing reserved bits in a variable-length message and optimizing message decoding utilizing the same** 1827](#_Toc469678285)

[**Method, system and device for controlling policy information required by a requested service** 1830](#_Toc469678286)

[**System and method for providing RBT in communication network** 1833](#_Toc469678287)

[**Method for establishing diameter session for packet flow based charging** 1847](#_Toc469678288)

[**Resource revoking method based on resource admission control subsystem and network device** 1852](#_Toc469678289)

[**Method and system for connecting a media stream, and method and system for detecting a connectivity** 1856](#_Toc469678290)

[**Method and an apparatus for resource admission control process** 1860](#_Toc469678291)

[**Statistic reporting method and media gateway** 1865](#_Toc469678292)

[**Method and device for information transfer** 1868](#_Toc469678293)

[**Method of informing a network of change of user equipment capability** 1871](#_Toc469678294)

[**Method, apparatus, and system for implementing policy and charging control** 1874](#_Toc469678295)

[**Method and system for intercommunicating between private network user and network with QoS guarantee** 1878](#_Toc469678296)

[**Method and system for idle mode signaling reduction** 1882](#_Toc469678297)

[**Method, system and equipment for processing SIP requests in IMS network** 1889](#_Toc469678298)

[**Method for selecting the authentication manner at the network side** 1894](#_Toc469678299)

[**Method for reducing feedback information overhead in precoded MIMO-OFDM systems** 1899](#_Toc469678300)

[**System and method for processing packet domain signal** 1902](#_Toc469678301)

[**Encoding method and apparatus for frame synchronization signal** 1906](#_Toc469678302)

[**Communication system, mobility management network element and method for processing resource** 1909](#_Toc469678303)

[**Method and apparatus for binding redundancy versions with a system frame number and subframe numbers** 1915](#_Toc469678304)

[**Method for user terminal accessing home network quickly in wireless local area network** 1918](#_Toc469678305)

[**Communication system, mobility management network element and method for processing resources** 1923](#_Toc469678306)

[**Method and apparatus of establishing a synchronization signal in a communication system** 1927](#_Toc469678307)

[**Method and apparatus for controlling power of uplink physical channel** 1931](#_Toc469678308)

[**Optimized interaction method of user terminal selecting access mobile network in wireless local area network** 1934](#_Toc469678309)

[**Method for channel estimation in orthogonal frequency division multiplexing system and device thereof** 1939](#_Toc469678310)

[**Method and system for a traditional terminal user to access an IMS domain** 1944](#_Toc469678311)

[**Method for releasing a service tunnel in a wireless local area network** 1948](#_Toc469678312)

[**Method for processing requests for location** 1952](#_Toc469678313)

[**Method of processing a periodic location request** 1956](#_Toc469678314)

[**Method of providing location service for WLAN user** 1960](#_Toc469678315)

[**Method of user access authorization in wireless local area network** 1966](#_Toc469678316)

[**Method of sending a location report from target user equipment** 1970](#_Toc469678317)

[**Method for establishment of a service tunnel in a WLAN** 1974](#_Toc469678318)

[**Transmission method of several services combination** 1979](#_Toc469678319)

[**Method for generation of training sequence in channel estimation** 1982](#_Toc469678320)

[**Method of counting the number of multimedia broadcasting multicast service subscribers** 1985](#_Toc469678321)

[**Process method about the service connection between the wireless local area network and user terminal** 1991](#_Toc469678322)

[**Wireless local area network access gateway and method for ensuring network security therewith** 1996](#_Toc469678323)

[**主权项修订统计** 2000](#_Toc469678324)

**Method and device for transmitting information on physical uplink control channel**

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| **公开号** | [US9380566](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9380566&sv=7b4a41e7d65ba46f25f376cb3ae5b078) | **公开日** | 2016/06/28 |
| **申请号** | 13/714,293 | **申请日** | 2012/12/13 |
| **授权日** | 2016/06/28 | **优先日** | 2010/06/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Lv; Yongxia | Cheng; Yan |
| **国际 主分类** | H04W 72/04 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention discloses a method and a device for transmitting information on a physical uplink control channel (PUCCH). The method includes the following steps: a user equipment (UE) selects information from channel state information (CSI) to transmit (S1); the information selected from the CSI is transmitted on the PUCCH with one or both of hybrid automatic retransmission acknowledgment information and a scheduling request (S2), which enables a base station to obtain not only the information in the CSI but also one or both of the hybrid automatic retransmission acknowledgement information and the scheduling request from the PUCCH. The present invention avoids the problem of system downlink throughput degradation caused by dropping all CSI by the UE in the prior art, and avoids the problem that system downlink throughput is influenced by unnecessary data retransmission on a downlink carrier caused by ACK/NACK bundling among carriers. |

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| **主权项** | 专利度:20特征度:21 |  |  |
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A method for transmitting information on a physical uplink control channel, the method comprising: selecting channel state information; and determining whether to transmit the selected channel state information and hybrid automatic repeat request acknowledgement information simultaneously or to transmit the selected channel state information only; wherein when it is determined to transmit the selected channel state information and hybrid automatic repeat request acknowledgement information simultaneously, the method further comprises jointly coding the selected channel state information and the hybrid automatic request acknowledgement information, and mapping to a first physical uplink control channel configured for transmitting hybrid automatic repeat request acknowledgement information, and then transmitting the selected channel state information on the first physical uplink control channel together with the hybrid automatic request acknowledgement information; when it is determined to transmit the selected channel state information only, the method further comprises: coding the selected channel state information and mapping to a second physical uplink control channel configured for transmitting channel state information, and then transmitting the selected channel state information on the second physical uplink control channel; wherein jointly coding the selected channel state information and hybrid automatic repeat acknowledgement information comprises: ordering hybrid automatic repeat request acknowledgement information bits and the selected channel state information bits according to a preset ordering rule, wherein the preset ordering rule is that the selected channel state information bits are ordered at the end of the hybrid automatic repeat acknowledgement information bits; and performing channel coding for the ordered information bits.

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| **对偶主权项** | 专利度:24特征度:10 |  |  |
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A method for transmitting information on a physical uplink control channel,~~characterized in that,~~the method compris~~es~~ing: selectingchannel stateinformation~~,~~;a~~t a user equipment, from channel state information; transmitting the information selected from the channel state information on the physical uplink control channel together with one or both of a hybrid automatic repeat request acknowledgement information and a scheduling request; wherein the selecting information from channel state information further compris~~nd determining whether to transmit the selected channel state information and hybrid automatic repeat request acknowledgement information simultaneously or to transmit the selected channel state information only; wherein when it is determined to transmit the selected channel state information and hybrid automatic repeat request acknowledgement information simultaneously, the method further comprises jointly coding the selected channel state information and the hybrid automatic requesta~~t least one of: (a) selecting wideband channel quality indicator and precoding matrix indicator from the channel state information, (b) selecting wideband channel quality indicator from the channel state information, (c) selecting precoding matrix indicator from the channel state information, (d) selecting subband channel quality indicator and subband position indicator from the channel state information, and (e) selecting subband channel quality indicator, subband position indicator, and precoding matrix indicator from the channel state~~cknowledgement information, and mapping to a first physical uplink control channel configured for transmitting hybrid automatic repeat request acknowledgement information, and then transmitting the selected channel state information on the first physical uplink control channel together with the hybrid automatic request acknowledgement information; when it is determined to transmit the selected channel state information only, the method further comprises: coding the selected channel state information and mapping to a second physical uplink control channel configured for transmitting channel state information, and then transmitting the selected channel state information on the second physical uplink control channel; wherein jointly coding the selected channel state information and hybrid automatic repeat acknowledgement information comprises: ordering hybrid automatic repeat request acknowledgement information bits and the selected channel state information bits according to a preset ordering rule, wherein the preset ordering rule is that the selected channel state information bits are ordered at the end of the hybrid automatic repeat acknowledgement information bits; and performing channel coding for the orderedinformationbits.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for updating metadata file**

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| **公开号** | [US9372863](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9372863&sv=b4ef6fb7741cb0330abfe8aaa2081a0b) | **公开日** | 2016/06/21 |
| **申请号** | 13/715,339 | **申请日** | 2012/12/14 |
| **授权日** | 2016/06/21 | **优先日** | 2010/06/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Shaobo |
| **国际 主分类** | G06F 17/30 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present invention discloses a method, an apparatus, and a system for updating a metadata file. The method include: sending a message to a server on a network side to request a metadata file corresponding to media presentation; receiving a metadata file returned by the server according to the message that requests the metadata file corresponding to the media presentation, where the metadata file includes information about duration of a part of described media presentation; determining update time of the metadata file according to the information about the duration of the part of described media presentation; and sending a request for updating the metadata file to the server according to the update time. |

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| **主权项** | 专利度:21特征度:12 |  |  |
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A method for updating a Media Presentation Description (MPD) implemented by a streaming client comprising a processor, the method comprising: receiving a first MPD sent by a streaming server, wherein the first MPD corresponding to a media presentation; obtaining, from the first MPD, a time length to wait before requesting a second MPD corresponding to the media presentation, wherein the time length is specified in the first MPD, wherein the media presentation is a media stream, the first MPD describes a first part of the media stream, and the second MPD describes a second part of the media stream; determining, according to the time length to wait before request the second MPD and a receive time at which the first MPD is received, an update time for requesting the second MPD; and requesting, at the update time, the second MPD from the streaming server.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A method for updating a~~metadata file, comprising: sending a message to a server on a network side to request a metadata file~~Media Presentation Description (MPD) implemented by a streaming client comprising a processor, the method comprising: receiving a first MPD sent by a streaming server, wherein the first MPDcorresponding toamedia presentation;~~receiving the metadata file returned by the server according to the message that requests the metadata file corresponding to the media presentation, wherein the metadata file comprises information about dur~~obtaining, from the first MPD, a time length to wait before requesting a second MPD corresponding to the media presentation, wherein the time length is specified in the first MPD, wherein the media presentation~~of~~isa~~part of described media presentation; determining update time of the metadata file according to the information about the duration of the part of described media presentation; and sending a request for updating the metadata file to the server according to the update ti~~media stream, the first MPD describes a first part of the media stream, and the second MPD describes a second part of the media stream; determining, according to the time length to wait before request the second MPD and a receive time at which the first MPD is received, an update time for requesting the second MPD; and requesting, at the update time, the second MPD from the streaming server.

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| **被引用** | 4 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for improving synchronization and information transmission in a communication system**

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| **公开号** | [US9369271](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9369271&sv=3c3f4935411e64f255b98a79136937c4) | **公开日** | 2016/06/14 |
| **申请号** | 14/523,478 | **申请日** | 2014/10/24 |
| **授权日** | 2016/06/14 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Popovic; Branislav |
| **国际 主分类** | H04K 1/10 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method is provided for improving synchronization and information transmission in a communication system, including: generating a signal with a centrally symmetric part s(k) exploitable for synchronization; and sending the signal over a communication channel. The signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission. The centrally symmetric part s(k) is centrally symmetric in the shape of absolute value thereof. The centrally symmetric part s(k) is of arbitrary length N. |

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| **主权项** | 专利度:16特征度:20 |  |  |
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A communication system, comprising: a receiver which is in communication with a transmitter, wherein the receiver is configured to receive a signal with a centrally symmetric part s(k) exploitable for synchronization from the transmitter; wherein the signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission, the centrally symmetric part s(k) is centrally symmetric in the shape of absolute value thereof, and the centrally symmetric part s(k) is of an arbitrary length N; and wherein the centrally symmetric part s(k) is obtained as an inverse discrete Fourier transform (IDFT) of a spectrum H(n) of N sub-carrier weights, the spectrum H(n) being generated by using elements of the sequence c(l), l=0, 1, . . . , L 1, L≦Nosc, as Fourier coefficients at occupied sub-carrier frequencies, Nosc being a maximum number of occupied sub-carriers, H(n)=H(N n), n=0, 1, 2, . . . , N 1, where H(N)=H(0) holds according to the periodicity of a discrete Fourier transform (DFT).

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| **对偶主权项** | 专利度:20特征度:14 |  |  |
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A communication system~~for improving synchronization and information transmission, comprising: a transmitter~~,comprising: a receiver which is in communication with a transmitter, wherein the receiver isconfigured to~~generat~~receive a signal with a centrally symmetric part s(k) exploitable for synchronization~~, and send the signal over a communication channel; a receiver, configured to receive the signal~~from the transmitter; wherein the signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission, the centrally symmetric part s(k) is centrally symmetric in the shape of absolute value thereof, and the centrally symmetric part s(k) is ofanarbitrary length N; and wherein the centrally symmetric part s(k) is obtained as an inverse discrete Fourier transform (IDFT) of a spectrum H(n) of N sub-carrier weights, the spectrum H(n) being generated by using elements of the sequence c(l), l=0, 1, . . . , L 1, L≦Nosc, as Fourier coefficients at occupied sub-carrier frequencies, Nosc being a maximum number of occupied sub-carriers, H(n)=H(N n), n=0, 1, 2, . . . , N 1, where H(N)=H(0) holds according to the periodicity of a discrete Fourier transform (DFT).

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for establishing cell reselection list**

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| **公开号** | [US9363681](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9363681&sv=754e64023330c4d47ce644a32e1ee240) | **公开日** | 2016/06/07 |
| **申请号** | 14/221,542 | **申请日** | 2014/03/21 |
| **授权日** | 2016/06/07 | **优先日** | 2009/10/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wang; Jiyong | Yu; Yongjun | Zhao; Yang | Fang; Ming |
| **国际 主分类** | H04W 48/16 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The embodiments of the present invention disclose a method for establishing a cell reselection list is provided. A network and a terminal establish frequency indexes for the cell reselection list, so that when a network side delivers an RAT and frequency priority information, the priority information may be delivered according to frequency indexes in a frequency list, thus implementing cell reselection that is based on the priority for the terminal. |

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| **主权项** | 专利度:17特征度:21 |  |  |
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A method for modifying a cell reselection list, comprising: obtaining, by a user equipment, a cell modification message from a network, wherein the cell modification message includes neighbor cell information indicating information of at least one cell neighboring a serving cell of the user equipment for performing a measurement by the UE of the at least one neighboring cell, the cell modification message being a packet measurement order (PMO) message or a packet cell change order (PCCO) message; updating, by the user equipment, a general packet radio service (GPRS) 3G cell reselection list by performing: modifying, by the user equipment, a 3G neighbor cell list according to the neighbor cell information in the cell modification message to obtain a modified 3G neighbor cell list; and updating, by the user equipment, the GPRS 3G cell reselection list according to the modified 3G neighbor cell list to obtain an updated GPRS 3G cell reselection list, wherein the updated GPRS 3G cell reselection list comprises frequency(s) and/or cell information in the modified 3G neighbor cell list.

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| **对偶主权项** | 专利度:20特征度:10 |  |  |
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A method for modifying a cell reselection list, comprising: obtaining, by a user equipment,a cell modification message~~; modifying~~from a network, wherein the cell modification message includes neighbor cell information indicating information of at least one cell neighboring a serving cell of the user equipment for performing a measurement by the UE of the at least one neighboring cell, the cell modification message being a packet measurement order (PMO) message or a packet cell change order (PCCO) message; updating, by the user equipment, a general packet radio service (GPRS) 3G cell reselection list by performing: modifying, by the user equipment,a 3G neighbor cell list according to theneighbor cell information in thecell modification message to obtain a modified 3G neighbor cell list; and updating~~a~~, by the user equipment, the GPRS 3Gcell reselection list according to the modified 3G neighbor cell list to obtain an updatedGPRS 3Gcell reselection list, wherein the updatedGPRS 3Gcell reselection list comprises frequency(s) and/or cell~~(s)~~informationin the modified 3G neighbor cell list.

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for predicting bandwidth extension frequency band signal, and decoding device**

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| **公开号** | [US9361904](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9361904&sv=35c83e5faec2ad1bccc6bf069901aac6) | **公开日** | 2016/06/07 |
| **申请号** | 14/806,896 | **申请日** | 2015/07/23 |
| **授权日** | 2016/06/07 | **优先日** | 2013/01/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Liu; Zexin | Miao; Lei | Qi; Fengyan |
| **国际 主分类** | G10L 19/00 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. odolph; Grant |

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| **摘要** |  |
| A method for predicting a bandwidth extension frequency band signal includes demultiplexing a received bitstream to obtain a frequency domain signal; determining whether a highest frequency bin, to which a bit is allocated, of the frequency domain signal is less than a preset start frequency bin of a bandwidth extension frequency band; predicting an excitation signal of the bandwidth extension frequency band according to the determination; and predicting the bandwidth extension frequency band signal according to the predicted excitation signal of the bandwidth extension frequency band and a frequency envelope of the bandwidth extension frequency band. |

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| **主权项** | 专利度:20特征度:20 |  |  |
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A method for predicting a bandwidth extension frequency band signal of an audio signal and performed by a decoding device comprising a processor, comprising: demultiplexing a received bitstream; decoding the demultiplexed bitstream to obtain a frequency domain signal; determining whether a highest frequency bin, to which a bit is allocated, of the frequency domain signal is less than a preset start frequency bin of a bandwidth extension frequency band; predicting an excitation signal of the bandwidth extension frequency band according to an excitation signal within a predetermined frequency band range of the frequency domain signal and the preset start frequency bin of the bandwidth extension frequency band when the highest frequency bin to which a bit is allocated is less than the preset start frequency bin of the bandwidth extension frequency band according to a process that comprises: making n copies of the excitation signal within the predetermined frequency band range of the frequency domain signal; and using the n copies of the excitation signal as an excitation signal between the preset start frequency bin of the bandwidth extension frequency band and a highest frequency bin of the bandwidth extension frequency band, wherein n is greater than 0, and wherein n is equal to a ratio of a quantity of frequency bins between the preset start frequency bin of the bandwidth extension frequency band and the highest frequency bin of the bandwidth extension frequency band to a quantity of frequency bins within the predetermined frequency band range of the frequency domain signal; predicting the excitation signal of the bandwidth extension frequency band according to the excitation signal within the predetermined frequency band range of the frequency domain signal, the preset start frequency bin of the bandwidth extension frequency band, and the highest frequency bin to which at least one bit is allocated when the highest frequency bin to which a bit is allocated is greater than or equal to the preset start frequency bin of the bandwidth extension frequency band; predicting the bandwidth extension frequency band signal according to the predicted excitation signal of the bandwidth extension frequency band and a frequency envelope of the bandwidth extension frequency band; and reconstructing the audio signal based on the predicted bandwidth extension frequency band signal.

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| **对偶主权项** | 专利度:20特征度:0 |  |  |
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A method for predicting a bandwidth extension frequency band signalof an audio signal and performed by a decoding device comprising a processor, comprising: demultiplexing a received bitstream~~, and~~;decoding the demultiplexed bitstream to obtain a frequency domain signal; determining whether a highest frequency bin, to which a bit is allocated, of the frequency domain signal is less than a preset start frequency bin of a bandwidth extension frequency band; predicting an excitation signal of the bandwidth extension frequency band according to an excitation signal within a predetermined frequency band range of the frequency domain signal and the preset start frequency bin of the bandwidth extension frequency band when the highest frequency bin to which a bit is allocated is less than the preset start frequency bin of the bandwidth extension frequency band~~;~~according to a process that comprises: making n copies of the excitation signal within the predetermined frequency band range of the frequency domain signal; and using the n copies of the excitation signal as an excitation signal between the preset start frequency bin of the bandwidth extension frequency band and a highest frequency bin of the bandwidth extension frequency band, wherein n is greater than 0, and wherein n is equal to a ratio of a quantity of frequency bins between the preset start frequency bin of the bandwidth extension frequency band and the highest frequency bin of the bandwidth extension frequency band to a quantity of frequency bins within the predetermined frequency band range of the frequency domain signal;predicting the excitation signal of the bandwidth extension frequency band according to the excitation signal within the predetermined frequency band range of the frequency domain signal, the preset start frequency bin of the bandwidth extension frequency band, and the highest frequency bin to which at least one bit is allocated when the highest frequency bin to which a bit is allocated is greater than or equal to the preset start frequency bin of the bandwidth extension frequency band;~~and~~predicting the bandwidth extension frequency band signal according to the predicted excitation signal of the bandwidth extension frequency band and a frequency envelope of the bandwidth extension frequency band; and reconstructing the audio signal based on the predicted bandwidth extension frequency band signal.

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| **被引用** | 2 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and radio network controller for transmitting information**

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| **公开号** | [US9357542](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9357542&sv=7454e5ad3350412630f09f0e3c67c1f9) | **公开日** | 2016/05/31 |
| **申请号** | 14/318,583 | **申请日** | 2014/06/28 |
| **授权日** | 2016/05/31 | **优先日** | 2007/10/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Ma; Jie | Lin; Bo |
| **国际 主分类** | H04W 72/04 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| A method for transmitting information includes: by a NodeB, receiving a message for setting up/reconfiguring a shared Enhanced Dedicated Channel (E-DCH) transmission channel from a Radio Network Controller (RNC); and setting up the shared E-DCH transmission channel according to parameters in the message, and exchanging information with the RNC through an established shared E-DCH transmission bearer. |

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| **主权项** | 专利度:24特征度:17 |  |  |
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A method for configuring an enhanced dedicated channel related resource, comprising: sending, by a radio network controller (RNC) to a NodeB, a message for configuring or reconfiguring an enhanced dedicated channel (E-DCH) related resource, wherein the E-DCH related resource corresponds to an E-DCH as a common transport channel, and wherein the message comprises the following: a signature list including a preamble signature for a random access request, E-DCH physical layer information, and a transmission bearer parameter; and receiving, by the RNC, a response from the NodeB, wherein the response comprises information about the E-DCH related resource that is configured or reconfigured by the NodeB according to the message, and the E-DCH related resource is configured or reconfigured by the NodeB before the NodeB receives a random access request from a user equipment (UE).

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| **对偶主权项** | 专利度:18特征度:10 |  |  |
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A method for~~transmitting information~~configuring an enhanced dedicated channel related resource, comprising: sending, by a radio network controller (RNC)to a NodeB, a message for~~setting up a shared~~configuring or reconfiguring anenhanced dedicated channel (E-DCH)~~to a NodeB, wherein the message comprises following parameters: a signature list, a relevant E-DCH physical layer parameter, a transmission channel parameter, and a transmission bearer parameter, wherein the~~related resource, wherein the E-DCH related resource corresponds to an E-DCH as a common transport channel, and wherein the message comprises the following: asignature list~~has a mode as P~~including a preamble~~S~~signature~~s~~for a~~physical random access channel (PRACH)~~random access request, E-DCH physical layer information, and a transmission bearer parameter; and receiving, by the RNC, a response from the NodeB, wherein the response comprises information about the~~shared E-DCH that set up by the NodeB according to the message~~E-DCH related resource that is configured or reconfigured by the NodeB according to the message, and the E-DCH related resource is configured or reconfigured by the NodeB before the NodeB receives a random access request from a user equipment (UE).

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Paging processing method, communication apparatus, and communication system**

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| **公开号** | [US9351276](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9351276&sv=cee6ede7170754b3ef5f4c8b9081dfce) | **公开日** | 2016/05/24 |
| **申请号** | 14/549,134 | **申请日** | 2014/11/20 |
| **授权日** | 2016/05/24 | **优先日** | 2009/06/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yin; Yu | Qi; Caixia |
| **国际 主分类** | H04W 68/00 | **优先 国家** | CN |
| **代理** | Slater Matsil, LLP |

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| **摘要** |  |
| A paging processing method, a communication apparatus, and a communication system are disclosed. The paging processing method includes: receiving, by a mobility management network element, a downlink data notification message which includes service attribute information of a downlink data packet; obtaining the service attribute information; and initiating paging of the user equipment based on different policies according to the service attribute information. |

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| **主权项** | 专利度:20特征度:20 |  |  |
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A paging processing method, comprising: receiving, by a serving gateway (SGW), a downlink data packet from a data gateway; determining, by the SGW, a service type/service feature according to an IP address, a protocol type, a port number, an IPSec parameter index, a DSCP/TOS or a flow label of the downlink data packet; sending, by the SGW, a downlink data notification message including the service type/service feature to a mobility management network element (MMNE); receiving, by the MMNE, the downlink data notification message obtaining, by the MMNE, the service type/service feature; and initiating, by the MMNE, paging of a user equipment (UE) based on a policy according to the service type/service feature.

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| **对偶主权项** | 专利度:17特征度:13 |  |  |
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A paging processing method, comprising: receiving, by a~~mobility management network element, a downlink data notification message, where the downlink data notification message includes service attribute information of a downlink data packet; obtaining the service attribute information~~serving gateway (SGW), a downlink data packet from a data gateway; determining, by the SGW, a service type/service feature according to an IP address, a protocol type, a port number, an IPSec parameter index, a DSCP/TOS or a flow label of the downlink data packet; sending, by the SGW, a downlink data notification message including the service type/service feature to a mobility management network element (MMNE); receiving, by the MMNE, the downlink data notification message obtaining, by the MMNE, the service type/service feature; and initiating, by the MMNE,paging of a user equipment(UE)based on~~different~~apolic~~ies~~yaccording to the service~~attribute information~~type/service feature.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**PLMN selection method, mobile terminal, BSC and core network device**

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| **公开号** | [US9351212](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9351212&sv=3dbc1c07567f34520990ad49f1950d3b) | **公开日** | 2016/05/24 |
| **申请号** | 14/514,808 | **申请日** | 2014/10/15 |
| **授权日** | 2016/05/24 | **优先日** | 2012/04/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhao; Yang | Fang; Ming |
| **国际 主分类** | H04W 36/14 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| Embodiments of the present invention disclose a public land mobile network PLMN selection method, including: when a mobile terminal is about to hand over from a first cell to a neighboring second cell, selecting, by the mobile terminal, a preferred PLMN after handover to the second cell; and sending, by the mobile terminal, identifier ID information of the preferred PLMN to a base station controller to which the first cell belongs. The embodiments of the present invention further disclose a mobile terminal, a base station controller, and a core network device. By applying the present invention, the PLMN to which the mobile terminal intends to hand over can be determined properly. |

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| **主权项** | 专利度:6特征度:23 |  |  |
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A Public Land Mobile Network (PLMN) selection method, comprising: receiving, by a core network device, a handover request from a base station controller, wherein the handover request is used to request handover of a mobile terminal from a first cell to a neighboring second cell, wherein the mobile terminal is in a cell to which the base station controller belongs; selecting, by the core network device, according to subscription attribute information of the mobile terminal, a preferred PLMN of the mobile terminal from sharing PLMNs of the second cell, comprising: when the home PLMN of the mobile terminal is one of the sharing PLMNs of the second cell, the home PLMN is directly used as the preferred PLMN of the mobile terminal; when the home PLMN of the mobile terminal is not one of the sharing PLMNs of the second cell, a PLMN that has subscribed a tariff preference policy with the home PLMN of the mobile terminal in the sharing PLMNs of the second cell is used as the preferred PLMN of the mobile terminal; and performing, by the core network device, a handover process according to the handover request, and sending identity (ID) information of the preferred PLMN of the mobile terminal to a base station controller to which the second cell belongs.

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| **对偶主权项** | 专利度:6特征度:14 |  |  |
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APublic Land Mobile Network (PLMN)selection method, comprising: receiving, by a core network device, a handover request from a base station controller, wherein the handover request is used to request handover of a mobile terminal from a first cell to a neighboring second cell, wherein the mobile terminal is in a cell to which the base station controller belongs; selecting, by the core network device, according to subscription attribute information of the mobile terminal, a preferred PLMN of the mobileterminal from sharing PLMNs of the second cell, comprising: when the home PLMN of the mobile terminal is one of the sharing PLMNs of the second cell, the home PLMN is directly used as the preferred PLMN of the mobile terminal; when the home PLMN of the mobile terminal is not one of the sharing PLMNs of the second cell, a PLMN that has subscribed a tariff preference policy with the home PLMN of the mobile terminal in the sharing PLMNs of the second cell is used as the preferred PLMN of the mobileterminal; and performing, by the core network device, a handover process according to the handover request, and sendingidentity (ID)information of the preferred PLMN of the mobile terminal to a base station controller to which the second cell belongs.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 4 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method of processing antenna configuration information**

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| **公开号** | [US9344244](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9344244&sv=0eea521675e9b7f6c2c0b37341de3dd4) | **公开日** | 2016/05/17 |
| **申请号** | 14/025,626 | **申请日** | 2013/09/12 |
| **授权日** | 2016/05/17 | **优先日** | 2009/01/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Song; Weiwei | Yu; Yinghui |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| A base station (BS) encodes antenna configuration information of a neighboring cell of a first cell, and sends encoded information relating to the antenna configuration information of the neighboring cell to a user equipment (UE). The UE is capable of communicating with the BS in the first cell. The UE receives the encoded information; decodes the antenna configuration information of the neighboring cell from the encoded information; and performs determination of predetermined time-frequency resource according to the antenna configuration information of the neighboring cell. The predetermined time-frequency resource is used by a BS of the neighboring cell for transmitting pilot measurement information. |

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| **主权项** | 专利度:26特征度:18 |  |  |
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A method for processing antenna configuration information, comprising: encoding, by a base station of a first cell serving a user equipment device (UE), comprehensive antenna configuration information, wherein the comprehensive antenna configuration information represents antenna configurations of all neighboring cells of the first cell; sending, by the base station, the encoded comprehensive antenna configuration information to the UE; decoding, by the UE, the encoded comprehensive antenna configuration information received from the base station; and resolving, by the UE, a predetermined time-frequency resource respectively for each of the neighboring cells according to the comprehensive antenna configuration information, wherein a predetermined time-frequency resource of a neighboring cell is used by a base station of the neighboring cell for transmitting pilot measurement information.

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| **对偶主权项** | 专利度:32特征度:11 |  |  |
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A method~~o~~forprocessing antenna configuration information, comprising: encoding, by a base station~~(BS), antenna configuration information of a neighboring cell of a first cell; sending, by the BS, encoded~~of a first cell serving a user equipment device (UE), comprehensive antenna configuration information, wherein the comprehensive antenna configurationinformation re~~lating to the~~presentsantenna configuration~~information~~sof~~the~~allneighboring cell~~to a user equipment (UE), the UE being capable of communicating with the BS in~~s ofthe first cell;~~receiv~~sending, by the~~UE~~base station, the encodedcomprehensive antenna configurationinformationto the UE; decoding, by the UE, theencoded comprehensiveantenna configuration information~~of the neighboring cell from the encoded inform~~received from the base station; and~~perform~~resolving, by the UE,~~determination of~~apredetermined time-frequency resourcerespectively for each of the neighboring cellsaccording to thecomprehensiveantenna configuration information~~of the neighboring cell, the~~, wherein apredetermined time-frequency resource~~being used by a BS~~of a neighboring cell is used by a base stationof the neighboring cell for transmitting pilot measurement information.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.36 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and eNodeB for forwarding downlink and uplink packets based on S1 handover**

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| **公开号** | [US9338698](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9338698&sv=b4cd8b5f9a24964ecf94ea2e674c7d5f) | **公开日** | 2016/05/10 |
| **申请号** | 14/661,905 | **申请日** | 2015/03/18 |
| **授权日** | 2016/05/10 | **优先日** | 2007/09/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Ying |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for forwarding downlink packets based on S1 handover is disclosed. The method includes: numbering a packet not processed by using PDCP according to a message that comprises PDCP Serial Number (SN) information if downlink packets to be forwarded include the packet not processed by using PDCP; and sending the downlink packets to the UE according to the PDCP SN corresponding to the packet included in the downlink packets. A method for forwarding uplink packets based on S1 handover is disclosed. The method includes: receiving state report information of the packet sent by the target eNodeB; and sending the packet according to the state report information of the packet. Another method for forwarding downlink packets based on S1 handover and an eNodeB are disclosed. Through the embodiments of the present disclosure, the packets are forwarded without loss in the case of S1 handover. |

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| **主权项** | 专利度:10特征度:21 |  |  |
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A method for forwarding downlink data packets during a handover for a user equipment (UE), comprising: receiving, by a target evolved NodeB (eNodeB), a plurality of downlink data packets, wherein the plurality of data packets at least includes a first data packet without Packet Data Convergence Protocol (PDCP) processing (a first non-PDCP data packet) sent from a source eNodeB and a second data packet without PDCP processing (a second non-PDCP data packet) sent from a serving gateway (S-GW); receiving, by the target eNodeB, a control message from the source eNodeB through a mobility management entity (MME), the control message including an initial PDCP serial number (SN); receiving, by the target eNodeB, a special packet sent by the source eNodeB, the special packet lacking any user data and being without a PDCP SN; processing, by the target eNodeB, the plurality of downlink data packets into PDCP data packets by numbering the plurality of downlink data packets with PDCP SNs according to the initial PDCP SN included in the received control message, wherein the first non-PDCP data packet is processed by the target eNodeB into a first PDCP data packet before the special packet is received, the second non-PDCP data packet is processed by the target eNodeB into a second PDCP data packet after the special packet is received; and sending, by the target eNodeB, the first PDCP data packet and the second PDCP data packet to the UE.

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| **对偶主权项** | 专利度:10特征度:14 |  |  |
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A method for forwarding downlink data packets during a handover for a user equipment (UE), comprising: receiving, by a target evolved NodeB (eNodeB), a plurality of downlink data packets, wherein the plurality of data packets at least includes a first data packet without Packet Data Convergence Protocol (PDCP) processing (a first non-PDCP data packet) sent from a source eNodeB and a second data packet without PDCP processing (a second non-PDCP data packet) sent from a serving gateway (S-GW); receiving, by~~a~~thetarget e~~volved NodeB (eNodeB)~~NodeB, a control message from the source eNodeB through a mobility management entity (MME), the control message including an initial PDCP serial number (SN); receiving, by the target eNodeB, a special packet sent by the source eNodeB, the special packet lacking any user data and being without a PDCP SN; processing, by the target eNodeB, the plurality of downlink data packets into PDCP data packets by numbering the plurality of downlink data packets with PDCP SNs according to the initial PDCP SN included in the received control message, wherein the first non-PDCP data packet is processedby the target eNodeBinto a first PDCP data packet before the special packet is received, the second non-PDCP data packet is processedby the target eNodeBinto a second PDCP data packet after the special packet is received; and sending, by the target eNodeB, the first PDCP data packet and the second PDCP data packet to the UE.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 18 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for improving synchronization and information transmission in a communication system**

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| **公开号** | [US9337998](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9337998&sv=443c40fe3722f9f7b0b81cf1ace0717c) | **公开日** | 2016/05/10 |
| **申请号** | 13/365,957 | **申请日** | 2012/02/03 |
| **授权日** | 2016/05/10 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Popovic; Branislav |
| **国际 主分类** | H04K 1/10 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method is provided for improving synchronization and information transmission in a communication system, including: generating a signal with a centrally symmetric part s(k) exploitable for synchronization; and sending the signal over a communication channel. The signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission. The centrally symmetric part s(k) is centrally symmetric in the shape of absolute value thereof. The centrally symmetric part s(k) is of arbitrary length N. |

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| **主权项** | 专利度:36特征度:16 |  |  |
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A method of synchronization in a communication system, comprising: generating, by a transmitter, a signal with a centrally symmetric part s(k) exploitable for synchronization between the transmitter and a receiver; and sending, by a transmitter, the signal to the receiver over a communication channel; wherein the signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission from the transmitter to the receiver, the centrally symmetric part s(k) is centrally symmetric in a shape of absolute value thereof, and the centrally symmetric part s(k) is of length N, and wherein the centrally symmetric part s(k) comprises two parts, the first part of the two parts does not have a symmetrical counterpart, and the second part of the two parts has N 1 centrally symmetric samples, and the sequence c(l) is a Zadoff-Chu sequence defined as c ( l ) = W L rl ( l + 1 ) / 2 , l = 0 , 1 , … , L - 1 , L is odd , where W L = exp ( - j2 π / L ) , j = - 1 .

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A method of synchronization in a communication system,~~the method~~comprising: generating, by a transmitter,a signal with a centrally symmetric part s(k) exploitable for synchronization~~; and sending the signal~~between the transmitter and a receiver; and sending, by a transmitter, the signal to the receiverover a communication channel~~,~~;wherein the signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission~~, wherein~~from the transmitter to the receiver,the centrally symmetric part s(k) is centrally symmetric in~~the~~ashape of~~an~~absolute value thereof, and~~wherein the centrally symmetric part s(k) is of arbitrary length N~~the centrally symmetric part s(k) is of length N, and wherein the centrally symmetric part s(k) comprises two parts, the first part of the two parts does not have a symmetrical counterpart, and the second part of the two parts has N 1 centrally symmetric samples, and the sequence c(l) is a Zadoff-Chu sequence defined as c ( l ) = W L rl ( l + 1 ) / 2 , l = 0 , 1 , … , L - 1 , L is odd , where W L = exp ( - j2 π / L ) , j = - 1.

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.23 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Uplink transmission power determining method and user equipment**

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| **公开号** | [US9326172](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9326172&sv=b8392559d9fc8ac2c7690d5ea575a0ff) | **公开日** | 2016/04/26 |
| **申请号** | 14/246,868 | **申请日** | 2014/04/07 |
| **授权日** | 2016/04/26 | **优先日** | 2011/10/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yuanjie |
| **国际 主分类** | H04W 24/08 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| Embodiments of the present invention provide an uplink transmission power determining method and a user equipment. A user equipment determines a transmission situation of at least one of: a PUCCH, a PUSCH, and an SRS on another cell except a secondary cell in a subframe corresponding to a preamble to be transmitted on the secondary cell, so that the user equipment can determine an uplink transmission power of the user equipment according to the determined transmission situation, thereby solving a problem that it is not provided in the prior art that how a user equipment determines an uplink transmission power of the user equipment when random access is executed through a secondary cell. |

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| **主权项** | 专利度:2特征度:16 |  |  |
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A method to determine uplink transmission power, comprising: determining, by a user equipment, a physical uplink control channel (PUCCH) needs to be transmitted on a first cell rather than a secondary cell in a second subframe rather than a first subframe among subframes corresponding to a random access preamble to be transmitted on the secondary cell; determining, by the user equipment, a transmission power of the random access preamble according to a first formulaPPRACH(i)=min{PCMAX,c,PREAMBLE\_RECEIVED\_TARGET\_POWER+PLc}; and determining, by the user equipment, a transmission power of the PUCCH according to a second formulaPPUCCH(i)=min{PPUCCH\_0,(PCMAX(i) PPRACH(i))} wherein i represents a subframe; PPRACH(i) represents the transmission power of the random access preamble; PCMAX(i) represents a maximum allowable power of the secondary cell; PREAMBLE\_RECEIVED\_TARGET\_POWER represents a target received power of the random access preamble; and PLc represents a target path loss of the secondary cell; wherein PPUCCH(i) represents the transmission power of the PUCCH; PPUCCH\_0 represents a transmission power of the PUCCH obtained by the user equipment by performing uplink power control; transmitting the random access preamble in the first subframe on the secondary cell to achieve uplink synchronization in the secondary cell using the determined transmission power PPRACH(i) and transmitting the PUCCH on the first cell and in the second subframe using the determined transmission power PPUCCH(i).

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| **对偶主权项** | 专利度:14特征度:6 |  |  |
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A~~n~~method to determineuplink transmission power~~determining method~~, comprising: determining, by a user equipment, a~~transmission situation of at least one of a physical uplink control channel (PUCCH), a physical uplink shared channel (~~physical uplink control channel (PUCCH) needs to be transmitted on a first cell rather than a secondary cell in a second subframe rather than a first subframe among subframes corresponding to a random access preamble to be transmitted on the secondary cell; determining, by the user equipment, a transmission power of the random access preamble according to a first formulaPPRACH(i)=min{PCMAX,c,PREAMBLE\_RECEIVED\_TARGET\_POWER+PLc}; and determining, by the user equipment, a transmission power of thePU~~S~~CCH~~), and a sounding reference signal (SRS) on another cell except a secondary cell in a subframe corresponding to a preamble to be transmitted~~according to a second formulaPPUCCH(i)=min{PPUCCH\_0,(PCMAX(i) PPRACH(i))} wherein i represents a subframe; PPRACH(i) represents the transmission power of the random access preamble; PCMAX(i) represents a maximum allowable power of the secondary cell; PREAMBLE\_RECEIVED\_TARGET\_POWER represents a target received power of the random access preamble; and PLc represents a target path losso~~n~~fthe secondary cell;~~and determining, by the user equipment, an uplink transmission power of~~wherein PPUCCH(i) represents the transmission power of the PUCCH; PPUCCH\_0 represents a transmission power of the PUCCH obtained by the user equipment by performing uplink power control; transmitting the random access preamble in the first subframe onthe~~u~~se~~r equipment according to the determined transmission situation~~condary cell to achieve uplink synchronization in the secondary cell using the determined transmission power PPRACH(i) and transmitting the PUCCH on the first cell and in the second subframe using the determined transmission power PPUCCH(i).

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device, and system for controlling IPTV (internet protocol television) content reporting configuring updates**

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| **公开号** | [US9325744](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9325744&sv=a2ef87a945949389268386b06242a803) | **公开日** | 2016/04/26 |
| **申请号** | 13/670,229 | **申请日** | 2012/11/06 |
| **授权日** | 2016/04/26 | **优先日** | 2010/05/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Yuanyuan | Yue; Peiyu | Shi; Teng | Tian; Linyi | Tian; Yonghui | Zhang; Chuxiong | Liu; Guangyuan | Yuan; Weizhong | Zhang; Renzhou | Wu; Lingyan |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present invention relates to the multimedia field, and discloses a method, a device, and a system for controlling content report behavior. The method includes: receiving a request for subscribing to a configuration update notification, in which the request is sent by the terminal or the media control function, and a configuration update request that is sent by an SCF and carries the new content report configuration information, and sending a configuration update notification message to the terminal or the media control function, where the configuration update notification message carries the new content report configuration information or acquiring information thereof. The method of the present invention avoids using the message body of the SIP message to transmit the content report configuration information, is compliant and compatible with logic for processing a SIP INFO message specified in the RFC 2976. |

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| **主权项** | 专利度:23特征度:25 |  |  |
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A method for controlling content report behavior, comprising performing by a Service Control Function (SCF) device having at least a processor executing program codes stored in a memory of the SFC device, which configure the SFC device to perform the following operations: collecting current content reporting from a terminal or a media control function (MCF) device, wherein the current content reporting comprises user's current content consumption statistics and accounting information on an existing channel or program; wherein the current content reporting is in response to detecting a request to switch to user's new content consumption from the existing channel or program to another channel or another program in the terminal or the MCF device; generating a session initiation protocol SIP message to update new content report configuration information, wherein a preset parameter in a header field of the SIP message carries the new content report configuration information; and sending the SIP message to the terminal or the media control function (MCF) device in order that the terminal or the MCF device implements updated content reporting for the SCF device according to the new content report configuration information.

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| **对偶主权项** | 专利度:23特征度:20 |  |  |
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A method for controlling content report behavior, comprising~~: generating a session initiation protocol SIP message~~performing by a Service Control Function (SCF) device having at least a processor executing program codes stored in a memory of the SFC device, which configure the SFC device to perform the following operations: collecting current content reporting from a terminal or a media control function (MCF) device, wherein the current content reporting comprises user's current content consumption statistics and accounting information on an existing channel or program; wherein the current content reporting is in response to detecting a request to switch to user's new content consumption from the existing channel or program to another channel or another program in the terminal or the MCF device; generating a session initiation protocol SIP message to update new content report configuration information, wherein a preset parameter in a header field of the SIP message carriesthenew content report configuration information; and sending the SIP message to~~a~~theterminal or~~a~~themedia control function(MCF~~so~~) device in orderthat the terminal or the MCFdeviceimplementsupdatedcontent reporting for the SCF deviceaccording to the new content report configuration information.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, base station, and user terminal for implementing uplink resource indication**

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| **公开号** | [US9320028](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9320028&sv=813db9d225d8f042a180acafd15f8ca7) | **公开日** | 2016/04/19 |
| **申请号** | 14/159,245 | **申请日** | 2014/01/20 |
| **授权日** | 2016/04/19 | **优先日** | 2007/08/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhao; Meng | Lv; Yongxia | Chen; Xiaobo |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Futurewei Technologies, Inc. |

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| **摘要** |  |
| A method, a base station (BS), and a user terminal are provided for implementing uplink resource indication. The method includes carrying an uplink resource index in an uplink resource grant (UL Grant), in which an uplink resource index corresponds to at least one uplink resource in terms of indication; and sending the UL Grant. The BS includes an index carrying module and an instruction sending module. The user terminal includes an instruction receiving module, an instruction resolving module, and an execution module. |

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| **主权项** | 专利度:19特征度:14 |  |  |
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A method for implementing an uplink resource grant (UL Grant), comprising: identifying, by a base station, a downlink subframe in a plurality of downlink subframes in a radio frame, wherein each downlink subframe corresponds to an unique uplink subframe set, each uplink subframe set comprises a plurality of uplink subframe groups, each uplink subframe group corresponds to an uplink resource index and is identified by the uplink resource index, each uplink subframe group has an unique uplink subframe grouping specifying at least one uplink subframe in a time domain, and at least one group in the plurality of uplink subframe groups comprises at least two uplink subframes; and sending, by the base station, an UL Grant to a user terminal on the downlink subframe, wherein the UL Grant includes a first uplink resource index corresponding to a first uplink subframe group in a first uplink subframe set, and the first uplink subframe set corresponds to the downlink subframe.

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| **对偶主权项** | 专利度:22特征度:27 |  |  |
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A method for implementing an uplink resource grant (UL Grant), comprising:~~obtain~~identifying, by a base station, a~~corresponding relationship betwee~~downlink subframe in a plurality of downlink subframes~~, a plurality of uplink subframe sets correlated with the~~in a radio frame, wherein each downlink subframe corresponds to an unique uplink subframe set, each uplink subframe set comprises aplurality of~~down~~uplink subframe~~s, and a plurality of values for an uplink resource index, wherein each uplink subframe set has at least one of a plurality of~~groups, eachuplink subframe group corresponds to an uplink resource index and is identified by the uplink resource index, each uplink subframegroup ha~~ving~~sanunique uplink subframe grouping specifying at least one uplink subframe in~~the time domain~~a time domain, and at least one group in the plurality of uplink subframe groups comprises at least two uplink subframes; and sending, by the base station, an UL Grant to a user terminal on~~a firs~~thedownlink subframe~~of the plurality of downlink subframes~~,whereinthe UL Grant includ~~ing~~esa first~~value of the plurality of values for said uplink resource index, wherein the first value~~uplink resource indexcorrespond~~s~~ingto a firstuplink subframegroup in a first uplink subframe set, and the first uplink subframe set corresponds to the~~first~~downlink subframe.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 31 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for transmitting sounding reference signal and method and device for indicating configuration**

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| **公开号** | [US9313679](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9313679&sv=1d0a594535acb6658b42c0096569dcba) | **公开日** | 2016/04/12 |
| **申请号** | 13/895,929 | **申请日** | 2013/05/16 |
| **授权日** | 2016/04/12 | **优先日** | 2010/11/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Qiang | Mazzarese; David |
| **国际 主分类** | H04W 24/10 | **优先 国家** | CN |
| **代理** | Leydig Voit & Mayer, Ltd |

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| **摘要** |  |
| A method for transmitting a sounding reference signal and a method and device for indicating a configuration are provided. A method for indicating a sounding reference signal configuration may include: generating at least two pieces of downlink control signaling DCI, where each of the at least two pieces of DCI includes a sounding reference signal SRS configuration information element; and transmitting the at least two pieces of DCI in a subframe to a terminal, so that the SRS configuration information elements in the at least two pieces of DCI are used to jointly indicate an SRS configuration. Solutions of embodiments of the present invention can improve accuracy and flexibility of indicating an SRS configuration. |

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| **主权项** | 专利度:18特征度:9 |  |  |
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A method for indicating a sounding reference signal (SRS) configuration, comprising: generating at least two pieces of downlink control signaling DCI, wherein each of the at least two pieces of DCI comprises a sounding reference signal SRS configuration information element; and transmitting the at least two pieces of DCI in a subframe to a terminal, for using the SRS configuration information elements in the at least two pieces of DCI to jointly indicate an SRS configuration, wherein using the SRS configuration information elements in the at least two pieces of DCI to jointly indicate the SRS configuration comprises: when an SRS configuration information element of only one piece of DCI in the at least two pieces of DCI indicates the SRS configuration, using the SRS configuration indicated by the SRS configuration information element of the one piece of DCI as the SRS configuration jointly indicated by the SRS configuration information elements in the at least two pieces of DCI; and when the SRS configuration information elements of the at least two pieces of DCI all indicate the SRS configuration, the SRS configuration information elements in the at least two pieces of DCI jointly indicating an invalid SRS configuration.

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| **对偶主权项** | 专利度:19特征度:9 |  |  |
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A method for indicating a sounding reference signal (SRS) configuration, comprising: generating at least two pieces of downlink control signaling DCI, wherein each of the at least two pieces of DCI comprises a sounding reference signal SRS configuration information element; and transmitting the at least two pieces of DCI in a subframe to a terminal, for using the SRS configuration information elements in the at least two pieces of DCI to jointly indicate an SRSconfiguration, wherein using the SRS configuration information elements in the at least two pieces of DCI to jointly indicate the SRS configuration comprises: when an SRS configuration information element of only one piece of DCI in the at least two pieces of DCI indicates the SRS configuration, using the SRS configuration indicated by the SRS configuration information element of the one piece of DCI as the SRS configuration jointly indicated by the SRS configuration information elements in the at least two pieces of DCI; and when the SRS configuration information elements of the at least two pieces of DCI all indicate the SRS configuration, the SRS configuration information elements in the at least two pieces of DCI jointly indicating an invalid SRSconfiguration.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for processing reverse single radio voice call continuity**

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| **公开号** | [US9307453](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9307453&sv=f79d57e11e174a8c442a2a051fdd50f0) | **公开日** | 2016/04/05 |
| **申请号** | 13/740,046 | **申请日** | 2013/01/11 |
| **授权日** | 2016/04/05 | **优先日** | 2010/08/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Xiaobo | Xu; Xiaoying | Liu; Hai |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention provides a method, device, and system for processing reverse single radio voice call continuity. The method includes, before handing over a voice service from a CS domain network to a PS domain network, preconfiguring, in the PS domain network by a UE, information about resources needed for the voice service handover; and in the process of handing over, by the UE, the voice service from the CS domain network to the PS domain network, establishing a forwarding channel between a first network element of the PS domain and a second network element of the CS domain by using the preconfigured information about resources, where the forwarding channel is configured to forward voice service data between the UE and a peer UE after the UE accesses the PS domain network. |

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| **主权项** | 专利度:13特征度:28 |  |  |
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A method for processing reverse single radio voice call continuity, comprising: during or before handing over a voice service from a circuit switched domain network to a packet switched domain network, performing an IMS registration; and in the process of handing over, by the user equipment, the voice service from the circuit switched domain network to the packet switched domain network, establishing a forwarding channel between a first network element of the packet switched domain network and a second network element of the circuit switched domain network, wherein the forwarding channel is configured to transmit voice service data between the user equipment and a peer user equipment after the user equipment accesses the packet switched domain network, and wherein the first network element is an access transfer gateway (ATCF/ATGW) and the second network element is a mobile switching center supporting a reverse single radio voice call continuity (SRVCC) service; wherein the establishing the forwarding channel between the first network element of the packet switched domain network and the second network element of the circuit switched domain network uses preconfigured information about resources needed for the handing over and comprises controlling, by a mobility management entity (MME) using the preconfigured information about resources, the establishment of the forwarding channel between the first network element of the packet switched domain network and the second network element of the circuit switched domain network; wherein the controlling the establishment of the forwarding channel comprises the second network element forwarding a handover request to the MME; and wherein the preconfigured information about resources comprises at least context information that is pre-registered in the packet switched domain network by the user equipment, and the context information comprises at least information about a session transfer number for the reverse voice call continuity service (STN-SR).

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| **对偶主权项** | 专利度:19特征度:7 |  |  |
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A method for processing reverse single radio voice call continuity,~~the method~~comprising: during or before handing over a voice service from a circuit switched domain network to a packet switched domain network, p~~reconfiguring, in the packet switched domain network and by a user equipment, information about resources needed for a voice service handover; and in the process of handing over, by~~erforming an IMS registration; and in the process of handing over, by the user equipment, the voice service from the circuit switched domain network to the packet switched domain network, establishing a forwarding channel between a first network element of the packet switched domain network and a second network element of the circuit switched domain network, wherein the forwarding channel is configured to transmit voice service data between the user equipment and a peer user equipment after the user equipment accesses the packet switched domain network, and wherein the first network element is an access transfer gateway (ATCF/ATGW) andthe~~u~~se~~r equipment, the voice service from the circuit switched domain network to the packet switched domain network, establishing a~~cond network element is a mobile switching center supporting a reverse single radio voice call continuity (SRVCC) service; wherein the establishing the forwarding channel between the first network element of the packet switched domain network and the second network element of the circuit switched domain network uses preconfigured information about resources needed for the handing over and comprises controlling, by a mobility management entity (MME) using the preconfigured information about resources, the establishment of theforwarding channel between~~a~~thefirst network element of the packet switched domain network and~~a~~thesecond network element of the circuit switched domain network~~,~~;wherein the~~forwarding channel is configured to transmit voice service data between the user equipment and a peer~~controlling the establishment of the forwarding channel comprises the second network element forwarding a handover request to the MME; and wherein the preconfigured information about resources comprises at least context information that is pre-registered in the packet switched domain network by theuser equipment,a~~fter the user equipme~~nd the context information comprises at least information about a~~cc~~sess~~es the packet switched domain network~~ion transfer number for the reverse voice call continuity service (STN-SR).

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for assigning ACK channels to users**

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| **公开号** | [US9306705](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9306705&sv=3db0a8ca579b645ec39ddbe8a8f387ba) | **公开日** | 2016/04/05 |
| **申请号** | 14/732,159 | **申请日** | 2015/06/05 |
| **授权日** | 2016/04/05 | **优先日** | 2008/04/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Chen; Xiaobo | Liu; Guang |
| **国际 主分类** | H04L 5/02 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for assigning acknowledgement (ACK) channels to a user is used to feed back ACKs of a plurality of downlink sub-frames in one uplink sub-frame. According to the method, reserved ACK channels are divided into blocks according to the number of downlink sub-frames; each downlink sub-frame corresponds to one block; each block is divided into several sub-blocks; control channel element (CCE) sets within the same sub-frame are respectively mapped to different sub-blocks; and the ACK channels are assigned to the downlink sub-frames according to a sequence of increasing a mapping label d first and then increasing a sub-block label m. Thus, more unused ACK channels can be released to form resource blocks (RBs) for transmission on other channels, for example, for PUSCH transmission. Other methods for assigning ACK channels to a user, a device for assigning ACK channels to a user, and a communication system are further provided. |

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| **主权项** | 专利度:12特征度:12 |  |  |
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A method for receiving acknowledge~~ment~~/negative-acknowledgement (ACK/NACK) information by a base station, comprising: obtaining a label nPUCCH(1) of an ACK channel of a control channel element (CCE) in a downlink sub-frame with a label of d among N downlink sub-frames~~based upon~~in accordance to: (N d 1)×NCCE,m, d×NCCE,m+1 and nCCE~~,~~.wherein m~~ε~~∈{0,1, . . . , max{Mi} 1} and NCCE,m≦nCCE≦NCCE,m+1 1, the nCCE is a label of the CCE, the NCCE,m represents at least one a labelnumber of CCE~~s~~in the downlink sub-frame when~~the~~anumber of symbols used for transmission of a physical downlink control channel (PDCCH) is equal to m, the NCCE,m+1 represents at least one a labelnumber of CCE~~s~~in the downlink sub-frame when the number of symbols used for transmission of the PDCCH is equal to m+1, the max{Mi} represents a number of symbols used for transmission of the PDCCH, and N is a positive integer, 0≦d#x3c;N; and receiving the ACK/NACK information on the ACK channel with the label nPUCCH(1).

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| **对偶主权项** | 专利度:12特征度:3 |  |  |
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A method for receiving acknowledge/negative-acknowledgement (ACK/NACK) information by a base station, comprising: obtaining a label nPUCCH(1) of an ACK channel of a control channel element (CCE) in a downlink sub-frame with a label of d among N downlink sub-frames in accordance to: (N d 1)×NCCE,m, d×NCCE,m+1 and nCCE. wherein m ∈ {0,1, . . . , max{Mi} 1} and NCCE,m≦nCCE≦NCCE,m+1 1, the nCCE is a label of the CCE, the NCCE,m represents at least one a label number of CCE in the downlink sub-frame when a number of symbols used for transmission of a physical downlink control channel (PDCCH) is equal to m, the NCCE,m+1 represents at least one a label number of CCE in the downlink sub-frame when the number of symbols used for transmission of the PDCCH is equal to m+1, the max{Mi} represents a number of symbols used for transmission of the PDCCH, and N is a positive integer, 0≦d#x3c;N; and receiving the ACK/NACK information on the ACK channel with the label nPUCCH(1).

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 35 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover method and system in relay network, relay node, control base station and base station**

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| **公开号** | [US9301231](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9301231&sv=824a90be3be32d429c13f4058b2eadf1) | **公开日** | 2016/03/29 |
| **申请号** | 14/550,278 | **申请日** | 2014/11/21 |
| **授权日** | 2016/03/29 | **优先日** | 2009/12/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhang; Tao |
| **国际 主分类** | H04W 36/16 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| Embodiments of the present invention provide a handover method and system in a relay network, a relay node, a control base station and a base station. The method includes: receiving, by a relay node, a first area identifier that identifies the relay node; sending a system information broadcast message carrying the first area identifier to a terminal in a coverage area; receiving a handover request message forwarded by a control base station; and performing, according to the handover request message, a control operation of accessing the relay node on the terminal. The first area identifier that identifies the relay node is allocated to the relay node, so that the terminal in the relay network can be normally handed over from the base station to the relay node. |

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| **主权项** | 专利度:22特征度:15 |  |  |
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A method for performing handover in a relay network, comprising: sending, by a control base station, a response message to a relay node according to a received interface setup request message, wherein the response message carries a first area identifier that identifies the relay node; and receiving, by a mobility management entity, a handover required message including target node information from a base station when the relay node is a target of the handover, wherein the target node information includes the first area identifier and an identifier of the control base station, and the identifier of the control base station is obtained according to the first area identifier; sending, by the mobility management entity, a handover request including the first area identifier to the control base station according to the identifier of the control base station included in the handover required message; forwarding, by the control base station, the handover request to the relay node according to the first area identifier in the handover request.

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| **对偶主权项** | 专利度:6特征度:7 |  |  |
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Amethod for performinghandover~~method~~in a relay network, comprising: sending, by a control base station, a response message to a relay node according to a received interface setup request message, wherein the response message carries a first area identifier that identifies the relay node;and~~is allocated to the relay node; and receiving a handover request message sent~~receiving, by a mobility management entity, a handover required message including target node information from a base station when the relay node is a target of the handover, wherein the target node information includes the first area identifier and an identifier of the control base station, and the identifier of the control base station is obtained according to the first area identifier; sending,by~~a~~themobility management entity, a~~nd forwarding the~~handover request~~message to the relay node, so that the relay node performs, according to~~including the first area identifier to the control base station according to the identifier of the control base station included inthe handover requ~~est~~iredmessage~~, a control operation of accessing the relay node on a t~~; forwarding, by the control base station, the handover request to the relay node according to the first area identifier~~m~~in~~al~~the handover request.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for measuring aggregated carrier cell**

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| **公开号** | [US9301190](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9301190&sv=cb57583904d3a0244a41ac55723120a4) | **公开日** | 2016/03/29 |
| **申请号** | 14/663,857 | **申请日** | 2015/03/20 |
| **授权日** | 2016/03/29 | **优先日** | 2010/02/03 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Deng; Tianle | Tang; Binsong | Wang; Jun |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A disclosure for measuring an aggregated carrier cell measuring an aggregated carrier cell configured with multiple component carriers is provided. In the disclosure, a user equipment receives, from a base station, a measurement period parameter for measuring a component carrier. The user equipment calculate a measurement period for a non-active component according to the received measurement period parameter and a signal measurement estimation value of the non-active component carrier, and performs measurement on the non-active component carrier with the calculated measurement period for the non-active component. |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A non-transitory computer readable medium, comprising: a computer program code comprising one or more executable instructions, which, when executed by a user equipment, cause the user equipment to perform a method for measuring an aggregated carrier cell configured with multiple component carriers, wherein the method comprises: receiving a measurement period parameter for component carrier measurement period calculation from a base station; determining a measurement period for a non-active component carrier among the multiple component carriers in accordance with the received measurement period parameter and a signal estimation value of the non-active component carrier; performing measurement on the non-active component carrier according to the determined measurement period for the non-active component carrier.

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| **对偶主权项** | 专利度:21特征度:9 |  |  |
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Anon-transitory computer readable medium, comprising: a computer program code comprising one or more executable instructions, which, when executed by a user equipment, cause the user equipment to perform amethod for measuring an aggregated carrier cell configured with multiple component carriers,whereinthe method compris~~ing~~es: receiving~~, by a user equipment,~~a measurement period parameter for component carrier measur~~ing~~ement period calculationfrom a base station~~,~~;determining~~, by the user equipment,~~a measurement period for a non-activecomponentcarrier among the multiple component carriers in accordance with the received measurement period parameter and a signal estimation value of the non-activecomponentcarrier;~~and~~performing~~, by the user equipment,~~measurement on the non-active component carrier according to the determined measurement period for the non-active componentcarrier.

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| **被引用** | 18 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for bearer processing**

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| **公开号** | [US9288790](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9288790&sv=8c2bac98f5cc63cb3f354831d018aed9) | **公开日** | 2016/03/15 |
| **申请号** | 13/926,390 | **申请日** | 2013/06/25 |
| **授权日** | 2016/03/15 | **优先日** | 2007/10/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Jinyi | Liu; Lan | Hu; Huadong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A bearer processing method is disclosed. The method includes these steps: a system border node receives a Packet Data Protocol (PDP) Context Request initiated by a universal mobile telecommunication system (UMTS); the system border node adjusts a Request Bearer Resource Allocation message of a system architecture evolution (SAE) system or the PDP Context Request of the UMTS according to the received PDP Context Request to map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS. The present invention can map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS. |

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| **主权项** | 专利度:10特征度:13 |  |  |
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A method for bearer processing, comprising, receiving, by a system border node, a Packet Data Protocol (PDP)~~c~~Context~~r~~Request message initiated by a Universal Mobile Telecommunication System (UMTS);~~allocating, by the system border node, a Procedure Transaction ID; and send~~and adjusting, by the system border node, a~~r~~Request~~b~~Bearer~~r~~Resource~~a~~Allocation message~~t~~ofa System Architecture Evolution (SAE) system~~, wherein the request b~~or a PDP Context Request message of the UMTS system according to the received PDP Context Request message, to map the Bearer~~r~~Resource~~a~~Allocation~~message comprises the Procedure Transaction ID~~procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS system.

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| **对偶主权项** | 专利度:19特征度:23 |  |  |
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A method for bearer processing, comprising, receiving, by a system border node, a Packet Data Protocol (PDP) Context Request message initiated by a Universal Mobile Telecommunication System (UMTS); and adjusting, by the system border node, a Request Bearer Resource Allocation message of a System Architecture Evolution (SAE) system or a PDP Context Request message of the UMTS system according to the received PDP Context Request message, to map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS system.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier**

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| **公开号** | [US9288779](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9288779&sv=70f6e3532613c09da8a1b806b611bec8) | **公开日** | 2016/03/15 |
| **申请号** | 14/049,990 | **申请日** | 2013/10/09 |
| **授权日** | 2016/03/15 | **优先日** | 2007/07/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong | Li; Ming |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method and an apparatus for identifying a UE in an SAE network, and an MME are provided herein. The method includes: receiving an SAE-TMSI which is allocated to a UE that accesses an SAE network and includes at least: a pool-ID, an MME-ID, and a UE temporary identifier; using the SAE-TMSI to temporarily identify the UE in the SAE network. The apparatus includes: a receiving unit and a temporary identifying unit. The MME includes a temporary identifier allocating unit. Moreover, a method for transmitting and allocating a temporary identifier, and a method for receiving and transmitting information according to the temporary identifier are disclosed herein. |

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| **主权项** | 专利度:10特征度:24 |  |  |
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A~~user equipment (UE), comprising: a receiver that receives a track area update (TAU) accept message from a mobility management entity (MME) of a system architecture evolved (SAE) network, the TAU accept message comprising an identifier, wherein the identifier is constructed at least fro~~method for identifying a user equipment (UE) that is accessing a system architecture evolved (SAE) network, the method comprising: receiving, by a first mobility management entity (MME) of the SAE network, a first SAE-temporary mobile subscriber identity (SAE-TMSI) allocated to the UE from a radio access network (RAN) entity, wherein the first SAE-TMSI comprises:a resource pool identifier (pool-ID), a mobility management entity identifier (MME-ID) and a UE temporary identifier~~,~~;and~~a transmitter that sends a TAU complete message to the MME, wherein the identifier uniquely identifies the UE in a public land mobile network (PLMN); wherein the pool-ID identifies a resource pool in the~~obtaining, by the first MME, context information or identifier information of the UE according to the first SAE-TMSI from a second MME; wherein the pool-ID is unique in a public land mobile network (PLMN), the MME-IDisunique~~ly identifies within the~~in aresource pool~~the MME~~, and the UE temporary identifierisunique~~ly identifies the UE within the~~in the secondMME.

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| **对偶主权项** | 专利度:10特征度:9 |  |  |
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A method for identifying a user equipment (UE) that is accessing a system architecture evolved (SAE) network, the method comprising: receiving, by a first mobility management entity (MME) of the SAE network, a first SAE-temporary mobile subscriber identity (SAE-TMSI) allocated to the UE from a radio access network (RAN) entity, wherein the first SAE-TMSI comprises: a resource pool identifier (pool-ID), a mobility management entity identifier (MME-ID) and a UE temporary identifier; and obtaining, by the first MME, context information or identifier information of the UE according to the first SAE-TMSI from a second MME; wherein the pool-ID is unique in a public land mobile network (PLMN), the MME-ID is unique in a resource pool, and the UE temporary identifier is unique in the second MME.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 36 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for transmitting information**

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| **公开号** | [US9282545](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9282545&sv=c7d4cbdb946b973064d76fc643026528) | **公开日** | 2016/03/08 |
| **申请号** | 14/192,298 | **申请日** | 2014/02/27 |
| **授权日** | 2016/03/08 | **优先日** | 2007/10/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ma; Jie | Lin; Bo |
| **国际 主分类** | H04W 72/04 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for transmitting information includes: by a NodeB, receiving information reported by a User Equipment (UE) through an Enhanced Dedicated Channel (E-DCH) transmission channel, and determining the UE corresponding to the received information according to UE ID information carried in the received information. A system and NodeB for transmitting information are also provided. Therefore, when random access data is transmitted between the UE and the NodeB, the NodeB can determine the UE from which the data is received, thus ensuring practicability of the transmission solution that uses High Speed Uplink Packet Access (HSUPA) to implement random access. |

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| **主权项** | 专利度:18特征度:32 |  |  |
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A method for transmitting information, comprising: converting, by a base station, a protocol layer data packet received from a user equipment (UE) into a Frame Protocol (FP) frame with a UE identity (ID) of the UE; and sending, by the base station, the FP frame with the UE ID of the UE to a radio network control device through an enhanced dedicated channel (E-DCH) resource, wherein the UE ID is for informing the radio network control device which UE the FP frame belongs to, wherein the E-DCH resource comprises a resource for transmission between the base station and the radio network control device; wherein the method further comprises: receiving, by the base station, a request for configuring or reconfiguring an E-DCH related resource, sent by the radio network control device, wherein the E-DCH related resource comprises the E-DCH resource and an E-DCH resource for transmission between the UE and the base station, and the E-DCH related resource corresponds to an E-DCH as a common transmission channel; and configuring or reconfiguring, depending on the request received, by the base station, the E-DCH related resources in accordance with a parameter in the received request; wherein the parameter in the received request comprises at least one of: a signature list used when the UE performs a random access procedure through the E-DCH resource for transmission between the UE and the base station, and other parameter required when the UE performs the random access procedure through the E-DCH related resource, wherein the other parameter comprises at least one of a relevant physical-layer parameter, a transmission channel parameter and a transmission bearer parameter.

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| **对偶主权项** | 专利度:15特征度:10 |  |  |
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A method for transmitting information, comprising: converting, by a base station, a protocol layer data packet received from a user equipment (UE) into a Frame Protocol (FP) frame with a UE identity (ID) of the UE; and sending, by the base station, the FP frame with the UE ID of the UE to a radio network control device through an enhanced dedicated channel (E-DCH)~~to~~resource, wherein the UE ID is forinformingthe radio networkcontrol devicewhich UE the FP frame belongs to~~;~~, wherein the E-DCH resource comprises a resource for transmission between the base station and the radio network control device;wherein the method further comprises: receiving, by the base station, a request for~~sett~~configuring~~up~~or reconfiguring~~the~~anE-DCHrelated resource, sent by the radio network control device~~; setting up or reconfiguring, depending on the request received, by~~, wherein the E-DCH related resource comprises the E-DCH resource and an E-DCH resource for transmission between the UE andthe base station,andthe E-DCH~~in accordance with a parameter in the received request; and sending, by the base station, a response to the radio network control device to indicate information of the E-DCH~~related resource corresponds to an E-DCH as a common transmission channel; and configuring or reconfiguring, depending on the request received, by the base station, the E-DCH related resources in accordance with a parameter in the received request; wherein the parameter in the received request comprises at least one of: a signature list used when the UE performs a random access procedure through the E-DCHresource for transmission between the UE and the base station, and other parameter required when the UE performs the random access procedure through the E-DCHrelated resource, wherein the other parameter comprisesat least one of a relevant physical-layer parameter, a transmission channel parameter and a transmission bearer parameter.

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| **被引用** | 25 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for random access**

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| **公开号** | [US9277568](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9277568&sv=e985ec8328b0d17a77311c94dcf5cdd2) | **公开日** | 2016/03/01 |
| **申请号** | 14/482,821 | **申请日** | 2014/09/10 |
| **授权日** | 2016/03/01 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Popovic; Branislav | Mauritz; Oskar |
| **国际 主分类** | H04W 74/08 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method can be used for facilitating a random access procedure between a first transceiver and a second transceiver within a cell. The first transceiver selects a signature sequence from a set of signature sequences, incorporates the signature sequence into a signal, and transmits the signal to the second transceiver. The set of signature sequences being obtained from a Zadoff-Chu sequence with zero correlation zone. |

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| **主权项** | 专利度:19特征度:9 |  |  |
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A method of facilitating a random access procedure between a first transceiver and a second transceiver within a cell, the method comprising: selecting, by the first transceiver, a signature sequence from a set of signature sequences, wherein the set of signature sequences is obtained from a Zadoff-Chu sequence with zero correlation zone, the Zadoff-Chu sequence being: a ( k ) = { W N k 2 / 2 + qk , N even W N k ( k + 1 ) / 2 + qk , N odd , k = 0 , 1 , … , N - 1 , where WN=exp( j2π/N), r, q and N are integers, r is relatively prime to N and value of r is indicated by the second transceiver to the first transceiver for generation of the set of signature sequences; incorporating, by the first transceiver, the signature sequence into a signal; and transmitting, by the first transceiver, the signal to the second transceiver.

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| **对偶主权项** | 专利度:21特征度:13 |  |  |
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A method of facilitating a random access procedure between a first transceiver and a second transceiver within a cell, the method comprising: selecting, by the first transceiver, a signature sequence from a set of signature sequences, wherein the set of signature sequences is obtained from a Zadoff-Chu sequence with zero correlation zone, the Zadoff-Chu sequence being: a&

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 21 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method of radio bearer management for multiple point transmission**

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| **公开号** | [US9276810](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9276810&sv=6ed54afebe416f670c5446f898791715) | **公开日** | 2016/03/01 |
| **申请号** | 13/329,197 | **申请日** | 2011/12/16 |
| **授权日** | 2016/03/01 | **优先日** | 2011/12/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Bi; Hao | Sun; Yishen |
| **国际 主分类** | H04L 12/24 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for operating a multiple point transmission system is disclosed. The method includes reconfiguring the multiple point transmission system according to an updated configuration of an at least one radio bearer between an at least one transmission point and a terminal device, and communicating with the terminal device using the reconfigured multiple point transmission system. The configuration of the at least one radio bearer is updated according to operating condition information of the terminal device. |

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| **主权项** | 专利度:32特征度:9 |  |  |
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A method for operating a multiple point transmission system, the method comprising: reconfiguring, by a primary point, the multiple point transmission system according to an updated configuration of an at least one radio bearer between a secondary point and a terminal device; exchanging, between the primary point and the terminal device, data of a first bearer, wherein the first bearer is set up between the primary point and the terminal device; exchanging, between the primary point and the secondary point directly, the updated configuration of the at least one radio bearer; exchanging, between the primary point and the terminal device, the updated configuration of the at least one radio bearer; and communicating, by the primary point and the secondary point, with the terminal device using the reconfigured multiple point transmission system.

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| **对偶主权项** | 专利度:37特征度:27 |  |  |
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A method for operating a multiple point transmission system, the method comprising: reconfiguring, by a primary point,the multiple point transmission system according to an updated configuration of an at least one radio bearer between a~~n at least one transmission~~secondary point and a terminal device; exchanging, between the primary point and the terminal device, data of a first bearer, wherein the first bearer is set up between the primarypoint and~~a~~theterminal device~~, wherein the configuration of the at least one radio bearer is updated according to operating condition information of the terminal device; and communicating~~; exchanging, between the primary point and the secondary point directly, the updated configuration of the at least one radio bearer; exchanging, between the primary point and the terminal device, the updated configuration of the at least one radio bearer; and communicating, by the primary point and the secondary point,with the terminal device using the reconfigured multiple point transmission system.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 4 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and communication system for storing address of network anchor point to network server**

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| **公开号** | [US9271250](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9271250&sv=7f2044dd8f3669847f6597c91575906d) | **公开日** | 2016/02/23 |
| **申请号** | 13/915,877 | **申请日** | 2013/06/12 |
| **授权日** | 2016/02/23 | **优先日** | 2007/05/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Jian | Zhu; Wenruo | Liu; Lan | Zhou; Sihong | Shuai; Yanglai | Wang; Haining |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method, apparatus and communication system for registering address information of a network anchor point to a network server are disclosed. A network apparatus, such as a mobility management entity, determines whether to register address information of a network anchor point to a network server, and registers the address information of the network anchor point to the network server when determining to do so. |

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| **主权项** | 专利度:10特征度:13 |  |  |
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A method for registering address information of a network anchor point to a network server, the method comprising: determining, by a network apparatus, whether to register the address information of the network anchor point to the network server according to a certain condition; and registering, by the network apparatus, the address information of the network anchor point to the network server, when determining to register the address information of the network anchor point to the network server wherein the certain condition comprises subscription data of a user equipment (UE) and wherein the determining comprises: determining, by the network apparatus, to register the address information of the network anchor point to the network server if the subscription data of the UE indicates that the UE is allowed to hand over to a non-3rd Generation Partnership Project (non-3GPP) access.

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| **对偶主权项** | 专利度:19特征度:13 |  |  |
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A method for registering address information of a network anchor point to a network server, the method comprising: determining, by a network apparatus, whether to registertheaddress information of~~a~~thenetwork anchor point to the network server according to a certain condition; and registering, by the network apparatus, the address information of the network anchor point to the network server, when determining to register the address information of the network anchor point to the network serverwherein the certain condition comprises subscription data of a user equipment (UE) and wherein the determining comprises: determining, by the network apparatus, to register the address information of the network anchor point to the network server if the subscription data of the UE indicates that the UE is allowed to hand over to a non-3rd Generation Partnership Project (non-3GPP) access.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover control method, apparatuses and communication system**

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| **公开号** | [US9271202](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9271202&sv=ef7a31cb8d3b7f3f231355825c5cf241) | **公开日** | 2016/02/23 |
| **申请号** | 13/340,148 | **申请日** | 2011/12/29 |
| **授权日** | 2016/02/23 | **优先日** | 2009/06/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Tao | Lin; Bo | Wang; Yan | Chai; Li |
| **国际 主分类** | H04B 7/14 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A handover control method, apparatuses and a communication system are disclosed. In embodiments of the present invention, a control base station (DeNB) of a Relay node is identified according to an established relation between the Relay node and the Control base station, and therefore, a handover request message can be routed to the correct DeNB and finally sent to the RN, and a User Equipment can normally hand over to a cell controlled by the Relay node. |

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| **主权项** | 专利度:14特征度:19 |  |  |
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A handover control method, comprising: receiving, by a serving base station, a measurement report from a user equipment which is to be handed over from a source cell served by the serving base station to a target cell served by a relay node, wherein the measurement report comprises a physical cell identity (PCI) of the target cell and an evolved-universal terrestrial radio access network (E-UTRAN) cell global identifier (ECGI) of the target cell; obtaining, by the serving base station, an identity of the relay node from the ECGI of the target cell, wherein the identity of the relay node is same as an identity of a control base station which controls the relay node, and the ECGI of the target cell comprises the identity of the relay node; sending, by the serving base station, a handover request to the control base station identified by the identity of the relay node, wherein the handover request comprises an identity of the target cell; and sending, by the control base station, the handover request to the relay node corresponding to the identity of the target cell.

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| **对偶主权项** | 专利度:35特征度:12 |  |  |
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A handover control method, comprising:~~obtaining an identity of a relay node corresponding to a handover target cell of a user equipment; obtaining~~receiving, by a serving base station, a measurement report from a user equipment which is to be handed over from a source cell served by the serving base station to a target cell served by a relay node, wherein the measurement report comprises a physical cell identity (PCI) of the target cell and an evolved-universal terrestrial radio access network (E-UTRAN) cell global identifier (ECGI) of the target cell; obtaining, by the serving base station, an identity of the relay node from the ECGI of the target cell, wherein the identity of the relay node is same asan identity ofacontrol base station~~corresponding to~~which controlsthe relay node,a~~ccording to~~nd the ECGI of the target cell comprisesthe identity of the relay node;~~and~~sending, by these~~nd~~rvingbase station,a handover~~control~~request to the control base station~~according to~~identified bythe identity of~~control base station, so that the control base station notifies the relay node of performing access control for the user equipmen~~the relay node, wherein the handover request comprises an identity of the target cell; and sending, by the control base station, the handover request to the relay node corresponding to the identity of the target cell.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for multiplexing control and data channels in a multiple input, multiple output communications system**

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| **公开号** | [US9270427](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9270427&sv=6108ebb3f5c536d59aa11ea41e857f18) | **公开日** | 2016/02/23 |
| **申请号** | 12/856,333 | **申请日** | 2010/08/13 |
| **授权日** | 2016/02/23 | **优先日** | 2010/01/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Blankenship; Yufei | Xiao; Weimin | Jin; Ying |
| **国际 主分类** | H04L 27/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, LLP |

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| **摘要** |  |
| A system and method for system and method for multiplexing control and data channels in a multiple input, multiple output (MIMO) communications system are provided. A method for transmitting control symbols and data symbols on multiple MIMO layers includes selecting a first set of codewords from Ncw codewords, distributing control symbols onto the first set of layers, placing data symbols of the first set of codewords onto the first set of layers, placing data symbols of the (Ncw-Ncw1) remaining codewords to remaining layers if Ncw&#x3e;Ncw1, and transmitting the multiple MIMO layers. The first set of codewords is associated with a first set of layers from the multiple MIMO layers, and the Ncw codewords are to be transmitted simultaneously and the first set of codewords comprises Ncw1 MIMO codewords, where Ncw and Ncw1 are integers greater than or equal to 1. The remaining layers are MIMO layers from the multiple MIMO layers not in the first set of layers. |

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| **主权项** | 专利度:46特征度:15 |  |  |
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A method for transmitting control symbols and data symbols on multiple input, multiple output (MIMO) layers, the method comprising: selecting a first set of codewords from Ncw codewords, wherein the first set of codewords is associated with a first set of layers from the multiple MIMO layers, and wherein the Ncw codewords are to be transmitted simultaneously and the first set of codewords comprises Ncw1 MIMO codewords, where Ncw and Ncw1 are integers greater than or equal to 1; distributing control symbols onto the first set of layers, wherein a quantity of the control symbols for each of the first set of layers is determined in accordance with a variable transmission rank-dependent offset of the first set of codewords, wherein the offset is different for different transmission ranks each having a different total number of the MIMO layers; placing data symbols of the first set of codewords onto the first set of layers; placing data symbols of the (Ncw-Ncw1) remaining codewords to remaining layers if Ncw#x3e;Ncw1, wherein the remaining layers are MIMO layers from the multiple MIMO layers not in the first set of layers; and transmitting the multiple MIMO layers.

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| **对偶主权项** | 专利度:46特征度:14 |  |  |
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A method for transmitting control symbols and data symbols on multiple input, multiple output (MIMO) layers, the method comprising: selecting a first set of codewords from Ncw codewords, wherein the first set of codewords is associated with a first set of layers from the multiple MIMO layers, and wherein the Ncw codewords are to be transmitted simultaneously and the first set of codewords comprises Ncw1 MIMO codewords, where Ncw and Ncw1 are integers greater than or equal to 1; distributing control symbols onto the first set oflayers, wherein a quantity of the control symbols for each of the first set of layers is determined in accordance with a variable transmission rank-dependent offset of the first set of codewords, wherein the offset is different for different transmission ranks each having a different total number of the MIMOlayers; placing data symbols of the first set of codewords onto the first set of layers; placing data symbols of the (Ncw-Ncw1) remaining codewords to remaining layers if Ncw#x3e;Ncw1, wherein the remaining layers are MIMO layers from the multiple MIMO layers not in the first set of layers; and transmitting the multiple MIMO layers.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 17 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for assigning backhaul resources**

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| **公开号** | [US9265053](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9265053&sv=56baed90995a1e5bfb409b6f5071360f) | **公开日** | 2016/02/16 |
| **申请号** | 12/725,280 | **申请日** | 2010/03/16 |
| **授权日** | 2016/02/16 | **优先日** | 2009/04/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Blankenship; Yufei | Classon; Brian | Sartori; Philippe |
| **国际 主分类** | H04W 72/08 | **优先 国家** | US |
| **代理** | Slater & Matsil, LLP |

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| **摘要** |  |
| A system and method for assigning backhaul resources is provided. A method for wireless relay network communications includes determining performance information regarding a plurality of relay nodes, allocating resource blocks in a subframe to relay nodes based on the information, and notifying relay nodes of the allocated RBs using a signaling message. |

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| **主权项** | 专利度:24特征度:17 |  |  |
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A method for wireless relay network communications, the method comprising: determining performance information regarding a plurality of relay nodes; grouping the relay nodes in the plurality of relay nodes into M sets, where M is a positive integer value; allocating backhaul resource blocks (RBs) in at least one subframe using a frequency division multiplexing technique and a time division multiplexing technique to the relay nodes in accordance with the performance information; and notifying the relay nodes of the allocated RBs using a signaling message, the signaling message comprising, for each relay node of the relay nodes, information identifying a set of the M sets to which the relay node is assigned, and an order of the relay node within the set.

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| **对偶主权项** | 专利度:24特征度:7 |  |  |
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A method for wireless relay network communications, the method comprising: determining performance information regarding a plurality of relay nodes;grouping the relay nodes in the plurality of relay nodes into M sets, where M is a positive integer value;allocatingbackhaulresource blocks (RBs) in a~~subframe to relay nodes based on~~t least one subframe using a frequency division multiplexing technique and a time division multiplexing technique to the relay nodes in accordance withthe performance information; and notifyingtherelay nodes of the allocated RBs using a signaling message, the signaling message comprising, for each relay node of the relay nodes, information identifying a set of the M sets to which the relay node is assigned, and an order of the relay node within the set.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 1 | **国家数** | 1 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and base station for transmitting a data block**

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| **公开号** | [US9265035](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9265035&sv=39faac6290d48975fbca22402e2e8c79) | **公开日** | 2016/02/16 |
| **申请号** | 14/323,482 | **申请日** | 2014/07/03 |
| **授权日** | 2016/02/16 | **优先日** | 2009/01/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Liu; Jianghua | Frenne; Mattias |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method and a base station of transmitting a data block are provided. At least one data block is transmitted via at least one of at least two downlink frequency bands. A modulation symbol and N spreading sequences are received. Acknowledgement/negative acknowledgement (A/N) information is determined in accordance with the modulation symbol and the N spreading sequences. The modulation symbol and the N spreading sequences jointly determine the A/N information. And the at least one data block may be retransmitted depending on the A/N information determined. |

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| **主权项** | 专利度:30特征度:13 |  |  |
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A method of transmitting a data block, comprising: transmitting at least one data block via at least one of at least two downlink frequency bands to a user equipment (UE); receiving a modulation symbol and N spreading sequences via N antenna ports, N being an integer greater than or equal to 2, each of the N spreading sequences being a two-dimensional spreading code, each of the N spreading sequences being received from one antenna port of the N antenna ports and spreading the modulation symbol, and the modulation symbol being received from the N antenna ports; determining acknowledgement/negative acknowledgement (A/N) information in accordance with the modulation symbol and the N spreading sequences, wherein the A/N information indicates whether the at least one data block is correctly detected by the UE, and the modulation symbol and the N spreading sequences jointly determine the A/N information; and determining whether the at least one data block needs to be retransmitted depending on the A/N information.

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| **对偶主权项** | 专利度:30特征度:15 |  |  |
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A method of transmitting a data block, comprising: transmitting at least one data block via at least one of at least two downlink frequency bands to a user equipment (UE); receiving a modulation symbol and N spreading sequencesvia N antenna ports, N being an integer greater than or equal to 2, each of the N spreading sequences being a two-dimensional spreading code, each of the N spreading sequences being received from one antenna port of the N antenna ports and spreading the modulation symbol, and the modulation symbol being received from the N antenna ports; determining acknowledgement/negative acknowledgement (A/N) information in accordance with the modulation symbol and the N spreading sequences, wherein the A/N information indicates whether the at least one data block is correctly~~receiv~~detected by the UE, and the modulation symbol and the N spreading sequences jointly determine the A/N information; and determining whether the at least one data block needs to be retransmitted depending on the A/N information~~determined~~.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for allocating and transmitting time and frequency resource for resource request indicator**

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| **公开号** | [US9258803](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9258803&sv=f302349e53bda5e545ff28e661775ed5) | **公开日** | 2016/02/09 |
| **申请号** | 13/685,457 | **申请日** | 2012/11/26 |
| **授权日** | 2016/02/09 | **优先日** | 2007/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Dang; Shujun | Ma; Sha | Wang; Xianghua | Deng; Tianle | Chen; Xiaobo | Wang; Chengyu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| Method and apparatus are provided to allocate a time and frequency resource of a resource request indicator (RRI) and to transmit an RRI. Codes are allocated for an RRI and other (such as non-RRI) uplink control signaling. The RRI and other uplink control signaling can be multiplexed in the same time and frequency resource, such as through multiplexing in a code division manner. |

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| **主权项** | 专利度:0特征度:14 |  |  |
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A user terminal, the user terminal comprising: a transmitter, and a processor coupled with the transmitter, wherein the processor being operable to obtain a code set that is allocated for a resource request indicator (RRI), wherein the RRI comprises a first part and a second part, the code set comprising a first code allocated for the first part of the RRI, a second code allocated for the first part of the RRI, a third code allocated for the second part of the RRI and a fourth code allocated for the second part of the RRI, and the first code allocated for the first part of the RRI, the second code allocated for the first part of the RRI, the third code allocated for the second part of the RRI and the fourth code allocated for the second part of the RRI are allocated to the user terminal for one slot; the transmitter being operable to send the RRI using the code set, wherein in a time domain, an extended manner corresponding to the first code allocated for a first part of the RRI is identical to an extended manner corresponding to a first code allocated for a pilot part of non-RRI uplink control signaling; in a frequency domain, an extended manner corresponding to the second code allocated for the first part of the RRI is identical to an extended manner corresponding to a second code allocated for the pilot part of the non-RRI uplink control signaling; in the time domain, an extended manner corresponding to the third code allocated for a second part of the RRI is identical to an extended manner corresponding to a third code allocated for a data part of the non-RRI uplink control signaling; and in the frequency domain, an extended manner corresponding to the fourth code allocated for the second part of the RRI is identical to an extended manner corresponding to a fourth code allocated for the data part of the non-RRI uplink control signaling.

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| **对偶主权项** | 专利度:10特征度:15 |  |  |
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A~~method for allocat~~user terminal, the user terminal comprising:a t~~ime and frequency resource for a resource request indicator (RRI), comprising: allocating codes fo~~ransmitter, and a processor coupled with the transmitter, wherein the processor being operable to obtain a code set that is allocated for a resource request indicator (RRI), wherein the RRI comprises a first part and a second part, the code set comprising a first code allocated for the first part of the RRI, a second code allocated for the first part ofthe RRI,a~~nd non-RRI uplink control signaling, said non-RRI uplink control signaling comprising a pilot part and a data part,~~third code allocated for the second part of the RRI and a fourth code allocated for the second part of the RRI, and the first code allocated for the first part of the RRI, the second code allocated for the first part of the RRI, the third code allocated for the second part of the RRI and the fourth code allocated for the second part of the RRI are allocated to the user terminal for one slot;~~w~~the~~rein extended manners~~transmitter being operable to send the RRI using the code set, whereininatime domain,an~~d frequency domain corresponding to a first part of the codes allocated for the RRI are respectively the same~~extended manner corresponding to the first code allocated for a first part of the RRI is identical to an extended manner corresponding to a first code allocated for a pilot part of non-RRI uplink control signaling; in a frequency domain,a~~s~~nextended manner~~s~~correspondingt~~ime domain and frequency domain~~o the second code allocated for the first part of the RRI is identical to an extended mannercorresponding to~~the~~a secondcode~~s~~allocated for the pilot part of the non-RRI uplink control signaling~~, and extended manners in~~; in thetime domain,an~~d frequency domain corresponding to a second part of the codes allocated for the RRI are respectively the same as~~extended manner corresponding to the third code allocated for a second part of the RRI is identical to an extended manner corresponding to a third code allocated for a data part of the non-RRI uplink control signaling; and in the frequency domain, anextended manner~~s~~correspondingt~~ime domain and frequency domain~~o the fourth code allocated for the second part of the RRI is identical to an extended mannercorresponding toa fourth~~e~~code~~s~~allocated for the data part of the non-RRI uplink control signaling.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 24 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, terminal, base station, and system for adjusting control parameters**

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| **公开号** | [US9253691](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9253691&sv=6bd16018ec7a4adc32bbc46237bf622d) | **公开日** | 2016/02/02 |
| **申请号** | 14/186,633 | **申请日** | 2014/02/21 |
| **授权日** | 2016/02/02 | **优先日** | 2011/08/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Tao | Wang; Shukun | Lin; Bo |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention discloses a method for adjusting control parameters. The method includes: when a terminal fails to be handed over from a source cell to a target cell, or when the terminal is handed over from a source cell to a target cell successfully and a radio link connection failure occurs on a radio link established between the terminal and the target cell, reestablishing, by the terminal, a radio link with a reestablished cell; and sending, by the terminal, a report message to a base station of the reestablished cell, where the report message carries moving speed information of the terminal and/or size information of the target cell. |

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| **主权项** | 专利度:16特征度:18 |  |  |
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A method for adjusting a control parameter, comprising: when a terminal fails to be handed over from a source cell to a target cell, or when the terminal is handed over from the source cell to the target cell successfully and a radio link connection failure occurs on a radio link established between the terminal and the target cell, reestablishing, by the terminal, the radio link with a reestablished cell; and sending, by the terminal, a report message to a base station of the reestablished cell, wherein the report message carries (a) moving speed information of the terminal and (b) size information of the target cell, so that the base station of the reestablished cell adjusts a mobility control parameter according to at least one of the moving speed information of the terminal and the size information of the target cell and sends the adjusted mobility control parameter to the terminal; wherein the moving speed information of the terminal comprises moving state information of the terminal; the base station adjusting the mobility control parameter further comprises: adjusting a scale factor corresponding to the moving state information of the terminal; adjusting a scale factor corresponding to the size information of the target cell; adjusting a current handover control parameter by multiply the adjusted scale factor corresponding to the moving state information of the terminal and the adjusted scale factor corresponding to the size information of the target cell; and obtaining the adjusted mobility control parameter comprising the adjusted scale factor corresponding to the moving state information of the terminal, the adjusted scale factor corresponding to the size information of the target cell and the adjusted current handover control parameter.

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| **对偶主权项** | 专利度:16特征度:12 |  |  |
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A method for adjusting a control parameter, comprising: when a terminal fails to be handed over from a source cell to a target cell, or when the terminal is handed over from the source cell to the target cell successfully and a radio link connection failure occurs on a radio link established between the terminal and the target cell, reestablishing, by the terminal, the radio link with a reestablished cell; and sending, by the terminal, a report message to a base station of the reestablished cell, wherein the report message carries~~at least~~(a) moving speed information of the terminal and (b) size information of the target cell, so that the base station~~e~~of the~~following (a)~~reestablished cell adjusts a mobility control parameter according to at least one of themoving speed information of the terminal and~~(b)~~thesize information of the target cell~~, so that the base station of the reestablished cell adjusts a mobility control parameter according to at least one of~~and sends the adjusted mobility control parameter to the terminal; wherein the moving speed information of the terminal comprises moving state information of the terminal; the base station adjusting the mobility control parameter further comprises: adjusting a scale factor corresponding to the moving state information of the terminal; adjusting a scale factor corresponding to the size information of the target cell; adjusting a current handover control parameter by multiply the adjusted scale factor corresponding tothe moving s~~peed~~tateinformation of the terminal and theadjusted scale factor corresponding to thesize information of the target cell;and~~sends~~obtainingthe adjusted mobility control parameter~~to the terminal~~comprising the adjusted scale factor corresponding to the moving state information of the terminal, the adjusted scale factor corresponding to the size information of the target cell and the adjusted current handover control parameter.

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| **被引用** | 18 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Adaptive audio signal coding**

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| **公开号** | [US9251798](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9251798&sv=08eecf168b25b78a76d4e411e1a3a680) | **公开日** | 2016/02/02 |
| **申请号** | 14/145,632 | **申请日** | 2013/12/31 |
| **授权日** | 2016/02/02 | **优先日** | 2011/10/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Miao; Lei | Liu; Zexin |
| **国际 主分类** | G10L 19/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| Example embodiments described herein generally provide for adaptive audio signal coding of low-frequency and high-frequency audio signals. More specifically, audio signals are categorized into high-frequency audio signals and low-frequency audio signals. Then, based on a set coding and/or characteristics of the low-frequency audio signals, the low-frequency coding manner is selected. Similarly, but in addition to, a bandwidth extension mode to code the high-frequency audio signals is selected according to the low-frequency coding manner and/or characteristics of the audio signals. |

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| **主权项** | 专利度:9特征度:20 |  |  |
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In an audio encoder, a method of adaptive audio signal coding, the method comprising: categorizing, by a categorizing unit programmed on an encoder, audio signals into high-frequency audio signals and low-frequency audio signals; coding, by a low-frequency signal coding unit programmed on an encoder, the low-frequency audio signals by using a time domain coding manner or a frequency domain coding manner according to characteristics of the low-frequency audio signals; and selecting, by a high-frequency signal coding unit programmed on an encoder, a bandwidth extension mode to code the high-frequency audio signals according to a low-frequency coding manner, characteristics of the audio signals, or both; wherein the selecting the bandwidth extension mode to code the high-frequency audio signals according to the characteristics of the audio signals further comprises: determining that the audio signals are voice signals, and selecting a time domain bandwidth extension mode to perform time domain coding for the high-frequency audio signals; or otherwise, determining that the audio signals are music signals, and selecting a frequency domain bandwidth extension mode to perform frequency domain coding for the high-frequency audio signals.

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| **对偶主权项** | 专利度:20特征度:18 |  |  |
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In an audio encoder, a method of adaptive audio signal coding, the method comprising: categorizing, by a categorizing unit programmed on an encoder,audio signals into high-frequency audio signals and low-frequency audio signals; coding, by a low-frequency signal coding unit programmed on an encoder,the low-frequency audio signals by using a time domain coding manner or a frequency domain coding manner according to characteristics of the low-frequency audio signals; and selecting, by a high-frequency signal coding unit programmed on an encoder,a bandwidth extension mode to code the high-frequency audio signals according to a low-frequency coding manner, characteristics of the audio signals, or both; wherein the selecting the bandwidth extension mode to code the high-frequency audio signals according to the characteristics of the audio signals further comprises: determining that the audio signals are voice signals, and selecting a time domain bandwidth extension mode to perform time domain coding for the high-frequency audio signals; or otherwise, determining that the audio signals are music signals, and selecting a frequency domain bandwidth extension mode to perform frequency domain coding for the high-frequency audio signals.

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| **被引用** | 2 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for negotiating security capability when terminal moves**

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| **公开号** | [US9241261](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9241261&sv=0e38f1b246a9f645530f9d5876684fa2) | **公开日** | 2016/01/19 |
| **申请号** | 14/303,146 | **申请日** | 2014/06/12 |
| **授权日** | 2016/01/19 | **优先日** | 2007/08/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Chengdong |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| An MME negotiates security in case of idle state mobility for a UE from a first network to a LTE network. The UE sends its security capabilities including non-access stratum (NAS) security capabilities supported by the UE to the LTE network. The MME selects a NAS security algorithm, in accordance with the NAS security capabilities of the UE, and sends the selected NAS security algorithm to the UE, sharing the NAS security algorithm between the UE and the LTE network when the UE moves from the first network to the LTE network. The MME also derives, in accordance with the selected NAS security algorithm, a NAS protection key from an authentication vector-related key so as to security communication between the UE and the LTE network. |

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| **主权项** | 专利度:24特征度:25 |  |  |
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A method of security negotiation for idle state mobility from a first network to a long term evolution (LTE) network using a mobility management entity (MME), the method comprising: transmitting an authentication vector-related key from a service general packet radio service (GPRS) support node (SGSN) in the first network to the MME; receiving security capabilities of a user equipment (UE) including non-access stratum (NAS) security capabilities of the UE from the UE; selecting a NAS security algorithm supported by the NAS security capabilities of the UE; sending a message that indicates the selected NAS security algorithm to the UE; and deriving a NAS protection key with the selected NAS security algorithm from the authentication vector-related key.

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| **对偶主权项** | 专利度:24特征度:8 |  |  |
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A method of security negotiation for idle state mobility from a first network to a long term evolution (LTE) network~~, the method comprising: receiving, by a mobility management entity (MME~~using a mobility management entity (MME), the method comprising: transmitting an authentication vector-related key from a service general packet radio service (GPRS) support node (SGSN) in the~~LTE~~firstnetwork~~,~~to the MME; receivingsecurity capabilities of a user equipment (UE)~~, the security capabilities of the UE~~including non-access stratum (NAS) security capabilities of the UE~~; selecting, by the MME,~~from the UE; selectinga NAS security algorithm~~, in accordance with~~supported bythe NAS security capabilities of the UE; sending~~, by the MME, a message including~~a message that indicatesthe selected NAS security algorithm to the UE; andderiving~~, by the MME,~~a NAS protection key~~from an authentication vector-related key, in accordance~~with the selected NAS security algorithmfrom the authentication vector-related key.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 20 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets**

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| **公开号** | [US9240875](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9240875&sv=62397321938d460334fcadc121e99408) | **公开日** | 2016/01/19 |
| **申请号** | 14/056,956 | **申请日** | 2013/10/18 |
| **授权日** | 2016/01/19 | **优先日** | 2008/11/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Fan; Xiaoan | Liu; Guang | Li; Bo | Hou; Yunzhe |
| **国际 主分类** | H04L 5/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The application relates to radio communications and discloses a method and apparatus for feeding back and receiving acknowledgment (ACK) information of semi-persistent scheduling (SPS) data packets. The method includes receiving downlink data packets and an uplink data assignment indicator (UL DAI) from a base station, wherein a value of the UL DAI indicates a number (N) of all scheduled downlink sub-frames which scheduled by the base station for the user equipment, the number N is greater than 1, and a number k (k&#x3c;N) of the downlink data packets is/are semi-persistent scheduling (SPS) data packets; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) acknowledging the N downlink data packets, k ACKs/NAKs of the k SPS data packets is/are placed from (N k+1)th to Nth positions of the N ACKs/NAKs; and sending the feedback signal to the base station starting from the ACK/NAK at the first position. |

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| **主权项** | 专利度:10特征度:19 |  |  |
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A method for a user equipment to feedback acknowledgement information of semi-persistent scheduling (SPS) data packets, comprising: obtaining a quantity N of physical downlink shared channel (PDSCH) sub-frames that are scheduled by a base station for the user equipment, the~~N~~scheduled PDSCH sub-frames including at least one SPS sub-frame and at least one dynamic scheduling sub-frame; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) in response to the N PDSCH sub-frames scheduled for the user equipment, wherein the feedback signal comprises at least one ACK/NAK in response to the at least one SPS sub-frame and at least one ACK/NAK in response to the at least one dynamic scheduling sub-frame, and wherein the at least one ACK/NAK in response to the at least one SPS sub-frame~~follows after~~is/are placed behindthe at least one ACK/NAK in response to the at least one dynamic scheduling sub-frame; and sending the feedback signal to the base station.

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| **对偶主权项** | 专利度:10特征度:9 |  |  |
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A method for a user equipment to feedback acknowledgement information of semi-persistent scheduling (SPS) data packets, comprising: obtaining a quantity N of physical downlink shared channel (PDSCH) sub-frames that are scheduled by a base station for the user equipment, the scheduled PDSCH sub-frames including at least one SPS sub-frame and at least one dynamic scheduling sub-frame; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) in response to the N PDSCH sub-frames scheduled for the user equipment, wherein the feedback signal comprises at least one ACK/NAK in response to the at least one SPS sub-frame and at least one ACK/NAK in response to the at least one dynamic scheduling sub-frame, and wherein the at least one ACK/NAK in response to the at least one SPS sub-frame is/are placed behind the at least one ACK/NAK in response to the at least one dynamic scheduling sub-frame; and sending the feedback signal to the base station.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 34 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for realizing broadcast TV**

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| **公开号** | [US9226002](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9226002&sv=d5de4bf9d9f722376ee9f4406507cf37) | **公开日** | 2015/12/29 |
| **申请号** | 14/274,297 | **申请日** | 2014/05/09 |
| **授权日** | 2015/12/29 | **优先日** | 2007/04/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Huang; Yong |
| **国际 主分类** | H04N 21/234 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for realizing video live broadcast, includes: receiving a request for creating conversation from a user equipment, the request carrying indication information for identifying video live broadcast BTV service packet, the BTV packet includes several channel program with the same authorization attribute and the same accounting attribute; sending BTV service control information corresponding to BTV service packet to a network marginal equipment corresponding to the user equipment UE; creating the conversation between a IPTV server and the user equipment UE according to the request; sending the channel program that the UE need access to the UE according to the BTV service control information. Corresponding equipment and system also are provided. The invention can ensure flexible authorization and accounting capability, meanwhile it also ensure the user can switch channel quickly according to the present invention. |

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| **主权项** | 专利度:12特征度:50 |  |  |
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A method for realizing~~a~~Broadcast TV (BTV)~~service~~, comprising: subdividing, by an~~Internet Protocol Television (~~IPTV~~)~~server, total BTV service to be consumed into~~different~~BTV service packages,~~and allocating a BTV service package ID for each BTV service package,~~wherein each BTV service package comprises multiple channel programs with the same authorization attribute and the same charging attribute;~~send~~receiving~~,~~by the IPTV server~~, the BTV service package IDs to a User Equipment (UE) and a network edge device corresponding to the UE; configuring, by an operator device, channel program content of each BTV service package in the network edge device; receiving, by the IPTV server, from the UE~~from a User Equipment (UE), a first session establishment request for establishing a first session~~,~~the first session establishment request carrying indication information for identifying a first BTV service package,~~and the first session establishment request requests the IPTV server to establish a session between the IPTV server and the UE in which the UE and the IPTV server know each other's status by periodically sending keepalive packets to each other,~~wherein the IPTV server realizes authorization and charging functions on the first BTV service package via the first session~~,~~and wherein an online state of the UE is monitored in real-time via the first session; sending, by the IPTV server~~,~~after authorizing a first channel program in the first BTV service package requested to access by the UE, to~~the~~anetwork edge device, BTV service control information for identifying the first BTV service package so as to activate the first BTV service~~package, wherein the BTV service control information includes a BTV service package ID, a UE ID, and an indication for activating a BTV service~~package; establishing, by the IPTV server, the first session between the IPTV server and the UE to perform charging to the first channel program; receiving, by the network edge device, a first IGMP JOIN message from the UE;~~and~~searching~~, by~~the network edge device~~,~~the first channel program in the first BTV service package, and sending the first channel program in the first BTV service package to the UE;~~wherein~~when the UE requests to access a second channel program in the first BTV service package,~~neither authorization nor charging operations are performed by the IPTV device, and sending the association ID to the network edge device so as to associate an IGMP request of the UE with a BTV service package that corresponds to the association ID~~sending, by the network edge device, the second channel program to the UE; and when the UE requests to access a third channel program in a second BTV service package; sending, by the UE, a second session establishing request for establishing a second session, the second session establishing request carrying indication information for identifying the second BTV service package, sending, by the IPTV server, after authorizing the third channel program in the second BTV service package requested to access by the UE to the network edge device, BTV service control information for identifying the second BTV service package so as to activate the second BTV service package, establishing, by the IPTV server, the second session between the IPTV server and the UE to perform charging to the third channel program, receiving by the network edge device a second IGMP JOIN message from the UE, searching, by the network edge device, the third channel program in the second BTV service package, and sending, by the network edge device, the third channel program in the second BTV service package to the UE.

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| **对偶主权项** | 专利度:13特征度:20 |  |  |
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A method for realizing Broadcast TV (BTV), comprising: subdividing, by an IPTV server, total BTV service to be consumed into BTV service packages, wherein each BTV service package comprises multiple channel programs with the same authorization attribute and the same charging attribute; receiving by the IPTV server from a User Equipment (UE), a first session establishment request for establishing a first session the first session establishment request carrying indication information for identifying a first BTV service package, wherein the IPTV server realizes authorization and charging functions on the first BTV service package via the first session and wherein an online state of the UE is monitored in real-time via the first session; sending, by the IPTV server after authorizing a first channel program in the first BTV service package requested to access by the UE, to a network edge device, BTV service control information for identifying the first BTV service package so as to activate the first BTV service package; establishing, by the IPTV server, the first session between the IPTV server and the UE to perform charging to the first channel program; receiving, by the network edge device, a first IGMP JOIN message from the UE; searching the network edge device the first channel program in the first BTV service package, and sending the first channel program in the first BTV service package to the UE; when the UE requests to access a second channel program in the first BTV service package, sending, by the network edge device, the second channel program to the UE; and when the UE requests to access a third channel program in a second BTV service package; sending, by the UE, a second session establishing request for establishing a second session, the second session establishing request carrying indication information for identifying the second BTV service package, sending, by the IPTV server, after authorizing the third channel program in the second BTV service package requested to access by the UE to the network edge device, BTV service control information for identifying the second BTV service package so as to activate the second BTV service package, establishing, by the IPTV server, the second session between the IPTV server and the UE to perform charging to the third channel program, receiving by the network edge device a second IGMP JOIN message from the UE, searching, by the network edge device, the third channel program in the second BTV service package, and sending, by the network edge device, the third channel program in the second BTV service package to the UE.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for energy saving management in network management system**

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| **公开号** | [US9220060](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9220060&sv=cdc9bbb72f0829626e6f73d4c885af19) | **公开日** | 2015/12/22 |
| **申请号** | 13/664,224 | **申请日** | 2012/10/30 |
| **授权日** | 2015/12/22 | **优先日** | 2010/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xia; Haitao | Zhao; Dong | Zou; Lan |
| **国际 主分类** | H04W 52/02 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method, an apparatus, and a system for energy saving management in a network management system are disclosed. The method for energy saving management includes: configuring, by an integrated reference point manager IRPManager, an energy saving policy, where the energy saving policy includes an identifier of a coverage backup entity for energy saving and further includes policy information of energy saving activation and/or policy information of energy saving deactivation; and sending, by the IRPManager, the energy saving policy to an integrated reference point agent IRPAgent, where the energy saving policy is used to perform energy saving management on a base station. |

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| **主权项** | 专利度:15特征度:19 |  |  |
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A method for energy saving management in a network management system, the method comprising: configuring, by an integrated reference point manager (IRPManager), an identifier of a coverage backup entity for energy saving, a load threshold for energy saving activation, and a load threshold for energy saving deactivation; and sending, by the IRPManager, the identifier of the coverage backup entity, the load threshold for energy saving activation, and the load threshold for energy saving deactivation to an integrated reference point agent (IRPAgent), wherein the identifier of the coverage backup entity, the load threshold for energy saving activation, and the load threshold for energy saving deactivation are used to perform energy saving management on a local entity, wherein in the procedure of the energy saving management, the coverage backup entity is used for providing coverage backup for the local entity, the load threshold for energy saving activation is used for triggering the energy saving activation, and the load threshold for energy saving deactivation is used for triggering energy saving deactivation; wherein the load threshold for energy saving activation comprises a local load threshold for energy saving activation and a backup load threshold for energy saving activation; wherein the local load threshold for energy saving activation is the local entity's load threshold for triggering energy saving activation; wherein the backup load threshold for energy saving activation is the coverage backup entity's load threshold for triggering energy saving activation; and wherein the load threshold for energy saving deactivation comprises a backup load threshold for energy saving deactivation, wherein the backup load threshold for energy saving deactivation is the coverage backup entity's load threshold for triggering energy saving deactivation.

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| **对偶主权项** | 专利度:19特征度:16 |  |  |
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A method for energy saving management in a network management system, the method comprising: configuring, by an integrated reference point manager (IRPManager), an~~energy saving policy, wherein the energy saving policy comprises an~~identifier of a coverage backup entity for energy saving, a load threshold for energy saving activation, and a load threshold for energy saving deactivation; and sending, by the IRPManager, the identifier of the coverage backup entity, the load threshold for energy saving activation, and the load threshold for energy saving deactivation to an integrated reference point agent (IRPAgent), wherein theidentifier of~~a~~thecoverage backup entity~~for energy saving and further comprises policy information of~~, the load threshold for energy saving activation, and the load threshold for energy saving deactivation are used to perform energy saving management on a local entity, wherein in the procedure of the energy saving management, the coverage backup entity is used for providing coverage backup for the local entity, the load threshold for energy saving activation is used for triggering theenergy saving activation,and~~/or policy information of~~the load threshold for energy saving deactivation is used for triggering energy saving deactivation; wherein the load threshold for energy saving activation comprises a local load threshold forenergy saving~~de~~activation~~;~~and~~sending, by the IRPManager, the energy saving policy to an integrated reference point agent (IRPAgent), wherein the energy saving policy is used to per~~a backup load threshold for energy saving activation; wherein the local load threshold for energy saving activation is the local entity's load threshold for triggering energy saving activation; wherein the backup load threshold for energy saving activation is the coverage backup entity's load threshold for triggering energy saving activation; and wherein the load threshold for energy saving deactivation comprises a backup load threshold for energy saving deactivation, wherein the backup load thresholdfor~~m~~energy saving~~management on a base st~~deactivation is the coverage backup entity's load threshold for triggering energy saving deactivation.

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| **被引用** | 15 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for allocating resources and processing confirmation information**

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| **公开号** | [US9219580](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9219580&sv=b928bad7b51c85562bd8608a823ed67f) | **公开日** | 2015/12/22 |
| **申请号** | 13/145,984 | **申请日** | 2010/01/25 |
| **授权日** | 2015/12/22 | **优先日** | 2009/01/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Qu; Binyu | Xue; Lixia | Guan; Lei |
| **国际 主分类** | H04L 1/18 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method and an apparatus for allocating ACKnowledgement (ACK)/Non-ACKnowledgement (NACK) channel resources and processing confirmation information are disclosed. The method includes: The network side determines one physical channel area among multiple physical channel areas to be used by an ACK/NACK channel, and notifies the determined physical channel area to a User Equipment (UE) so as to enable the UE to determine a channel for receiving or sending ACK/NACK information in the determined physical channel area according to a mapping rule. Moreover, the network side may send or receive ACK/NACK information on the physical channel area that includes the ACK/NACK channel. The method and apparatus improve the utilization ratio and flexibility of the ACK/NACK channel, and reduce the probability of conflict generated by the ACK/NACK channel. |

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| **主权项** | 专利度:28特征度:20 |  |  |
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A resource allocation method, comprising: determining, by a base station (BS) from at least two physical channel areas, a physical channel area for one physical downlink shared channel (PDSCH) on one downlink carrier in at least two downlink carriers, wherein each of the at least two physical channel areas comprises at least two physical uplink control channel (PUCCH) resources, the at least two downlink carriers are capable of being configured to transmit data for a user equipment (UE) on one or more of the at least two downlink carriers, and the determined physical channel area for the one PDSCH is dynamically located between a long term evolution (LTE) area and an LTE-A specific area of the at least two physical channel areas; transmitting, by the BS, a physical channel area indication for notifying the UE of the determined physical channel area; transmitting, by the BS, the PDSCH to the UE on the one downlink carrier; and receiving, by the BS from the UE, uplink acknowledgement or non-acknowledgement (ACK/NACK) information, in response to the PDSCH, on a PUCCH resource in the determined physical channel area.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A resource allocation method, comprising: determining~~one physical channel area among multiple physical channel areas; and notifying a U~~, by a base station (BS) from at least two physical channel areas, a physical channel area for one physical downlink shared channel (PDSCH) on one downlink carrier in at least two downlink carriers, wherein each of the at least two physical channel areas comprises at least two physical uplink control channel (PUCCH) resources, the at least two downlink carriers are capable of being configured to transmit data for a user~~E~~equipment (UE) o~~f the determined physical channel area through signaling so as to enable the UE~~n one or more of the at least two downlink carriers, and the determined physical channel area for the one PDSCH is dynamically located between a long term evolution (LTE) area and an LTE-A specific area of the at leasttwo~~determine a confirm~~physical channel areas; transmitting, by the BS, a physical channel area indication~~in~~for~~mation channel in~~notifying the UE ofthe determined physical channel area~~according to a mapping rule~~; transmitting, by the BS, the PDSCH to the UE on the one downlink carrier; and receiving, by the BS from the UE, uplink acknowledgement or non-acknowledgement (ACK/NACK) information, in response to the PDSCH, on a PUCCH resource in the determined physical channel area.

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| **被引用** | 9 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.9 |

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| **同族数** | 15 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Cell access control method and user equipment**

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| **公开号** | [US9215633](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9215633&sv=6ed977d4d1ecc15aa289015e3663ce0a) | **公开日** | 2015/12/15 |
| **申请号** | 13/852,803 | **申请日** | 2013/03/28 |
| **授权日** | 2015/12/15 | **优先日** | 2007/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Qiu; Yong |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A cell access control method and a user terminal are provided, the method includes: obtaining, by a user equipment (UE), cell access information through a pilot channel and/or a synchronization channel; determining a current cell is a macro base station cell or an HNB cell according to the cell access information; determining, when the current cell is an HNB cell, whether the UE is allowed to access the HNB cell according to HNB information of the cell access information, if the UE is allowed to access the HNB cell, performing the access processing, if the UE is not allowed to access the HNB, abandoning the access. A UE is provided accordingly. |

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| **主权项** | 专利度:14特征度:10 |  |  |
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A cell access control method, comprising:~~receiv~~obtaining, by a user equipment (UE), cell identifier information~~through~~froma synchronization channel;~~rea~~determining, by the UE,~~a broadcast message including home eNodeB (HNB) information when a cell is determined to be an HNB cell in accordance with the cell identifier information received through the synchronization channel; and accessing, by the UE, the HNB cell when~~whether a first cell is a home eNodeB (HNB) cell in accordance with the cell identifier information obtained by the UE; obtaining, by the UE, cell access information from a broadcast message when the first cell is determined to be the HNB cell; and determining, bythe UE~~is d~~, whether~~mined to be~~the UE isallowed to access the HNB cell in accordance with the~~HNB~~cell accessinformation~~included in~~obtained fromthe broadcast message.

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| **对偶主权项** | 专利度:16特征度:7 |  |  |
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A cell access control method, comprising: obtaining, by a user equipment (UE), cell identifier information from a synchronization channel; determining, by the UE, whether a first cell is a home eNodeB (HNB) cell in accordance with the cell identifier information obtained by the UE; obtaining, by the UE, cell access information from a broadcast message when the first cell is determined to be the HNB cell; and determining, by the UE, whether the UE is allowed to access the HNB cell in accordance with the cell access information obtained from the broadcast message.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for non-access stratum message processing during handover in evolved network**

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| **公开号** | [US9215624](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9215624&sv=9a9ef2c3ea6437acda156715d4a53c94) | **公开日** | 2015/12/15 |
| **申请号** | 14/156,184 | **申请日** | 2014/01/15 |
| **授权日** | 2015/12/15 | **优先日** | 2007/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Hongzhuo | Qiu; Yong | Huang; Ying | Wang; Qiang |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for non-access stratum (NAS) message processing during handover in an evolved network are provided. The method includes the following steps. An evolved packet core (EPC) receives a message which indicates that a UE is being handed over sent by a source evolved NodeB (S-eNB), and stops sending an NAS message to the UE temporarily. The EPC receives a message which indicates that the UE returns to an S-eNB service area sent by the S-eNB. The EPC sends the NAS message to the UE through the S-eNB, if needed. With the method and the apparatus, the EPC can acquire a location of the UE in time in the case of a handover failure of the UE, a time limit of a retransmission timer is set precisely, and a specific implementation for forwarding an NAS message through an X2 interface is provided. |

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| **主权项** | 专利度:16特征度:12 |  |  |
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A~~communication~~method for processing a Non-access Stratum (NAS) message during a handover of a user equipment (UE) in an evolved network, themethod~~,~~comprising:~~send~~receiving, by a~~mobility management device, a first message to a base station, the first message including a non-access stratum (NAS) message; and sending, by the base station, a second message to the mobility management device, the second message including cause information and~~n Evolved Packet Core (EPC), a message sent from an source eNodeB (S-eNB), the message indicating that the UE is in the handover; starting, by the EPC, a retransmission timer; and sending, by the EPC,the NAS message~~,~~tothe~~cause information indicating the NAS message is not delivered by the base station to a user equipment because of a handover~~UE through the S-eNB when the handover fails and the retransmission timer expires.

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| **对偶主权项** | 专利度:8特征度:12 |  |  |
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A method for processing a Non-access Stratum (NAS) message during a handover of a user equipment (UE) in an evolved network, the method comprising: receiving, by an Evolved Packet Core (EPC), a message sent from an source eNodeB (S-eNB), the message indicating that the UE is in the handover; starting, by the EPC, a retransmission timer; and sending, by the EPC, the NAS message to the UE through the S-eNB when the handover fails and the retransmission timer expires.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 19 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for reporting and obtaining channel state information, eNodeB, and user equipment**

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| **公开号** | [US9209882](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9209882&sv=848a0dec0ae406a409b54b6725b29449) | **公开日** | 2015/12/08 |
| **申请号** | 13/606,414 | **申请日** | 2012/09/07 |
| **授权日** | 2015/12/08 | **优先日** | 2010/07/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Xingwei | Lv; Yongxia | Cheng; Yan |
| **国际 主分类** | H04B 7/06 | **优先 国家** | CN |
| **代理** | HUAWEI TECHNOLOGIES CO., LTD. |

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| **摘要** |  |
| A method for reporting and obtaining channel state information, an eNodeB, and a user equipment are disclosed. The method for reporting channel state information includes: determining a reported content in channel state information (CSI) of downlink component carriers according to priorities of contents-in-CSI, where the CSI of the downlink component carriers includes the reported content and a content that is not to be reported; and reporting the reported content to an eNodeB on a physical uplink control channel (PUCCH). By determining a reported content in CSI according to a priority, the shortage of a CSI reporting resource may be relieved. |

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| **主权项** | 专利度:8特征度:26 |  |  |
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A method for a user equipment device (UE) to report channel state information (CSI) to an evolved base station (eNodeB), comprising: obtaining, by the UE, CSI of a plurality of downlink component carriers (CCs), wherein CSI of each downlink CC comprises at least one of the following items: a rank indicator (RI), a wideband channel quality indicator (CQI), a subband CQI and a subband precoding matrix indicator (PMI); when at least part of the CSI of the plurality of downlink CCs needs to be reported in an uplink subframe, identifying, by the UE, a reported content that is to be reported to the eNodeB and a non-reported content that is not to be reported to the eNodeB from all contents in the CSI of the plurality of downlink CCs according to preset priorities of the RI, the wideband CQI, the subband CQI and the subband PMI, wherein the priority of the RI is higher than the priority of the wideband CQI, the priority of the wideband CQI is higher than the priority of the subband CQI, the priority of the subband CQI is the same as the priority of the subband PMI, and wherein the reported content includes one or more items whose priorities are higher than that of other one or more items included in the non-reported content; and sending, by the UE, only the reported content to the eNodeB on a physical uplink control channel (PUCCH) of the uplink subframe, wherein the one or more items included the reported content include at least one of the RI or the wideband CQI, and the other one or more items included in the non-reported content include at least one of the subband CQI or the subband PMI.

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| **对偶主权项** | 专利度:15特征度:29 |  |  |
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A method fora user equipment device (UE) toreport~~ing~~channel state information~~, comprising: obtaining channel state information~~(CSI) to an evolved base station (eNodeB), comprising: obtaining, by the UE, CSI of a plurality of downlink component carriers (CCs), wherein CSI of each downlink CC comprises at least one of the following items: a rank indicator (RI), a wideband channel quality indicator(C~~S~~QI)~~of multiple downlink component carriers (CCs); and sending reported information to an~~, a subband CQI and a subband precoding matrix indicator (PMI); when at least part of the CSI of the plurality of downlink CCs needs to be reported in an uplink subframe, identifying, by the UE, a reported content that is to be reported to the eNodeB and a non-reported content that is not to be reported to the eNodeB from all contents in the CSI of the plurality of downlink CCs according to preset priorities of the RI, the wideband CQI, the subband CQI and the subband PMI, wherein the priority of the RI is higher than the priority of the wideband CQI, the priority of the wideband CQI is higher than the priority of the subband CQI, the priority of the subband CQI is the same as the priority of the subband PMI, and wherein the reported content includes one or more items whose priorities are higher than that of other one or more items included in the non-reported content; and sending, by the UE, only the reported content to theeNodeB on a physical uplink control channel (PUCCH) of~~an~~theuplink subframe,wherein the~~reported information comprises at least part of CSI of each downlink CC in at least two downlink CCs of the multiple downlink CCs~~one or more items included the reported content include at least one of the RI or the wideband CQI, and the other one or more items included in the non-reported content include at least one of the subband CQI or the subband PMI.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Policy control method and system, and relevant apparatus**

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| **公开号** | [US9197577](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9197577&sv=0241ff7172b7fd06c01928b3723feffd) | **公开日** | 2015/11/24 |
| **申请号** | 13/687,781 | **申请日** | 2012/11/28 |
| **授权日** | 2015/11/24 | **优先日** | 2010/05/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chai; Xiaoqian | Shan; Mingjun | Kang; Jiao |
| **国际 主分类** | H04L 12/911 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention discloses a policy control method and system, and a relevant apparatus. The method includes: receiving, by a policy decision apparatus, a control policy request sent by a gateway device, where the control policy request carries a subscriber identifier; sending, by the policy decision apparatus, a session request message carrying the subscriber identifier to a charging system; receiving, by the policy decision apparatus, a response message; receiving, by the policy decision apparatus, a notification message sent through an established session by the charging system, and generating a service data flow control policy according to information of an occurred charging relevant event; and sending, by the policy decision apparatus, the control policy to the gateway device. The method may implement, based on charging relevant information of a subscriber, policy control of a data flow, flexibility is desirable, and service experience of the subscriber is good. |

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| **主权项** | 专利度:12特征度:21 |  |  |
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A policy control method, comprising: receiving, by a policy decision apparatus, a control policy request sent from a gateway device, wherein the control policy request carries a subscriber identifier; sending, by the policy decision apparatus, a session request message to a charging system, wherein the session request message carries the subscriber identifier; receiving, by the policy decision apparatus, a response message of the session request message from the charging system to indicate that a session between the policy decision apparatus and the charging system is established; receiving, by the policy decision apparatus, a notification message sent through the established session from the charging system, wherein the notification message carriers information of a non-subscribed charging relevant event that has occurred, and the non-subscribed charging relevant event is not subscribed to by the policy decision apparatus, and generating a service data flow control policy according to the information of the occurred non-subscribed charging relevant event carried in the notification message; and sending, by the policy decision apparatus, the control policy to the gateway device according to the control policy request.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A policy control method, comprising: receiving, by a policy decision apparatus, a control policy request sent~~by~~froma gateway device, wherein the control policy request carries a subscriber identifier; sending, by the policy decision apparatus, a session request message to a charging system, wherein the session request message carries the subscriber identifier; receiving, by the policy decision apparatus, a response message of the session request message~~, wherein the response message is sent by~~from the charging system to indicate that a session between the policy decision apparatus andthe charging systemis established; receiving, by the policy decision apparatus, a notification message sent through the established session~~by~~fromthe charging system,wherein the notification message carriers information of a non-subscribed charging relevant event that has occurred, and the non-subscribed charging relevant event is not subscribed to by the policy decision apparatus,and generating a service data flow control policy according totheinformation of~~an~~theoccurrednon-subscribedcharging relevant event carried in the notification message; and sending, by the policy decision apparatus, the control policy to the gateway device according to the control policy request.

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| **被引用** | 3 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication system, base station apparatus, and mobile station apparatus**

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| **公开号** | [US9191149](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9191149&sv=f641081a6b7c47fe562bbccc77fc9ec8) | **公开日** | 2015/11/17 |
| **申请号** | 13/359,294 | **申请日** | 2012/01/26 |
| **授权日** | 2015/11/17 | **优先日** | 2007/07/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Aiba; Tatsushi | Yamada; Shohei |
| **国际 主分类** | H04W 72/04 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The amount of control information is reduced for specifying the transmission method for simultaneously transmitting uplink data and reception quality information, and uplink data and ACK/NACK. Delay in changing the transmission method is reduced, and the mapping of uplink data and reception quality information and of uplink data and ACK/NACK is realized, in compliance with modulation scheme and coding rate of the uplink data specified by the base station apparatus. In a mobile communication system the base station apparatus allocates, to the mobile station apparatus, resources wherein the base station apparatus transmits, to the mobile station apparatus, control information for specifying a transmission format for the mobile station apparatus to transmit information using the uplink, while the mobile station apparatus simultaneously transmits, to the base station apparatus, uplink data and reception quality information based on the specified transmission format when the control information from the base station apparatus is received. |

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| **主权项** | 专利度:10特征度:16 |  |  |
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A mobile station apparatus, comprising: a receiver, configured to receive, from a base station apparatus, resource allocation information specifying an uplink resource for mapping data onto a physical uplink shared channel (PUSCH), wherein the uplink resource comprises a resource block, the resource block carrying a first set of modulation symbols including reception quality information and a second set of modulation symbols including uplink data, the number of the first set of modulation symbols being larger than 0 and the number of the second set of modulation symbols being larger than 0, and the reception quality information indicating a quality of a downlink signal; a processor, configured to calculate, based on the resource allocation information, a quantity of the first set of modulation symbols including the reception quality information, and to map the first set of modulation symbols onto the resource block of the uplink resource; and a transmitter, configured to transmit, to the base station apparatus, the reception quality information in the first set of modulation symbols and the uplink data in the second set of modulation symbols in the resource block of the uplink resource.

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| **对偶主权项** | 专利度:15特征度:21 |  |  |
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A mobile~~communication system where a mobile station apparatus transmits, to a base station apparatus, reception quality information indicating quality of a signal received from the base~~station apparatus, comprising: a receiver, configured to receive, from a base station apparatus, resource allocation information specifying an uplink resource for mapping data onto a physical uplink shared channel (PUSCH),~~t~~whe~~mobile communication system comprising: the base station apparatus, which transmits, to the mobile station apparatus, the signal for permitting data transmission in an uplink, including resource allocation~~rein the uplink resource comprises a resource block, the resource block carrying a first set of modulation symbols including reception qualityinformation~~for~~and as~~p~~ec~~ifying a resources region of an uplink data channel that comprises a time domain and a frequency domain,~~ond set of modulation symbols including uplink data, the number of the first set of modulation symbols being larger than 0andthe~~mobile station apparatus, which calculates an amount of resources for the reception quality information to be mapped together with uplink data on the uplink data channel, using said resource allocation information, such that the amount of resources does not exceed a predetermined amount; and~~number of the second set of modulation symbols being larger than 0, and the reception quality information indicating a quality of a downlink signal; a processor, configured to calculate, based on the resource allocation information, a quantity of the first set of modulation symbols including the reception quality information, and to map the first set of modulation symbols onto the resource block of the uplink resource; and a transmitter, configured totransmit~~s~~, to the base station apparatus, the reception quality information~~with~~inthe~~calculated amount of resources together with~~first set of modulation symbols andthe uplink data~~us~~in~~g~~the~~uplink data channel~~second set of modulation symbols in the resource block of the uplink resource.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 36 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**User equipment, method for determining resource, method for reporting resource, and system for distributing resource**

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| **公开号** | [US9178671](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9178671&sv=42bc6c589767feb6e20ec1a758513a5f) | **公开日** | 2015/11/03 |
| **申请号** | 13/156,613 | **申请日** | 2011/06/09 |
| **授权日** | 2015/11/03 | **优先日** | 2008/12/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Yi | Ma; Jie | Wang; Haidan | He; Chuanfeng | Zhang; Cunfei |
| **国际 主分类** | H04L 5/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A User Equipment (UE), a method for determining a resource, a method for reporting a resource, and a system for distributing a resource are provided. The method for determining a resource includes: if transmission data on the carrier reaches maximum transmission data supported in a scope allowed by Service Grant (SG), and a transmission power of the UE is capable of improving a data transmission rate of the carrier, and the carrier and the other one carrier of the dual carriers are incapable of completing transmitting total buffer status data in the same delay period, determining that a resource distributed to a UE on one carrier of dual carriers of the UE is insufficient; otherwise, determining that the resource distributed for the UE on the carrier is sufficient. Therefore, a solution for reporting the resource of the dual carriers is provided, so as to improve a network performance. |

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| **主权项** | 专利度:18特征度:20 |  |  |
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A method comprising: setting, by a user equipment (UE) capable of data transmission on multiple carriers, a happy bit for each carrier; and transmitting, by the UE, the happy bit, wherein the happy bit is set, for each carrier, to “unhappy” if following first, second and third conditions are met: the first condition indicating that transmission data on the carrier reaches maximum transmission data allowed by a current service grant (SG) on the carrier; the second condition indicating that the UE has enough transmission power available to improve a data transmission rate on the carrier; and the third condition indicating that, in a configured time period, the carrier together with at least one of other carriers among the multiple carriers are incapable of finishing transmission of total buffer data transmitted with a product of the current SG and a ratio of active processes to a total number of processes on the carrier plus a product of a current SG and a ratio of active processes to a total number of processes on each of the at least one of the other carriers.

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| **对偶主权项** | 专利度:11特征度:15 |  |  |
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A method~~for determining a resource, comprising: if transmission data on one carrier of dual carriers of a User Equipment, UE, reaches maximum transmission data supported in a scope~~comprising: setting, by a user equipment (UE) capable of data transmission on multiple carriers, a happy bit for each carrier; and transmitting, by the UE, the happy bit, wherein the happy bit is set, for each carrier, to “unhappy” if following first, second and third conditions are met: the first condition indicating that transmission data on the carrier reaches maximum transmission dataallowed by~~S~~a current service~~G~~grant~~, SG, and a~~(SG) on the carrier; the second condition indicating that the UE has enoughtransmission power~~of the UE is cap~~available~~of~~toimprov~~ing~~ea data transmission rate o~~f~~nthe carrier~~,~~;andthe~~carrier and the other one carrier of the dual~~third condition indicating that, in a configured time period, the carrier together with at least one of other carriers among the multiplecarriers are incapable of~~complet~~finishing transmi~~tting~~ssion oftotal buffer~~status data in a same delay period, determining that a resource distributed to the UE on the carrier is insufficient; otherwise, determining that the resource distributed to the UE on~~data transmitted with a product of the current SG and a ratio of active processes to a total number of processes on the carrier plus a product of a current SG and a ratio of active processes to a total number of processes on each of the at least one of the othercarrier~~is sufficient~~s.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 17 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and network system for terminal to traverse private network to communicate with server in IMS core network**

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| **公开号** | [US9172559](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9172559&sv=e1d58738b0dd2e7c4bc32b5d28930caa) | **公开日** | 2015/10/27 |
| **申请号** | 13/770,014 | **申请日** | 2013/02/19 |
| **授权日** | 2015/10/27 | **优先日** | 2010/08/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chen; Aiping | Nie; Chengjiao | Zhang; Zhanbing |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| Embodiments of the present invention provide a method, an apparatus, and a network system for a terminal to traverse a private network to communicate with a server in an IMS core network. The method includes: the terminal sets a source address of service data to be sent as a virtual IP address, sets a destination address of the service data to be sent as an address of an internal network server, and obtains a first service packet, where the virtual IP address is an address allocated by the IMS core network to the terminal, encapsulate the first service packet into a first tunnel packet, and send the first tunnel packet to the security tunnel gateway over a VPN tunnel between the terminal and a security tunnel gateway, then the security tunnel gateway sends the first service packet in the first tunnel packet to the internal network server. |

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| **主权项** | 专利度:21特征度:34 |  |  |
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A method performed by a terminal in a private network to communicate with a network server in an internet protocol multimedia subsystem (IMS) network, comprising: constructing a first service packet, including: setting a source address of the first service packet as a virtual IP address allocated by the IMS network to the terminal, and setting a destination address of the first service packet as an address of the network server in the IMS network, wherein the first service packet contains service data to be sent to the network server; encapsulating the first service packet into a first tunnel packet, wherein a source IP address of the first tunnel packet is a real IP address of the terminal, and a destination IP address of the first tunnel packet is an IP address of a security tunnel gateway located at an edge of the IMS network; and sending the first tunnel packet to the security tunnel gateway of the IMS network over a virtual private network (VPN) tunnel between the terminal and the security tunnel gateway, for the security tunnel gateway to deliver the first service packet to the network server; wherein the VPN tunnel between the terminal and the security tunnel gateway is a User Datagram Protocol (UDP) tunnel; and when a Security Socket Layer (SSL) tunnel exists between the terminal and the security tunnel gateway additionally, the method further comprises: sending first service control information to the security tunnel gateway over the SSL tunnel, the first service control information comprises a request for allocating the virtual IP address; and receiving second service control information sent by the security tunnel gateway over the SSL tunnel, the second service control information comprises the virtual IP address allocated by the security tunnel gateway to the terminal.

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| **对偶主权项** | 专利度:20特征度:26 |  |  |
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A method performed by a terminal in a private network to communicate with a network server in an internet protocol multimedia subsystem (IMS) network, comprising:~~setting, a source address of service data to be sent as a virtual IP address;~~constructing a first service packet, including: setting a source address of the first service packet as a virtual IP address allocated by the IMS network to the terminal, andsetting a destination address of thefirstservice~~data to be sen~~packet as an address of the network server in the IMS network~~; obtaining a~~, wherein thefirst service packet~~, wherein the virtual IP address is an address allocated by~~contains service data to be sent tothe~~IMS~~network~~to the terminal~~server; encapsulating the first service packet into a first tunnel packet, wherein a source IP address of the first tunnel packet is a~~n~~realIP address of the terminal, and a destination IP address of the first tunnel packet is an IP address of a security tunnel gatewaylocated at an edge of the IMS network; and sending the first tunnel packet to the security tunnel gatewayof the IMS networkover a virtual private network (VPN) tunnel between the terminal and the security tunnel gateway, for the security tunnel gateway to deliver the first service packet to the network server; wherein the VPN tunnel between the terminal and the security tunnel gateway is a User Datagram Protocol (UDP) tunnel; and when a Security Socket Layer (SSL) tunnel exists between the terminal and the security tunnel gateway additionally, the method further comprises: sending first service control information to the security tunnel gateway over the SSL tunnel, the first service control information comprises a request for allocating the virtual IP address; and receiving second service control information sent by the security tunnel gateway over the SSL tunnel, the second service control information comprises the virtual IP address allocated by the security tunnel gateway to the terminal.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Apparatus, system, and method for signaling a quantity of antenna ports in a wireless communication system**

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| **公开号** | [US9172518](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9172518&sv=d809085a00c44787e07d01a840c4c7dd) | **公开日** | 2015/10/27 |
| **申请号** | 14/511,754 | **申请日** | 2014/10/10 |
| **授权日** | 2015/10/27 | **优先日** | 2008/12/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Frenne; Mattias | Popovic; Branislav | Liu; Jianghua |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A quantity of antenna ports of a transmitting apparatus is signalled in a wireless communication system. The quantity of antenna ports of the transmitting apparatus is encoded into a first type information and a second type information. The first type information is transmitted on a physical broadcast channel (PBCH); and the second type information is transmitted on a physical downlink shared channel (PDSCH). The PDSCH is transmitted on at least one antenna port indicated by the first type information. |

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| **主权项** | 专利度:32特征度:11 |  |  |
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A method of receiving a quantity of antenna ports of a transmitting apparatus in a wireless communication system, comprising: receiving, by a receiving apparatus, a first type information on a physical broadcast channel (PBCH) in a case that the first type information is detectable to the receiving apparatus; receiving, by the receiving apparatus, a second type information on a physical downlink shared channel (PDSCH) in a case that the second type information is detectable to the receiving apparatus, wherein the PDSCH is transmitted on at least one antenna port indicated by the first type information; decoding, by the receiving apparatus, the quantity of antenna ports of the transmitting apparatus according to the first type information in a case that only the first type information is detectable to the receiving apparatus; and decoding, by the receiving apparatus, the quantity of antenna ports of the transmitting apparatus according to the first type information and the second type information in a case that both the first type information and the second type information are detectable to the receiving apparatus.

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| **对偶主权项** | 专利度:36特征度:12 |  |  |
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A method of~~signal~~receiving a quantity of antenna ports of a transmitting apparatus in a wireless communication system, comprising:~~encod~~receiving, by a~~transmitt~~receiving apparatus~~comprising a processor, the quantity of antenna ports of the transmitting apparatus into a first type information and a second type information; transmitting, by the transmitting apparatus, the first type information on a physical broadcast channel (PBCH); and transmitting, by~~, a first type information on a physical broadcast channel (PBCH) in a case that the first type information is detectable to the receiving apparatus; receiving, by the receiving apparatus, a second type information on a physical downlink shared channel (PDSCH) in a case that the second type information is detectable to the receiving apparatus, wherein the PDSCH is transmitted on at least one antenna port indicated by the first type information; decoding, by the receiving apparatus, the quantity of antenna ports ofthe transmitting apparatus~~, the second~~according to the firsttype information~~o~~in a~~physical downlink shared channel (PDSCH), w~~case that only the first type information is detectable to the receiving apparatus; and decoding, by there~~in the PDSCH is transmitted on at least~~ceiving apparatus, the quantity of antenna ports of the transmitting apparatus according to the first type information~~e~~an~~tenna port indicated by the first type information~~d the second type information in a case that both the first type information and the second type information are detectable to the receiving apparatus.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 17 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, base station, and system of configuring relay link resources**

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| **公开号** | [US9160439](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9160439&sv=f265a0364df1b8d0a3092903d836e854) | **公开日** | 2015/10/13 |
| **申请号** | 13/362,615 | **申请日** | 2012/01/31 |
| **授权日** | 2015/10/13 | **优先日** | 2009/07/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Zhongfeng |
| **国际 主分类** | H04L 5/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method, a base station, and a system of configuring relay link resources are provided. The method of configuring relay link resources includes: receiving an orthogonal frequency division multiplexing OFDM symbol number reported by a relay node RN, in which the OFDM symbol is used by a physical downlink control channel PDCCH of a multimedia multicast broadcast single frequency network MBSFN subframe where a relay link of the RN is located; and configuring relay link resources according to the OFDM symbol number, an offset, and a length of a PDCCH in an eNB subframe, in which the offset is an offset of an RN frame relative to the time when the RN frame is initially synchronized with an eNB frame, and is smaller than a sum of a length of the PDCCH of the MBSFN subframe where the relay link of the RN is located and a first idle time. |

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| **主权项** | 专利度:15特征度:26 |  |  |
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A method of configuring relay link resources, comprising: receiving, by a relay node (RN), relay link information on the relay link resources, from a base station, wherein the relay link resources start from an orthogonal frequency division multiplexing (OFDM) symbol corresponding to a start time of the RN receiving the relay link information, the OFDM symbol corresponding to the start time of the RN receiving the relay link information is a Kth OFDM symbol in a base station subframe, the relay link resources comprise f OFDM symbols, wherein f=14 K N, wherein K is a serial number of one of the OFDM symbols comprised in the base station subframe corresponding to a start time of the base station which sends the relay link information, wherein N is an integer and is one of 0, 1 and 2, and a sum of K and N is smaller than 14; wherein the relay link resources are configured according to an OFDM symbol number used by a physical downlink control channel (PDCCH) of a multimedia multicast broadcast single frequency network (MBSFN) subframe where a relay link of the RN is located, an offset, and a length of a PDCCH in the base station subframe, and the offset is a time offset of timing of an access link of an RN frame relative to timing of a relay link of the RN frame.

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| **对偶主权项** | 专利度:19特征度:76 |  |  |
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A method of configuring relay link resources, comprising: receiving, by a relay node (RN), relay link information on the relay link resources,from a base station,wherein the relay link resources start from an orthogonal frequency division multiplexing (OFDM) symbol corresponding toastart time of the RN receiving the relay link information, the OFDM symbol corresponding to the start time of the RN receiving the relay link information is a Kth OFDM symbol in a base station subframe, the relay link resources comprise f OFDM symbols, wherein f~~is the number of OFDM symbols comprised in the base station subframe~~=14K N, wherein K is a serial number of one of the OFDM symbols comprised in the base station subframe corresponding toastart time of~~a~~thebase station which sends the relay link information, wherein N is an integer~~,~~and~~the~~is one of 0, 1 and 2, and asum of K and N is smaller than 14; wherein the relay link resources are configured according to an OFDM symbol number used by a physical downlink control channel (PDCCH) of a multimedia multicast broadcast single frequency network (MBSFN) subframe where a relay link of the RN is located, an offset, and a length of a PDCCH in the base station subframe, and the offset is a time offset of timing of an access link of an RN frame relative to timing of a relay link of the RN frame.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for determining transmit power**

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| **公开号** | [US9155050](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9155050&sv=ac68d893d439ab795451780342c3727b) | **公开日** | 2015/10/06 |
| **申请号** | 14/025,504 | **申请日** | 2013/09/12 |
| **授权日** | 2015/10/06 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wang; Weixin | Ma; Xueli | Wang; Zongjie |
| **国际 主分类** | H04W 52/06 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| An apparatus is disclosed for determining a gain factor of an E-DPDCH in a compressed mode. In disclosure, the E-DPDCH gain factor in the compressed mode is determined according to the number of E-DPDCHs used for initial transmission of data. With the determined E-DPDCH gain factor, the transmission power of the E-DPDCH can be accordingly determined. As the E-DPDCH gain factor in compressed mode is determined according to the number of the E-DPDCHs for initial transmission of data, the gain factor of the E-DPDCH in compressed mode can be determined accurately, and thus the transmit power of the E-DPDCH can be determined accurately according to the E-DPDCH gain factor in the compressed mode. Therefore, the waste of transmit power of the E-DPDCH is reduced, and thus the system capacity is improved. |

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| **主权项** | 专利度:3特征度:32 |  |  |
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An apparatus comprising: a non~~-transitory~~volatilestorage medium including executable instructions;anda processor,wherein the executable instructions, when executed by the processor, cause the~~processor~~apparatusto~~:~~determine an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in~~a~~compressed mode~~as follows, when a current frame is compressed~~, wherein, when a current frame is compressed, the instructions, when executed by the processor, caused the apparatus to determine the E-DPDCH gain factor in the compressed mode as follows: β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1&

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| **对偶主权项** | 专利度:3特征度:6 |  |  |
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An apparatus comprising: a nonvolatile storage medium including executable instructions; and a processor, wherein the executable instructions, when executed by the processor, cause the apparatus to determine an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, wherein, when a current frame is compressed, the instructions, when executed by the processor, caused the apparatus to determine the E-DPDCH gain factor in the compressed mode as follows: β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1 &#xe89e; A ed , ref , 2 2 - A ed , ref , 1 2 K e , ref , 2 - K e , ref , 1 ) &#xe89e; ( K e , i - K e , ref , 1 ) + A ed , ref , 1 2 ) · 10 ( Δ &#xe89e; &#xe89e; harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N wherein, βed,C,i denotes the E-DPDCH gain factor in the compressed mode, Le,I,i denotes the number of E-DPDCHs for initial transmission of data, βc,C,j denotes a Dedicated Physical Control Channel (DPCCH) gain factor used for the j:th TFC in the compressed mode, A ed , ref , 1 = β ed , ref , 1 β c , &#xe89e; and A ed , ref , 2 = β ed , ref , 2 β c , where βc is a DPCCH gain factor in non-compressed mode, βed,ref,1 and βed,ref,2 denote the E-DPDCH gain factors of a first and a second reference E-TFCs, respectively, Le,ref,1 and Le,ref,2 denote the number of the E-DPDCHs used for the first and second reference E-TFCs, respectively, Ke,ref,1 and Ke,ref,2 denote transport block sizes of the first and second reference E-TFCs, respectively, Ke,i denotes the transport block size of the i:th E-TFC, Δharq denotes an offset of a Hybrid Automatic Repeat Request (HARQ), Npilot,C denotes the number of pilot bits per slot on a DPCCH in the compressed mode, Npilot,N denotes the number of pilot bits per slot on the DPCCH in the non-compressed mode, and Nslots,I denotes the number of non Discontinuous Transmission (DTX) slots in a frame used for the initial transmission of data.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 22 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system, and device for network selection**

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| **公开号** | [US9155031](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9155031&sv=d910bd6b2f0583d54a905a5de747736d) | **公开日** | 2015/10/06 |
| **申请号** | 12/957,120 | **申请日** | 2010/11/30 |
| **授权日** | 2015/10/06 | **优先日** | 2008/05/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chai; Xiaoqian | Cui; Shouling | Tian; Linyi |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method, system, and device for network selection are provided. The method for network selection includes the following steps. After network selection is triggered, a network selection list stored in a Universal Integrated Circuit Card (UICC) and a network selection list stored in a Mobile Equipment (ME) are read, where the UICC is embedded in the ME and accessible to the ME. Network selection is performed according to the network selection list stored in the UICC and the network selection list stored in the ME. Also, a method for network selection through a network selection policy is added and methods for implementing a type and a data structure of a network selection policy as well as a method for network selection based on a network selection policy are provided, so that network selection can be controlled more flexibly, a terminal can locate a target network faster, and time consumed for the network selection is reduced. |

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| **主权项** | 专利度:4特征度:20 |  |  |
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A method for network selection, the method comprising: reading, after network selection is triggered, a first network selection list stored in a Universal Integrated Circuit Card (UICC), wherein the UICC is embedded in a mobile equipment (ME) and accessible by the ME; performing network selection according to the first network selection list stored in the UICC, wherein the network selected is a PLMN, WLAN or WiMAX network; and when no network is selected in the first network selection list stored in the UICC, selecting a network in a second network selection list stored in the ME; wherein the second network selection list stored in the ME is configured and stored in a device management (DM) tree of the ME; and wherein the second network selection list in the DM tree of the ME is configured and stored through a DM command sent in a DM session; wherein the second network selection list stored in the ME comprises a WLANForbiddenList; and wherein, when the network selected is WLAN, a WLAN network type contained in the WLANForbiddenList is not selected.

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| **对偶主权项** | 专利度:17特征度:18 |  |  |
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A method for network selection, the method comprising:reading,after network selection is triggered,~~reading~~afirstnetwork selection list stored in a Universal Integrated Circuit Card (UICC)~~and a network selection list stored in a mobile equipment (ME), wherein the UICC is embedded in the ME and accessible by the ME; and performing network selection according to the network selection list stored in the UICC and the network selection list stored in the ME~~, wherein the UICC is embedded in a mobile equipment (ME) and accessible by the ME; performing network selection according to the first network selection list stored in the UICC, wherein the network selected is a PLMN, WLAN or WiMAX network; and when no network is selected in the first network selection list stored in the UICC, selecting a network in a second network selection list stored in the ME; wherein the second network selection list stored in the ME is configured and stored in a device management (DM) tree of the ME; and wherein the second network selection list in the DM tree of the ME is configured and stored through a DM command sent in a DM session; wherein the second network selection list stored in the ME comprises a WLANForbiddenList; and wherein, when the network selected is WLAN, a WLAN network type contained in the WLANForbiddenList is not selected.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**User detachment when a handover or change occurs in heterogeneous network**

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| **公开号** | [US9155000](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9155000&sv=c68d2bbabeda47cfccd381d0f9350249) | **公开日** | 2015/10/06 |
| **申请号** | 13/952,938 | **申请日** | 2013/07/29 |
| **授权日** | 2015/10/06 | **优先日** | 2007/08/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu | Hu; Weihua | Wang; Shanshan |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for user detachment when a handover or change occurs in a heterogeneous network is provided. The method includes: a user equipment (UE) is handed over or switched from a source network to a target network; a network element on a network side determines whether to detach the UE from the source network, and if yes, the network element on the network side detaches the UE from the source network. A system and a device for user detachment when a handover or change occurs in a heterogeneous network, and another method for user detachment when a handover or change occurs in a heterogeneous network are also provided. |

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| **主权项** | 专利度:18特征度:26 |  |  |
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In a mobility management entity (MME) of a 3rd Generation Partnership Project (3GPP) network, a method for releasing resources utilized by a User Equipment (UE) when handed over from the 3GPP network and a non-3GPP network, comprising: receiving a delete bearer request sent by a serving gateway (GW) in the 3GPP network, wherein the delete bearer request includes an indication of a handover of the UE from the 3GPP network to the non-3GPP network; in response to the delete bearer request, deleting at least one bearer resource and verifying that all bearer resources associated with the UE have been deleted; determining that a terminal capability of the UE is single radio capability; and based on the determination, detaching the UE from the 3GPP network without sending a detach request message to the UE.

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| **对偶主权项** | 专利度:20特征度:16 |  |  |
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~~A method for user detachment when a handover or change occurs between a 3GPP network and a non-3GPP network, comprising: handing over or switching a us~~In a mobility management entity (MME) of a 3rd Generation Partnership Project (3GPP) network, a method for releasing resources utilized by a User Equipment (UE) when handed over from the 3GPP network and a non-3GPP network, comprising: receiving a delete bearer request sent by a serving gateway (GW) in the 3GPP network, wherein the delete bearerrequ~~ipment (~~est includes an indication of a handover of theUE~~)~~from~~a source~~the 3GPPnetwork to~~a target network; and determining, by a network element on a network side, whether to detach the UE from the source network; if yes~~the non-3GPP network; in response to the delete bearer request, deleting at least one bearer resource and verifying that all bearer resources associated with the UE have been deleted; determining that a terminal capability of the UE is single radio capability; and based on the determination, detaching the UE from the~~source~~3GPPnetworkwithout sending a detach request message to the UE.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 17 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for triggering communication between group of MTC devices and MTC server, and MTC device**

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| **公开号** | [US9131467](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9131467&sv=c8080587b81c54d171a30943e7dbe355) | **公开日** | 2015/09/08 |
| **申请号** | 13/665,067 | **申请日** | 2012/10/31 |
| **授权日** | 2015/09/08 | **优先日** | 2010/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Xiaojuan | Long; Shuiping | Jin; Hui | Duan; Xiaoyan |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention discloses a method for triggering communication between a group of MTC devices and an MTC server, and an MTC device. The method includes: receiving an MTC request message sent by a machine type communications MTC server, where the MTC request message carries a group ID of the group of MTC devices and a communication notification message for the group of MTC devices; obtaining area information of the group of MTC devices; and sending the area information, the group ID of the group of MTC devices, and the communication notification message for the group of MTC devices to a cell broadcast center CBC, so that the CBC sends a broadcast message to a device in an area, where the broadcast message includes the group ID of the group of MTC devices and the communication notification message for the group of MTC devices. |

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| **主权项** | 专利度:16特征度:15 |  |  |
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A method for triggering communication between a group of Machine Type Communications (MTC) devices and an MTC server, comprising: receiving an MTC request message sent by a machine type communications MTC server, wherein the MTC request message carries a group ID of the group of MTC devices and a communication notification message for the group of MTC devices; obtaining area information of the group of MTC devices; and sending the area information, the group ID of the group of MTC devices, and the communication notification message for the group of MTC devices to a cell broadcast center (CBC), so that the CBC sends a broadcast message to a device of the MTC devices in an area specified by the area information, wherein the broadcast message comprises the group ID of the group of MTC devices and the communication notification message for the group of MTC devices.

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| **对偶主权项** | 专利度:16特征度:15 |  |  |
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A method for triggering communication between a group ofMachine Type Communications (MTC)devices and an MTC server, comprising: receiving an MTC request message sent by a machine type communications MTC server, wherein the MTC request message carries a group ID of the group of MTC devices and a communication notification message for the group of MTC devices; obtaining area information of the group of MTC devices; and sending the area information, the group ID of the group of MTC devices, and the communication notification message for the group of MTC devices to a cell broadcast center(CBC), so that the CBC sends a broadcast message to a device~~in an area~~of the MTC devices in an area specified by the area information, wherein the broadcast message comprises the group ID of the group of MTC devices and the communication notification message for the group of MTC devices.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Closed subscriber group information processing method, access control method, system, and device**

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| **公开号** | [US9131427](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9131427&sv=59cf43424af6a56115a96a58a2ba1741) | **公开日** | 2015/09/08 |
| **申请号** | 13/009,497 | **申请日** | 2011/01/19 |
| **授权日** | 2015/09/08 | **优先日** | 2008/08/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A Closed Subscriber Group (CSG) information processing method, an access control method, and the corresponding system and devices are disclosed herein. The CSG information processing method includes: obtaining modified CSG information of User Equipment (UE); and sending a message that carries the CSG information to the UE. The method and the corresponding system and devices enable the UE to know the change of the stored CSG information. The access control method includes: obtaining modified CSG information; and detaching a UE from an accessed CSG area when discovering that the UE is not allowed to access the accessed CSG area any longer according to the modified CSG information. The access control method and the corresponding system and devices implement access control under a CSG mechanism. |

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| **主权项** | 专利度:10特征度:21 |  |  |
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An access control method for closed subscriber group (CSG), comprising: receiving, by a mobility management entity (MME), an insert subscriber data message from a home subscriber server (HSS), wherein the insert subscriber data message comprises CSG information of a user equipment (UE); determining, by the MME, that the CSG information of the UE has changed and the UE is not allowed to access an accessed CSG cell; instructing, by the MME, an access network element to initiate a UE handover from the accessed CSG cell to a target cell; and instructing, by the MME, the access network element to release resources when the UE cannot handover to the target cell within a configured time period.

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| **对偶主权项** | 专利度:18特征度:20 |  |  |
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An access control method~~, comprising: obtaining modified Closed Subscriber Group (~~for closed subscriber group (CSG), comprising: receiving, by a mobility management entity (MME), an insert subscriber data message from a home subscriber server (HSS), wherein the insert subscriber data message comprisesCSG~~)~~information~~; and detaching U~~of a user~~E~~equipment (UE)~~from an accessed CSG area when discovering that~~; determining, by the MME, that the CSG information of the UE has changed andthe UE is not allowed to access~~the~~anaccessed CSG~~area any longer according to the modified CSG informat~~cell; instructing, by the MME, an access network element to initiate a UE handover from the accessed CSG cell to a target cell; and instructing, by the MME, the access network element to release resources when the UE cannot handover to the target cell within a configured time perio~~n~~d.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for connecting mobile station to base station, mobile station, base station, multi-carrier mobile communication system, and random access channel mapping method**

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| **公开号** | [US9125187](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9125187&sv=9a5a17fda497148c9628b4997a4ec7f9) | **公开日** | 2015/09/01 |
| **申请号** | 13/894,004 | **申请日** | 2013/05/14 |
| **授权日** | 2015/09/01 | **优先日** | 2006/06/01 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Uemura; Katsunari | Oh; Wahoh | Kato; Yasuyuki | Yamada; Shohei |
| **国际 主分类** | H04W 72/04 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| In a mobile station, correction information is obtained from a base station for correcting a transmission timing shift in an uplink line of the mobile station, and the transmission timing shift is corrected in accordance with the correction information. Within a period in which the correction information is valid, the mobile station requests communication resource allocation information from the base station, using a random access channel having guard time. In an alternate embodiment, if a communication resource for transmitting a control channel in the uplink line is assigned to the mobile station within a period during which the correction information is valid, the mobile station instead requests the communication resource allocation information from the base station using the control channel in an uplink line from the mobile station to the base station. |

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| **主权项** | 专利度:4特征度:15 |  |  |
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A processing method of a mobile station, wherein a random access channel having guard time and a control channel in an uplink line from the mobile station to a base station are provided, the method comprising: obtaining, by the mobile station, correction information for correcting a transmission timing shift in an uplink line of the mobile station from the base station; correcting, by the mobile station, the transmission timing shift according to the correction information; and requesting, by the mobile station to the base station, communication resource allocation information of transmission data to the base station using the random access channel having the guard time within a period in which the correction information is valid when a communication resource for transmitting the control channel in the uplink line is not assigned to the mobile station.

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| **对偶主权项** | 专利度:1特征度:15 |  |  |
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A processing method of a mobile station,~~comprising at least~~whereina random access channel having guard time~~when the mobile station performs communic~~and a control channel in an uplink line from the mobile station~~with~~toa base stationare provided,~~w~~the~~rein~~method comprising: obtaining, bythe mobile station~~obtains~~,correction information for correcting a transmission timing shift in an uplink line of the mobile station from the base station~~and~~;correct~~s~~ing, by the mobile station,the transmission timing shift according to the correction information~~,~~;andrequesting, bythe mobile station~~requests,~~to the base station, communication resource allocation information of transmission data to the base station using the random access channel having the guard time within a period in which the correction information is validwhen a communication resource for transmitting the control channel in the uplink line is not assigned to the mobile station.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 39 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for scheduling data flow**

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| **公开号** | [US9107230](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9107230&sv=d757f868f1927674db7c04f97cea2baa) | **公开日** | 2015/08/11 |
| **申请号** | 13/761,543 | **申请日** | 2013/02/07 |
| **授权日** | 2015/08/11 | **优先日** | 2010/08/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Weisheng | Liu; Hai |
| **国际 主分类** | H04W 72/10 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| Embodiments of the present invention provide a method, device, and system for scheduling a data flow, which are used to improve the processing efficiency. A network side device marks a priority of a subsequent uplink and/or downlink data flow of a UE corresponding to a downlink data packet in the downlink data packet, and enables a downstream node to schedule an access network resource or air interface resource according to the priority. Therefore, a bearer does not need to be modified during the process of distinguishing different service flows and performing differentiation scheduling on different service flows, thereby reducing the workload and improving the processing efficiency. |

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| **主权项** | 专利度:10特征度:26 |  |  |
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A method for scheduling a data flow, comprising: marking, by a network side device, in a priority marking field in a downlink data packet sent to a user equipment (UE), a priority of a subsequent uplink and/or downlink data flow of the UE corresponding to the downlink data packet; and sending the downlink data packet, so that a downstream node schedules an access network resource or air interface resource for the subsequent uplink and/or downlink data flow according to the priority; wherein the method further comprising: receiving at least one data packet, or a data packet of a period of time, obtaining a service type or service content of the data packet when receiving the data packet, and predicting the priority of the subsequent uplink and/or downlink data flow according to the service type or the service content of the data packet; or setting the priority of the subsequent uplink and/or downlink data flow according to a network or operator policy; wherein the predicting the priority of the subsequent uplink and/or downlink data flow according to the service type or the service content of the data packet comprises at least one of the following: when receiving one data packet, searching for a priority of the data packet according to correspondence between a service type or service content and a priority and taking the priority of the data packet as the priority of the subsequent uplink and/or downlink data flow; when receiving at least two data packets, searching for a priority of the at least two data packets according to correspondence between a service type or service content and a priority, and taking a statistical value of the priority of the at least two data packets as the priority of the subsequent uplink and/or downlink data flow; when receiving a data packet of a period of time, searching for a priority of the data packet of a period of time according to correspondence between a service type or service content and a priority, and taking a statistical value of the priority of the data packet of a period of time as the priority of the subsequent uplink and/or downlink data flow.

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| **对偶主权项** | 专利度:18特征度:10 |  |  |
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A method for scheduling a data flow, comprising: marking, by a network side device, in a priority marking field in a downlink data packet sent to a user equipment (UE), a priority of a subsequent uplink and/or downlink data flow of the UE corresponding to the downlink data packet; and sending the downlink data packet, so that a downstream node schedules an access network resource or air interface resource for the subsequent uplink and/or downlink data flow according to the priority; wherein the method further comprising: receiving at least one data packet, or a data packet of a period of time, obtaining a service type or service content of the data packet when receiving the data packet, and predicting the priority of the subsequent uplink and/or downlink data flow according to the service type or the service content of the data packet; or setting the priority of the subsequent uplink and/or downlink data flow according to a network or operator policy; wherein the predicting the priority of the subsequent uplink and/or downlink data flow according to the service type or the service content of the data packet comprises at least one of the following: when receiving one data packet, searching for a priority of the data packet according to correspondence between a service type or service content and a priority and taking the priority of the data packet as the priority of the subsequent uplink and/or downlink data flow; when receiving at least two data packets, searching for a priority of the at least two data packets according to correspondence between a service type or service content and a priority, and taking a statistical value of the priority of the at least two data packets as the priority of the subsequent uplink and/or downlink data flow; when receiving a data packet of a period of time, searching for a priority of the data packet of a period of time according to correspondence between a service type or service content and a priority, and taking a statistical value of the priority of the data packet of a period of time as the priority of the subsequent uplink and/or downlink data flow.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 13 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for channel state information feedback in wireless communications systems**

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| **公开号** | [US9100169](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9100169&sv=3897ba7782485c92ec0d2a7500d13f73) | **公开日** | 2015/08/04 |
| **申请号** | 13/233,134 | **申请日** | 2011/09/15 |
| **授权日** | 2015/08/04 | **优先日** | 2010/09/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Jianguo | Tang; Yang | Zhou; Yongxing | Mazzarese; David | Frenne; Mattias |
| **国际 主分类** | H04L 1/06 | **优先 国家** | US |
| **代理** | Slater & Matsil, LLP |

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| **摘要** |  |
| A system and method for channel state information feedback in wireless communications systems are provided. A method for reporting channel information includes determining, at a user equipment, a channel information type for first channel information to be reported to a communications controller, determining the first channel information conditioned on previously reported channel information and on the channel information type, and reporting the first channel information, the channel information type, or a combination thereof, to the communications controller. |

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| **主权项** | 专利度:30特征度:11 |  |  |
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A method for reporting channel information, the method comprising: determining, by a user equipment, a channel information type comprising a precoding type indication (PTI) for first channel information to be reported to a communications controller; determining, by the user equipment, the first channel information conditioned on last reported channel information and on the channel information type comprising the PTI; and reporting, by the user equipment, at least one of the first channel information and the channel information type.

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| **对偶主权项** | 专利度:29特征度:17 |  |  |
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A method for reporting channel information, the method comprising: determining,~~at~~bya user equipment, a channel information typecomprising a precoding type indication (PTI)for first channel information to be reported to a communications controller; determining, by the user equipment,the first channel information conditioned on~~previously~~lastreported channel information and on the channel information typecomprising the PTI; and reporting, bythe~~first channel information, the channel information type, or a combination thereof, to the communications controller~~user equipment, at least one of the first channel information and the channel information type.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Very short pitch detection and coding**

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| **公开号** | [US9099099](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9099099&sv=b1b199877c9748879ca5e46cf1a625c1) | **公开日** | 2015/08/04 |
| **申请号** | 13/724,769 | **申请日** | 2012/12/21 |
| **授权日** | 2015/08/04 | **优先日** | 2011/12/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Gao; Yang | Qi; Fengyan |
| **国际 主分类** | G10L 19/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| System and method embodiments are provided for very short pitch detection and coding for speech or audio signals. The system and method include detecting whether there is a very short pitch lag in a speech or audio signal that is shorter than a conventional minimum pitch limitation using a combination of time domain and frequency domain pitch detection techniques. The pitch detection techniques include using pitch correlations in time domain and detecting a lack of low frequency energy in the speech or audio signal in frequency domain. The detected very short pitch lag is coded using a pitch range from a predetermined minimum very short pitch limitation that is smaller than the conventional minimum pitch limitation. |

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| **主权项** | 专利度:22特征度:16 |  |  |
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A method forvery shortpitch detection and coding implemented by an apparatus for speech or audio coding, the method comprising: detecting in a speech or~~an~~audio signal avery shortpitch lag shorter than a~~first~~conventionalminimum pitch limitation,~~predetermined for a range to encode the speech or the audio signal,~~using a combination of time domain and frequency domain pitch detection techniques including using pitch correlation and detecting a lack of low frequency energy;~~determin~~and coding the very short pitch lag for the speech or audio signalin~~g~~a~~second minimum pitch limitation smaller than the first minimum pitch limitation; and coding the pitch lag for the speech or the audio signal in a~~range froma minimum very short pitch limitation to the conventional minimum pitch limitation, wherein the minimum very short pitch limitation is predetermined and is smaller thanthe~~se~~con~~d minimum pitch limitation to the first~~ventionalminimum pitch limitation.

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| **对偶主权项** | 专利度:22特征度:6 |  |  |
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A method for very short pitch detection and coding implemented by an apparatus for speech or audio coding, the method comprising: detecting in a speech or audio signal a very short pitch lag shorter than a conventional minimum pitch limitation, using a combination of time domain and frequency domain pitch detection techniques including using pitch correlation and detecting a lack of low frequency energy; and coding the very short pitch lag for the speech or audio signal in a range from a minimum very short pitch limitation to the conventional minimum pitch limitation, wherein the minimum very short pitch limitation is predetermined and is smaller than the conventional minimum pitch limitation.

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| **被引用** | 2 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Conditional uplink timing alignment in a mobile station device of a radio communication system**

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| **公开号** | [US9094909](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9094909&sv=ac4d6508b783e75282cac586984578a4) | **公开日** | 2015/07/28 |
| **申请号** | 14/315,090 | **申请日** | 2014/06/25 |
| **授权日** | 2015/07/28 | **优先日** | 2007/08/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 夏普 | **发明人** | Yamada; Shohei | Kato; Yasuyuki |
| **国际 主分类** | H04W 56/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A mobile station device transmits a random access preamble to a base station device. The base station device receives the random access preamble from the mobile station device and transmits, to the mobile station device, a Random Access-Radio Network Temporary Identity (RA-RNTI) which notifies a resource assignment of a random access response. The mobile station device further monitors downlink control channels while detecting both a Cell-Radio Network Temporary Identity (C-RNTI) and the RA-RNTI, in which a downlink control channel includes the RA-RNTI and a downlink control channel includes the C-RNTI which notifies a resource assignment of downlink data. Upon detection of the C-RNTI and the RA-RNTI in a same sub-frame, the mobile station receives both the random access response and the downlink data, or receives either the random access response or the downlink data. |

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| **主权项** | 专利度:12特征度:14 |  |  |
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A radio communication system including: a~~bas~~mobile station device~~that receives a random access preamble and~~; and a base station device, wherein the mobile station device is configured totransmit~~s~~a random access~~response in response to the random access preamble, a mobile station device that transmits~~preamble to the base station device, and the base station device is configured to receivethe random access preamble~~to~~fromthe~~bas~~mobile station device~~, monitors both a Cell-~~and to transmit a Random Access—Radio Network Temporary Identity (~~C~~RA-RNTI)~~and a Random Access-~~to the mobile station device, wherein the mobile station device is further configured: to monitor downlink control channels while detecting both a Cell—Radio Network Temporary Identity (~~RA~~C-RNTI)~~,~~and~~receives, upon detection of the C-RNTI and the RA-RNTI in a same sub-frame, both~~theRA-RNTI; a downlink control channel including the RA-RNTI notifies a resource assignment of arandom access response;and~~the~~adownlink~~data, wherein~~control channel includingthe~~RA~~C-RNTI~~is carried by a first downlink control channel and identifies~~notifies a resource assignment of downlink data, and to receive, upon detection of the C-RNTI and the RA-RNTI in a same sub-frame, boththe random access response~~,~~and~~wherein the C-RNTI is carried by a second downlink control channel and notifies a resource assignment of~~the downlink data, or either the random access response or thedownlink data.

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| **对偶主权项** | 专利度:3特征度:18 |  |  |
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A radio communication system including: a mobile station device; and a base station device, wherein the mobile station device is configured to transmit a random access preamble to the base station device, and the base station device is configured to receive the random access preamble from the mobile station device and to transmit a Random Access—Radio Network Temporary Identity (RA-RNTI) to the mobile station device, wherein the mobile station device is further configured: to monitor downlink control channels while detecting both a Cell—Radio Network Temporary Identity (C-RNTI) and the RA-RNTI; a downlink control channel including the RA-RNTI notifies a resource assignment of a random access response; and a downlink control channel including the C-RNTI notifies a resource assignment of downlink data, and to receive, upon detection of the C-RNTI and the RA-RNTI in a same sub-frame, both the random access response and the downlink data, or either the random access response or the downlink data.

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| **被引用** | 20 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 55 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for information transfer**

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| **公开号** | [US9088918](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9088918&sv=e64a7a2db98b251fb836a2e5a372bd5f) | **公开日** | 2015/07/21 |
| **申请号** | 13/289,535 | **申请日** | 2011/11/04 |
| **授权日** | 2015/07/21 | **优先日** | 2007/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Hu; Weihua | Wu; Wenfu |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for information transfer includes: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN), version number of GPRS Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE. The embodiment of the invention also provides a device for information transfer. With the embodiment of present invention, corresponding user information transfer may be realized. |

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| **主权项** | 专利度:14特征度:14 |  |  |
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A method for information transfer, comprising: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN), a version number of a GPRS Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE; wherein when the GTP version number is GTPV2, the user information corresponding to the version number of the GTP is user information corresponding to a higher version AN, or when the GTP version number is one of GTPV1 and GTPV0, the user information corresponding to the version number of the GTP is user information corresponding to a lower version AN; and wherein the user information corresponding to the lower version AN comprises Packet Data Network Gateway (P-GW) information, and the user information corresponding to the higher version AN comprises both P-GW information and Serving Gateway (S-GW) information.

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| **对偶主权项** | 专利度:18特征度:15 |  |  |
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A method for information transfer, comprising: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN),aversion number ofaGPRS Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE; wherein when the GTP version number is GTPV2, the user information corresponding to the version number of the GTP is user information corresponding to a higher version AN, or when the GTP version number is one of GTPV1 and GTPV0, the user information corresponding to the version number of the GTP is user information corresponding to a lower version AN; and wherein the user information corresponding to the lower version AN comprises Packet Data Network Gateway (P-GW) information, and the user information corresponding to the higher version AN comprises both P-GW information and Serving Gateway (S-GW) information.

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Connection establishment method and user equipment**

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| **公开号** | [US9084222](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9084222&sv=e393149889f1db55c08406e5930efbc8) | **公开日** | 2015/07/14 |
| **申请号** | 14/281,487 | **申请日** | 2014/05/19 |
| **授权日** | 2015/07/14 | **优先日** | 2011/11/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chai; Li | Lin; Bo |
| **国际 主分类** | H04W 76/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention provides a connection establishment method and a user equipment. The connection establishment method includes: acquiring, by a second user equipment supporting a device to device (D2D) function, first user equipment information of a first user equipment supporting the D2D function; and initiating, by the second user equipment, a connection establishment process with a network-side device after the second user equipment determines that a connection with the first user equipment is established according to the first user equipment information, and sending the first user equipment information to the network-side device in the connection establishment process, so that a connection is established between the network-side device and the first user equipment. The present invention can realize establishment of a DPS bearer between the user equipments supporting the D2D function, realize communication between the user equipments supporting the D2D function and further realize resource controllability of a network. |

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| **主权项** | 专利度:20特征度:17 |  |  |
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A connection establishment method, comprising: acquiring, by a second user equipment supporting a device to device (D2D) function, first user equipment information of a first user equipment supporting the D2D function; determining, by the second user equipment, to establish a connection with the first user equipment according to the first user equipment information; and initiating, by the second user equipment, after determining to establish the connection with the first user equipment, a connection establishment process with a network-side device and sending the first user equipment information to the network-side device in the connection establishment process to facilitate establishment of a connection between the network-side device and the first user equipment; wherein after a connection is established between the network-side device and the first user equipment, the method further comprises: receiving, by the second user equipment, a D2D link establishment request message from the first user equipment, wherein the D2D link establishment request message carries an identifier of the first user equipment, an identifier of the second user equipment, and channel state information and resource allocation condition of the first user equipment; and sending, by the second user equipment, a D2D link establishment response message to the first user equipment if connection establishment is permitted, wherein the D2D link establishment response message carries the identifier of the second user equipment, the identifier of the first user equipment, channel state information of the second user equipment and an accepting or rejecting response of the second user equipment to the resource allocation condition of the first user equipment.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A connection establishment method, comprising: acquiring, by a second user equipment supporting a device to device (D2D) function, first user equipment information of a first user equipment supporting the D2D function;~~initiating, by the second user equipment, a connection establishment process with a network-side device after the second user equipment determines, according to the first user equipment information, that a connection with the first user equipment is established, and sending the first user equipment information to the network-side device in~~determining, by the second user equipment, to establish a connection with the first user equipment according to the first user equipment information; and initiating, by the second user equipment, after determining to establish the connection with the first user equipment, a connection establishment process with a network-side device and sending the first user equipment information to the network-side device in the connection establishment process to facilitate establishment of a connection between the network-side device and the first user equipment; wherein after a connection is established between the network-side device and the first user equipment, the method further comprises: receiving, by the second user equipment, a D2D link establishment request message from the first user equipment, wherein the D2D link establishment request message carries an identifier of the first user equipment, an identifier of the second user equipment, and channel state information and resource allocation condition of the first user equipment; and sending, bythesecon~~nection establishment process, so that a connection is established between the network-side device an~~duser equipment, a D2D link establishment response message to the first user equipment if connection establishment is permitted, wherein the D2D link establishment response message carries the identifier of the second user equipment, the identifier of the first user equipment, channel state information of the second user equipment and an accepting or rejecting response of the second user equipment to the resource allocation condition ofthe first user equipment.

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| **被引用** | 21 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.12 |

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| **同族数** | 7 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for reporting power headroom report and user equipment**

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| **公开号** | [US9078264](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9078264&sv=779c94f0e302fd886fc18d1a78860f32) | **公开日** | 2015/07/07 |
| **申请号** | 13/723,830 | **申请日** | 2012/12/21 |
| **授权日** | 2015/07/07 | **优先日** | 2010/06/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Han; Guanglin | Li; Anjian | Zhang; Wurong | Quan; Wei | Jiang; Yi |
| **国际 主分类** | H04W 72/04 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention discloses a method for reporting a power headroom report and a user equipment, which are applied in the field of communications. The method includes triggering reporting of a first power headroom report and determining that a condition of sending the first power headroom report is satisfied. The condition of sending the first power headroom report includes a determination that uplink data channel transmission occurs in a current transmission time interval. The first power headroom report is obtained. The first power headroom report includes a first power headroom value that includes a difference between maximum transmitting power of a carrier and a sum of transmitting power of a control channel of the carrier and transmitting power of a data channel of the carrier. |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A method for reporting a power headroom report, the method comprising: triggering reporting of a first power headroom report; determining that a condition of transmitting the first power headroom report is satisfied, wherein the condition of transmitting the first power headroom report comprises a determination that uplink data channel transmission occurs in a current transmission time interval; obtaining the first power headroom report and a second power headroom report, wherein the first power headroom report comprises a first power headroom value that comprises a difference between maximum transmitting power of a carrier and a sum of transmitting power of a control channel of the carrier and transmitting power of a data channel of the carrier, and the second power headroom report comprises a second power headroom value that comprises a difference between the maximum transmitting power of the carrier and the transmitting power of the data channel of the carrier; instructing a multiplexing entity to use the same Medium Access layer control element (MAC CE) to transmit the first power headroom report and the second power headroom report of the carrier in the current transmission time interval; and transmitting the first power headroom report and the second power headroom report of the carrier in the current transmission time interval using the same MAC CE.

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| **对偶主权项** | 专利度:17特征度:8 |  |  |
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A method for reporting a power headroom report, the method comprising: triggering reporting of a first power headroom report; determining that a condition of~~send~~transmitting the first power headroom report is satisfied, wherein the condition of~~send~~transmitting the first power headroom report comprises a determination that uplink data channel transmission occurs in a current transmission time interval; obtaining the first power headroomreport and a second power headroomreport, wherein the first power headroom report comprises a first power headroom value that comprises a difference between maximum transmitting power of a carrier and a sum of transmitting power of a control channel of the carrier and transmitting power of a data channel of the carrier~~; and sending the first power headroom report~~, and the second power headroom report comprises a second power headroom value that comprises a difference between the maximum transmitting power of the carrier and the transmitting power of the data channel of the carrier; instructing a multiplexing entity to use the same Medium Access layer control element (MAC CE) to transmit the first power headroom report and the second power headroom report of the carrier in the current transmission time interval; and transmitting the first power headroom report and the second power headroom report of the carrier in the current transmission time interval using the same MAC CE.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 22 | **国家数** | 10 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, base station, and terminal for generating reference signal**

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| **公开号** | [US9077496](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9077496&sv=75ad3be1f8e29772358459c27faf43bb) | **公开日** | 2015/07/07 |
| **申请号** | 13/584,330 | **申请日** | 2012/08/13 |
| **授权日** | 2015/07/07 | **优先日** | 2010/02/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Mingyu | Wan; Lei | Ren; Xiaotao | Xia; Yuan | Wu; Zuomin | Li; Qiang |
| **国际 主分类** | H04W 84/18 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention relates to a method for generating a reference signal, including: obtaining first control information, where the first control information indicates or includes cyclic shift related information which is used by a terminal belonging to a serving cell to send a reference signal; and sending the first control information to the terminal belonging to the serving cell, so that the terminal belonging to the serving cell generates the reference signal according to the cyclic shift related information which is indicated or included by the first control information and used by the terminal to send the reference signal, where a variation rule of a cyclic shift which the terminal belonging to the serving cell uses to generate the reference signal is the same as that of a cyclic shift which a terminal belonging to a coordinated cell uses to generate the reference signal. |

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| **主权项** | 专利度:10特征度:17 |  |  |
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A method for generating a reference signal, comprising: obtaining first control information, wherein the first control information indicates or comprises cyclic shift related information which is used to control an offset value of cyclic shifts in two timeslots of a same transmission time interval (TTI); and sending the first control information to a terminal belonging to the serving cell, so that the terminal belonging to the serving cell generates the reference signal according to the cyclic shift related information which is indicated or comprised by the first control information and used by the terminal to send the reference signal, wherein a variation rule of a cyclic shift which the terminal belonging to the serving cell uses to generate the reference signal is the same as that of a cyclic shift which a terminal belonging to a coordinated cell uses to generate a reference signal, and the cyclic shift which the terminal belonging to the serving cell uses to generate the reference signal is different from the cyclic shift which the terminal belonging to the coordinated cell uses to generate the reference signal; sending orthogonal cover code (OCC) information to the terminal belonging to the serving cell, the OCC information is used to superpose an orthogonal cover code on the reference signals in a same TTI, wherein, the OCC allocated to the terminal belonging to the serving cell is different from an OCC allocated to the terminal belonging to the coordinated cell.

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| **对偶主权项** | 专利度:16特征度:6 |  |  |
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A method for generating a reference signal, comprising: obtaining first control information, wherein the first control information indicates or comprises cyclic shift related information which is used~~by a terminal belonging to a serving cell~~to control an offset value of cyclic shifts intwo~~send a reference signal~~timeslots of a same transmission time interval (TTI); and sending the first control information to~~the~~aterminal belonging to the serving cell, so that the terminal belonging to the serving cell generates the reference signal according to the cyclic shift related information which is indicated or comprised by the first control information and used by the terminal to send the reference signal, wherein a variation rule of a cyclic shift which the terminal belonging to the serving cell uses to generate the reference signal is the same as that of a cyclic shift which a terminal belonging to a coordinated cell uses to generate a reference signal, and the cyclic shift which the terminal belonging to the serving cell uses to generate the reference signal is different from the cyclic shift which the terminal belonging to the coordinated cell uses to generate the reference signal; sending orthogonal cover code (OCC) information to the terminal belonging to the serving cell, the OCC information is used to superpose an orthogonal cover code on the reference signals in a same TTI, wherein, the OCC allocated to the terminal belonging to the serving cell is different from an OCC allocated to the terminal belonging to the coordinated cell.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile station device and method, base station device and method, and mobile station device operating frequency band mapping method**

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| **公开号** | [US9077433](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9077433&sv=e8a662104292e863db594062eba978c0) | **公开日** | 2015/07/07 |
| **申请号** | 12/083,049 | **申请日** | 2006/10/02 |
| **授权日** | 2015/07/07 | **优先日** | 2005/10/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yamada; Shohei | Oh; Wahoh | Hibi; Keiichi |
| **国际 主分类** | H04W 4/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| In a method for mapping an operating frequency band of a mobile station device in a mobile communication system, an operating frequency band position at the time of idle mode of respective mobile station devices is arranged so as to be distributed throughout a unique frequency bandwidth of a base station device. |

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| **主权项** | 专利度:16特征度:13 |  |  |
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A communication method used in a mobile communication system, wherein the mobile communication system has a shared control signaling channel and a shared data channel in a same transmission timing interval (TTI) located within a radio frame, the method comprising: transmitting, by a base station, a packet indicator related to a packet call to a mobile station by using the shared control signaling channel; and transmitting, by the base station, packet paging information corresponding to the packet call by using the shared data channel of the TTI.

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| **对偶主权项** | 专利度:66特征度:11 |  |  |
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~~(canceled)~~A communication method used in a mobile communication system, wherein the mobile communication system has a shared control signaling channel and a shared data channel in a same transmission timing interval (TTI) located within a radio frame, the method comprising: transmitting, by a base station, a packet indicator related to a packet call to a mobile station by using the shared control signaling channel; and transmitting, by the base station, packet paging information corresponding to the packet call by using the shared data channel of the TTI.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 24 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Precoding processing method and user equipment**

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| **公开号** | [US9077406](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9077406&sv=ebd21f7b8784c2a0c9b6ab4797ceae8d) | **公开日** | 2015/07/07 |
| **申请号** | 14/527,648 | **申请日** | 2014/10/29 |
| **授权日** | 2015/07/07 | **优先日** | 2010/05/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Yongxing | Wu; Qiang | Gao; Chi |
| **国际 主分类** | H04B 7/02 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A precoding processing method and user equipment are disclosed. The precoding processing method includes: selecting a codebook vector for performing precoding processing for data among a codebook set of Nt antennas, where the codebook set includes a first codebook vector<br/><br/><br/><br/><br/> <br/> <br/> [<br/> <br/> <br/> <br/> A<br/> <br/> <br/> <br/> <br/> B<br/> <br/> <br/> <br/> ]<br/> <br/><br/><br/><br/><br/>of a uniform linear array and a second codebook vector<br/><br/><br/><br/><br/><br/> <br/> <br/> [<br/> <br/> <br/> <br/> A<br/> <br/> <br/> <br/> <br/> <br/> -<br/> B<br/> <br/> <br/> <br/> <br/> ]<br/> <br/><br/><br/><br/><br/>generated according to the first codebook vector, where A is a (Nt/2)×1 vector composed of a first half of elements of the first codebook vector, B is a (Nt/2)×1 vector composed of a last half of elements of the first codebook vector, and Nt is a positive even number; and sending an index number of the codebook vector to a base station, whereupon the base station uses the codebook vector corresponding to the index number to perform precoding processing for the data to be transmitted by the antennas. Embodiments of the present invention make the codebook set compatible with two types of antenna configuration modes.<br/> |

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| **主权项** | 专利度:9特征度:20 |  |  |
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A precoding processing method, comprising: selecting, by a user equipment (UE), a codebook vector from a codebook set of 8 antennas for performing precoding processing for data, wherein the codebook set comprises 8 first codebook vectors [ A B ]&

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| **对偶主权项** | 专利度:9特征度:17 |  |  |
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A precoding processing method, comprising: selecting, by a user equipment (UE), a codebook vector from a codebook set of 8 antennas for performing precoding processing for data, wherein the codebook set comprises 8 first codebook vectors [ A B ] &#xe89e; s and 8 second codebook vectors [ A - B ] &#xe89e; s , wherein the second codebook vectors are generated according to the first codebook vectors, A is a 4×1 vector composed of a first 4 elements of the first codebook vector, B is a 4×1 vector composed of a last 4 elements of the first codebook vector; and sending, by the UE, an index number of the codebook vector to a base station; wherein: [ A B ] is obtained using an 8-dimensional discrete Fourier transformation codebook structure, and a number of discrete Fourier transformation groups is 1; and wherein the discrete Fourier transformation codebook structure is as follows: e m ( g ) = 1 M &#xe89e; [ w 0 &#xe89e; m ( g ) … w ( M - 1 ) &#xe89e; m ( g ) ] T w nm ( g ) = exp &#xe89e; { j &#xe89e; 2 &#xe89e; π &#xe89e; &#xe89e; n M &#xe89e; ( m + g G ) } where superscript T represents a transpose operation, M is a number of dimensions of discrete Fourier transformation and with M=8, with m=0, 1 . . . M 1 and n=0, 1 . . . M 1, G is the number of discrete Fourier transformation groups with g=0, 1, . . . , G 1, and em(g) is a precoding vector in the codebook set, and wnm(g) represents elements in em(g).

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, user equipment and application server for adding media stream to a multimedia session**

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| **公开号** | [US9071610](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9071610&sv=3d913912c8bdfc95b5d0c2f80d96e403) | **公开日** | 2015/06/30 |
| **申请号** | 12/507,629 | **申请日** | 2009/07/22 |
| **授权日** | 2015/06/30 | **优先日** | 2007/08/17 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Long; Shuiping | Jin; Hui |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method, user equipment and application server for adding media stream of multimedia session. A UE1 establishes a multimedia session with a UE2, receives a media stream adding request directed at the multimedia session of the UE 1; the media stream adding request includes an identity of a UE3 and the media type of the media flow requested to be added; the UE3 is controlled to establish a media stream of the media type with the UE2. Therefore, adding the media stream on the UE3 is realized, and the user may realize the multimedia session with the peer end through multiple UEs, thereby avoiding the inconvenience that the media stream can only be added to the two parties in the session and living up to the users' diversified requirements on the multimedia services. |

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| **主权项** | 专利度:5特征度:26 |  |  |
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A method for adding a media stream for a multimedia session, comprising: controlling, by an application server, a first user equipment to establish a multimedia session with a second user equipment; receiving, by the application server, a media stream adding request directed at the multimedia session sent by the first user equipment, wherein the media stream adding request comprises an identity of a third user equipment and a media type of a media stream requested to be added, wherein the media stream adding request is realized through a Subscribe message of the SIP, wherein the Subscribe message comprises the media stream type and the identity of a third user equipment, and wherein the first user equipment and the third user equipment both register using an identical public user identity; sending, by the application server, to the third user equipment a session Invite, wherein the session Invite includes, as an address of a calling party, the address of an identity of the second user equipment; controlling, by the application server, the third user equipment and the second user equipment to perform a media information negotiation directed at the media type; and wherein a gr parameter of a Globally Routable User Agent (UA) URIs (GRUU) of the first user equipment and a gr parameter of a GRUU of the third user equipment are set to different values to differentiate the first user equipment and the third user equipment.

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| **对偶主权项** | 专利度:13特征度:29 |  |  |
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A method for adding a media stream for a multimedia session, comprising~~,~~:controlling, by an application server,a first user equipment~~, UE1,~~to establish a multimedia session with a second user equipment~~, UE2~~; receiving, by the application server,a media stream adding request directed at the multimedia session~~of the UE1~~sent by the first user equipment, whereinthe media stream adding request comprises~~:~~an identity of a~~UE3 or a media type of the media stream requested to be added; and controlling the UE3 to establish a media stream of the media type wi~~third user equipment and a media type of a media stream requested to be added, wherein the media stream adding request is realized through a Subscribe message of the SIP, wherein the Subscribe message comprises the media stream type and the identity of a third user equipment, and wherein the first user equipment and the third user equipment both register using an identical public user identity; sending, by the application server, to the third user equipment a session Invite, wherein the session Invite includes, as an address of a calling party, the address of an identity of the second user equipment; controlling, by the application server, the third user equipment and the second user equipment to perform a media information negotiation directed at the media type; and wherein a gr parameter of a Globally Routable User Agent (UA) URIs (GRUU) of the first user equipment and a gr parameter of a GRUU of the third user equipment are set to different values to differentiate the first user equipment andtheth~~e UE2~~ird user equipment.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for control of discontinuous reception (DRX) by a mobile device in a wireless communications network supporting voice-over-internet-protocol (VoIP)**

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| **公开号** | [US9066353](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9066353&sv=a4f0383546536d191caa977a545de8c9) | **公开日** | 2015/06/23 |
| **申请号** | 14/179,356 | **申请日** | 2014/02/12 |
| **授权日** | 2015/06/23 | **优先日** | 2007/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Xu; Shugong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and system for controlling discontinuous reception (DRX) in a mobile device in a wireless communications network uses autonomous DRX control after initial VoIP traffic setup. If the mobile device transmits a negative-acknowledgement signal (NACK) indicating unsuccessful receipt of a VoIP packet, then it autonomously turns on a predetermined delay time later to receive the retransmission of the VoIP packet. The predetermined delay time is related to the time for the base station to process the NACK and prepare the VoIP packet for retransmission. When the mobile device transmits or retransmits a VoIP packet, reception is deactivated, but is autonomously activated the predetermined delay time later to receive an acknowledgement signal (ACK) or NACK. VoIP packets may be transmitted from the mobile device the predetermined delay time before VoIP packets are transmitted from the base station. |

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| **主权项** | 专利度:20特征度:12 |  |  |
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A method for discontinuous reception in a communication system, the method comprising the steps of: activating reception for a second transmission of downlink data from a base station upon expiration of a first predefined timer, wherein the first predefined timer is started in a first transmission time interval (TTI) in which a first transmission of the downlink data is received from the base station; receiving the second transmission of the downlink data from the base station in a second TTI after determining the first transmission of the downlink data is unsuccessful; starting a second predefined timer in the second TTI; determining that the second transmission of the downlink data is unsuccessful; and activating reception for a third transmission of the downlink data upon expiration of the second predefined timer.

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| **对偶主权项** | 专利度:4特征度:17 |  |  |
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A method for discontinuous reception in a communication system,th~~at executes transmitting and/or receiving during each fixed time interval, the method comprising: receiving~~e method comprising the steps of: activating reception for a second transmission ofdownlink data~~transmitted~~from a base station~~; indicating whether or not the receipt~~upon expiration of a first predefined timer, wherein the first predefined timer is started in a first transmission time interval (TTI) in which a first transmissionof the downlink data~~has succeeded to~~is received fromthe base station; receiving~~re~~the secondtransmissionof thedownlink data~~retransmitted~~from the base station~~after a first number of time intervals pass from a time interval in which the downlink data has been received; maintaining reception when the re~~in a second TTI after determining the first transmission of the downlink data is unsuccessful; starting a second predefined timer in the second TTI; determining that the secondtransmissionof thedownlink data is~~not received from the base station after the first number of time intervals; and stopp~~unsuccessful; and activating reception~~when the~~for a thirdtransmissionof thedownlink data~~is received~~upon expiration of the second predefined timer.

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| **被引用** | 20 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 22 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication system, base station apparatus, and mobile station apparatus**

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| **公开号** | [US9065604](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9065604&sv=3ae18a2b06c33fb52862b2fd2cc0035f) | **公开日** | 2015/06/23 |
| **申请号** | 13/359,344 | **申请日** | 2012/01/26 |
| **授权日** | 2015/06/23 | **优先日** | 2007/07/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Aiba; Tatsushi | Yamada; Shohei |
| **国际 主分类** | H04W 72/04 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The amount of control information is reduced for specifying the transmission method for simultaneously transmitting uplink data and reception quality information, and uplink data and ACK/NACK. Delay in changing the transmission method is reduced, and the mapping of uplink data and reception quality information and of uplink data and ACK/NACK is realized, in compliance with modulation scheme and coding rate of the uplink data specified by the base station apparatus. In a mobile communication system the base station apparatus allocates, to the mobile station apparatus, resources wherein the base station apparatus transmits, to the mobile station apparatus, control information for specifying a transmission format for the mobile station apparatus to transmit information using the uplink, while the mobile station apparatus simultaneously transmits, to the base station apparatus, uplink data and reception quality information based on the specified transmission format when the control information from the base station apparatus is received. |

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| **主权项** | 专利度:10特征度:21 |  |  |
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A mobile communication system, comprising: a base station apparatus configured to: transmit resource allocation information for specifying an uplink resource for mapping data onto a physical uplink shared channel (PUSCH), wherein the uplink resource contains at least a plurality of symbols in a time domain; and a mobile station apparatus configured to: receive, from the base station apparatus, the resource allocation information for specifying the uplink resource for mapping the data onto the PUSCH; calculate, based on the resource allocation information for specifying the uplink resource for mapping the data onto the PUSCH, a quantity of positive acknowledgement (ACK) or negative acknowledgement (NACK) modulation symbols in the PUSCH that are available to carry ACK or NACK for downlink data in the uplink resource; map ACK or NACK modulation symbols onto part of the symbols in the time domain of the uplink resource, wherein the quantity of the mapped ACK or NACK modulation symbols is equal to or less than the calculated quantity of the ACK or NACK modulation symbols in the PUSCH that are available to carry the ACK or the NACK for the downlink data in the uplink resource, and does not exceed a predetermined amount; and transmit, to the base station apparatus, the mapped ACK or NACK modulation symbols together with uplink data in the uplink resource.

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| **对偶主权项** | 专利度:15特征度:23 |  |  |
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A mobile communication system~~where a mobile station apparatus transmits, to a base station apparatus, ACK or NACK of HARQ (hybrid automatic repeat request) for downlink data, the mobile communication system comprising: the base station apparatus, which transmits, to the mobile station apparatus, a signal~~, comprising: a base station apparatus configured to: transmit resource allocation information for specifying an uplink resource for mapping data onto a physical uplink shared channel (PUSCH), wherein the uplink resource contains at least a plurality of symbols in a time domain; and a mobile station apparatus configured to: receive, from the base station apparatus, the resource allocation informationforspe~~rmitting data transmission in an uplink, including resource allocation information for specifying a resources region of an uplink data channel that comprises a time domain and a frequency domain, and the mobile station apparatus, which calculates an amount of resources for the ACK or NACK to be mapped together with uplink data~~cifying the uplink resource for mapping the data onto the PUSCH; calculate, based on the resource allocation information for specifying the uplink resource for mapping the data onto the PUSCH, a quantity of positive acknowledgement (ACK) or negative acknowledgement (NACK) modulation symbols in the PUSCH that are available to carry ACK or NACK for downlink data in the uplink resource; map ACK or NACK modulation symbols onto part of the symbols in the time domain of the uplink resource, wherein the quantity of the mapped ACK or NACK modulation symbols is equal to or less than the calculated quantityo~~n~~fthe~~uplink data channel, us~~ACK or NACK modulation symbolsin~~g~~the~~resource allocation information, such that the amount of~~PUSCH that are available to carry the ACK or the NACK for the downlink data in the uplinkresource~~s~~, anddoes not exceed a predetermined amount; and transmit~~s~~, to the base station apparatus, themappedACK or NACK~~with the calculated amount of resource~~modulation symbols together with~~the~~uplink data~~us~~in~~g~~the uplink~~data channel~~resource.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 36 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Scheduling method and device**

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| **公开号** | [US9060364](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9060364&sv=e594f5940ad0c5e954a0751483a1c0a6) | **公开日** | 2015/06/16 |
| **申请号** | 13/759,559 | **申请日** | 2013/02/05 |
| **授权日** | 2015/06/16 | **优先日** | 2010/08/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xing; Pingping | Guo; Yi |
| **国际 主分类** | H04J 3/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention discloses a scheduling method and a device, which may avoid a conflict between scheduling performed by a first system on a UE and using, by the UE, a second system on a frequency band adjacent to a frequency band of the first system, such as receiving or sending, by the UE, data or a message of the second system. In this way, the problem of mutual interference in message reception and transmission that are performed by the UE in two systems on adjacent frequency bands is solved. |

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| **主权项** | 专利度:21特征度:17 |  |  |
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A scheduling method, comprising: receiving, by a base station in a first system, a first indication and recommended scheduling information sent by a user equipment (UE), wherein the first indication indicates that interference exists between the first system and a second system, and the recommended scheduling information indicates a manner recommended by the UE for the base station to schedule the UE; generating, by the base station, temporary scheduling information by modifying the recommended scheduling information according to a current service condition of the UE, wherein the current service condition of the UE is that semi-persistent scheduling is used or not to receive a service; sending, by the base station, the temporary scheduling information to the UE; and scheduling, by the base station, the UE according to the temporary scheduling information, wherein the time at which the base station schedules the UE according to the temporary scheduling information does not overlap the time at which the UE receives data from the second system.

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| **对偶主权项** | 专利度:20特征度:10 |  |  |
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A scheduling method, comprising: receiving, by a base station in a first system, a first indicationand recommended scheduling informationsent by a user equipment (UE), wherein the first indication indicates that interference exists between the first system and a second system~~; generating, by the base station, temporary scheduling information, and sending~~, and the recommended scheduling information indicates a manner recommended by the UE for the base station to schedule the UE; generating, by the base station, temporary scheduling information by modifying the recommended scheduling information according to a current service condition of the UE, wherein the current service condition of the UE is that semi-persistent scheduling is used or not to receive a service; sending, by the base station,the temporary scheduling information to the UE; and scheduling, by the base station, the UE according to the temporary scheduling information, wherein the time at which the base station schedules the UE according to the temporary scheduling information does not overlap the time at which the UE receives data from the second system.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Power control method and device**

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| **公开号** | [US9060339](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9060339&sv=543dcf6def6f401129ce64bfe17d1da7) | **公开日** | 2015/06/16 |
| **申请号** | 14/097,959 | **申请日** | 2013/12/05 |
| **授权日** | 2015/06/16 | **优先日** | 2009/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yang; Bo | He; Chuanfeng | Ma; Xueli | Wang; Zongjie | Li; Jing | Ma; Jie |
| **国际 主分类** | H04B 7/216 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A power control method and device are used for achieving transmit power control of a User Equipment (UE) in a multi-carrier mode. The power control method includes: calculating a transmit power of a UE when the UE sends data through a plurality of carriers; and performing power compression on each carrier either step by step according to property parameters of each carrier or synchronously according to a compression ratio, when the transmit power of the UE exceeds a preset maximum transmit power. A power control device is further provided. |

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| **主权项** | 专利度:18特征度:16 |  |  |
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A power control method, comprising: calculating, by a user equipment (UE), a transmit power of the UE when the UE sends data through a plurality of carriers; and performing, by the UE, power compression on each carrier step by step according to a property parameter of each carrier when the transmit power of the UE exceeds a maximum transmit power, wherein the property parameter comprises one of a Dedicated Physical Control Channel (DPCCH) power, an Enhanced Dedicated Channel (E-DCH) Transport Format Combination Indicator (E-TFCI) and a Serving Grant (SG) parameter.

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| **对偶主权项** | 专利度:18特征度:9 |  |  |
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A power control method, comprising: calculating, by a user equipment (UE), a transmit power of the UE when the UE sends data through a plurality of carriers; and performing, by the UE, power compression on each carrier step by step according toaproperty parameter~~s~~of each carrier when the transmit power of the UE exceeds a maximum transmit power~~;~~,wherein the property parameter~~s~~comprises~~at least one of an~~one of a Dedicated Physical Control Channel (DPCCH) power, an Enhanced Dedicated Channel (E-DCH)Transport Format Combination Indicator (E-TFCI) and a Serving Grant (SG) parameter.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 15 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for reporting radio bearer loss information**

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| **公开号** | [US9060305](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9060305&sv=c31f7ab45fe308671f070b86a74519bc) | **公开日** | 2015/06/16 |
| **申请号** | 13/727,261 | **申请日** | 2012/12/26 |
| **授权日** | 2015/06/16 | **优先日** | 2010/08/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yan | Zhu; Fenqin |
| **国际 主分类** | H04L 12/26 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for reporting radio bearer loss information is provided in an embodiment of this invention. The method comprises: receiving a User Equipment UE Context Release Request message or a Release Access Bearer Request message or an Iu interface release request message all carrying a release cause value; and if the release cause value indicates an abnormal release, reporting radio bearer loss information to a gateway while preserving non-GBR bearers. With the method and apparatus of embodiments of this invention, not only bearer reporting can be realized, but also problems caused by the release of Non-Guaranteed Bandwidth non-GBR bearers can be prevented. |

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| **主权项** | 专利度:12特征度:23 |  |  |
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A radio bearer loss information reporting method, comprising: receiving a release cause value indicating an abnormal release and carried by one of: a user equipment (UE) context release request message, a release access bearer request message, and an Iu interface release request message; and reporting radio bearer loss information to a gateway while preserving non-guaranteed bandwidth (non-GBR) bearers and releasing guaranteed bandwidth (GBR) bearers, wherein the abnormal release occurs when the release cause value is one of a lost radio connection with the UE, a management maintenance cause, and repeated unsuccessful integrity checks with the UE.

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| **对偶主权项** | 专利度:15特征度:11 |  |  |
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A radio bearer loss information reporting method, comprising: receiving~~one of the group consisting~~a release cause value indicating an abnormal release and carried by oneof:a user equipment (UE) context release request message, a release access bearer request message, and an Iu interface release request message~~, wherein each of the user equipment (UE) context release request message the release access bearer request message and the Iu interface release request message carries a release cause value; if the release cause value indicates an abnormal release, reporting the radio bearer loss information to a gateway while preserving non-guaranteed band~~; and reporting radio bearer loss information to a gateway while preserving non-guaranteed bandwidth (non-GBR) bearers and releasing guaranteed bandwidth (GBR) bearers, wherein the abnormal release occurs when the release cause value is one of a lost radio connection with the UE, a management maintenance cause, and repeated unsuccessful integrity checkswi~~d~~th~~(non-GBR) bearers~~the UE.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Negotiating security capabilities during movement of UE**

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| **公开号** | [US9060268](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9060268&sv=98798eafaf7a3d9cc8cd1853ac497248) | **公开日** | 2015/06/16 |
| **申请号** | 12/717,385 | **申请日** | 2010/03/04 |
| **授权日** | 2015/06/16 | **优先日** | 2007/09/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Chengdong |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for negotiating security capabilities during movement of a User Equipment (UE) includes the following steps: a target network entity receives a Routing Area Update (RAU) Request from the UE; the entity obtains Authentication Vector (AV)-related keys deduced according to a root key, and sends the selected security algorithm to the UE; and the UE deduces the AV-related keys according to the root key of the UE. A system, SGSN, and MME for negotiating security capabilities during movement of a UE are also disclosed. The present invention is applicable to security capability negotiation between the UE and the network. |

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| **主权项** | 专利度:3特征度:32 |  |  |
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In a mobility management entity (MME) of a long term evolution (LTE) network, a method for negotiating security keys comprising: receiving a context request for requesting a mobility management context sent by a serving GPRS support node (SGSN) in a second or third generation (2G/3G) network, according to a routing area update (RAU) request from a user equipment (UE) in an idle mode; and sending the mobility management context to the SGSN, wherein the mobility management context comprises information for determining security capacities supported by the UE and authentication vector (AV)-related keys that are deduced according to a root key of the MME, wherein the AV-related keys comprise an Integrity Protection Key (IK) and a Ciphering Key (CK), or comprise values derived from the IK and the CK through an unidirectional transformation.

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| **对偶主权项** | 专利度:19特征度:27 |  |  |
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~~A method for negotiating security capabilities during movement of a User Equipment (UE), wherein when the UE moves from a Long Term Evolution (LTE) network to~~In a mobility management entity (MME) of a long term evolution (LTE) network, a method for negotiating security keys comprising: receiving a context request for requesting a mobility management context sent by a serving GPRS support node (SGSN) ina second~~/~~orthird~~-~~generation (2G/3G) network,~~the method comprises: by a target network entity, receiving~~according toa~~R~~routing~~A~~area~~U~~update (RAU)~~R~~request~~message sent by the UE, obta~~from a user equipment (UE) in an idle mode; and sending the mobility management context to the SGSN, wherein the mobility management context comprises information for determining security capa~~bil~~cities supported by the UE~~,~~and~~obtaining A~~authentication~~V~~vector (AV)-related keysthat arededuced according to a root key~~; selecting a security algorithm according to the security capabilities supported by the UE and sending the selected security algorithm to the UE; and deducing, by the UE, the AV-related keys according to the root key of the UE~~of the MME, wherein the AV-related keys comprise an Integrity Protection Key (IK) and a Ciphering Key (CK), or comprise values derived from the IK and the CK through an unidirectional transformation.

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| **被引用** | 37 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for accessing and obtaining user equipment context and user equipment identity**

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| **公开号** | [US9055549](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9055549&sv=77bbb0b66612f1d73e0b693060d5e47b) | **公开日** | 2015/06/09 |
| **申请号** | 14/308,231 | **申请日** | 2014/06/18 |
| **授权日** | 2015/06/09 | **优先日** | 2008/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Guo; Xiaolong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and device for accessing and obtaining user equipment (UE) context and UE identity are provided. The method for access includes: when a UE accesses a System Architecture Evolution (SAE) network, judging, by a network node, whether a Globally Unique Mobility Management Entity Identifier (GUMMEI) carried by the UE or a Mobility Management Entity Group Identity (MMEGI) in the GUMMEI is allocated or mapped by the SAE network; if the GUMMEI or MMEGI is allocated by the SAE network, selecting, by the network node, a Mobility Management Entity (MME) according to the GUMMEIA network device includes an identity attribute obtaining module and a network resource node allocation module. Therefore, the access of the UE is achieved. |

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| **主权项** | 专利度:20特征度:25 |  |  |
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A method for accessing identification information of a user equipment (UE), comprising: judging, by an eNodeB, whether a Globally Unique Mobility Management Entity Identifier (GUMMEI) carried by the UE or a Mobility Management Entity Group Identity (MMEGI) in the GUMMEI is allocated by a System Architecture Evolution (SAE) network or mapped from a temporary identity of a Second Generation/Third Generation (2G/3G) network; if the GUMMEI or the MMEGI is allocated by the SAE network, selecting, by the eNodeB, a first Mobility Management Entity (MME) according to one of the following: (a) the GUMMEI, (b) the MMEGI and a Mobility Management Entity Code (MMEC), and (c) a selected Public Land Mobile Network Identity (PLMN-id), the MMEGI and the MMEC, and transmitting, by the eNodeB, the identification information of the UE to the selected first MME; and if the GUMMEI or MMEGI is mapped from the temporary identity of the 2G/3G network, selecting, by the eNodeB, a second MME according to one of the following: (a) a Mobile Country Code (MCC), a Mobile Network Code (MNC) and an MMEC in the GUMMEI, (b) the MMEC in the GUMMEI, and (c) the MMEC in the GUMMEI and the selected PLMN-id, and transmitting, by the eNodeB, the identification information of the UE to the selected second MME.

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| **对偶主权项** | 专利度:20特征度:5 |  |  |
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A method for accessing identification information of a user equipment (UE), comprising: judging, by an eNodeB, whether a Globally Unique Mobility Management Entity Identifier (GUMME~~D~~I)carried by the UE or a Mobility Management Entity Group Identity (MMEGI) in the GUMMEI is allocated by a System Architecture Evolution (SAE) network or mapped from a temporary identity of a Second Generation/Third Generation (2G/3G) network; if the GUMMEI or the MMEGI is allocated by the SAE network, selecting, by the eNodeB, a first Mobility Management Entity (MME) according to one of the following: (a) the GUMMEI, (b) the MMEGI and a Mobility Management Entity Code (MMEC), and (c) a selected Public Land Mobile Network Identity (PLMN-id), the MMEGI and the MMEC, and transmitting, by the eNodeB, the identification information of the UE to the selected first MME; and if the GUMMEI or MMEGI is mapped from the temporary identity of the 2G/3G network, selecting, by the eNodeB, a second MME according to one of the following: (a) a Mobile Country Code (MCC), a Mobile Network Code (MNC) and an MMEC in the GUMMEI, (b) the MMEC in the GUMMEI, and (c) the MMEC in the GUMMEI and the selected PLMN-id, and transmitting, by the eNodeB, the identification information of the UE to the selected second MME.

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| **被引用** | 20 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.23 |

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| **同族数** | 31 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Interworking method and interworking control unit, method and system for implementing simulation services**

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| **公开号** | [US9055083](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9055083&sv=bbcbc2eac7237aa748df3e5febf24597) | **公开日** | 2015/06/09 |
| **申请号** | 12/398,644 | **申请日** | 2009/03/05 |
| **授权日** | 2015/06/09 | **优先日** | 2006/12/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Youzhu | Zhou; Qing | Mao; Lingzhi |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present invention discloses a method for implementing simulation services, including the following: an interworking control unit obtains the CS domain network user identifier after detecting that the call signaling message from the CS domain network carries no CS domain network user identifier, puts the obtained user identifier into the SIP message, which is subsequently sent to the IMS network; the IMS network processes the PSTN/ISDN simulation services according to the user identifier. The present invention also discloses a system for implementing simulation service. The present invention makes it unnecessary to extend the existing SIP protocol and to perform signaling interaction between the IMS network and the interworking control unit for obtaining the user identifier, thus simplifying the implementation of the PSTN/ISDN simulation services. |

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| **主权项** | 专利度:20特征度:18 |  |  |
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A method for implementing simulation services of a Public Switched Telephone Network/Integrated Service Digital Network (PSTN/ISDN) in an IP Multimedia Subsystem (IMS) network, the method comprising: determining, by an interworking control unit that interconnects the IMS network and a Circuit Switched (CS) domain network, that a received call signaling message from the CS domain network does not carry a CS domain network user identifier; based on the determination, obtaining, by the interworking control unit, the CS domain network user identifier without involving a request from an Application Server (AS); sending, by the interworking control unit, the obtained CS domain network user identifier to the IMS network; and processing, by the IMS network, PSTN/ISDN simulation services according to the obtained user identifier.

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| **对偶主权项** | 专利度:21特征度:12 |  |  |
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A method for implementing simulation services~~,~~of a Public Switched Telephone Network/Integrated Service Digital Network (PSTN/ISDN) in an IP Multimedia Subsystem (IMS) network, the methodcomprising:~~obta~~determining, by an interworking control unit~~,~~th~~e CS domain network user identifier after detecting that the~~at interconnects the IMS network and a Circuit Switched (CS) domain network, that a receivedcall signaling message from the CS domain network does not carryaCS domain network user identifier~~, and sending~~; based on the determination, obtaining, by the interworking control unit, the CS domain network user identifier without involving a request from an Application Server (AS); sending, by the interworking control unit,the obtained CS domain network user identifier to the IMS network; and processing, by the IMS network,~~the~~PSTN/ISDN simulation services according to theobtaineduser identifier.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Method, device and system for assigning ACK channels to users**

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| **公开号** | [US9054867](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9054867&sv=fdba680f385035383f08adce8c04ab03) | **公开日** | 2015/06/09 |
| **申请号** | 14/104,782 | **申请日** | 2013/12/12 |
| **授权日** | 2015/06/09 | **优先日** | 2008/04/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Chen; Xiaobo | Liu; Guang |
| **国际 主分类** | H04L 5/02 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for assigning acknowledgement (ACK) channels to a user is used to feed back ACKs of a plurality of downlink sub-frames in one uplink sub-frame. According to the method, reserved ACK channels are divided into blocks according to the number of downlink sub-frames; each downlink sub-frame corresponds to one block; each block is divided into several sub-blocks; control channel element (CCE) sets within the same sub-frame are respectively mapped to different sub-blocks; and the ACK channels are assigned to the downlink sub-frames according to a sequence of increasing a mapping label d first and then increasing a sub-block label m. Thus, more unused ACK channels can be released to form resource blocks (RBs) for transmission on other channels, for example, for PUSCH transmission. Other methods for assigning ACK channels to a user, a device for assigning ACK channels to a user, and a communication system are further provided. |

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| **主权项** | 专利度:12特征度:28 |  |  |
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A method for assigning ACK channels to a user, which is used to feed back ACKs of N downlink sub-frames in one uplink sub-frame, the method comprising: dividing reserved ACK channels into N blocks, each downlink sub-frame of the N downlink sub-frames corresponding to one block in a preset sequence, wherein the preset sequence is a sequence that a special sub-frame is placed at a last position, or the preset sequence is a sequence that the sub-frame with the maximum actual value of n is placed at a foremost position; dividing each block into max{Mi} or Mi sub-blocks, the sub-blocks belonging to different blocks being interleaved and sub-blocks which are from the different blocks and mapped to a same control channel element, CCE, set of different sub-frames are arranged sequentially according to the preset sequence; and assigning the ACK channels to the downlink sub-frames by mapping CCE sets with labels of {0, 1, . . . , NCCE,1 1}, {NCCE,1, NCCE,1+1, . . . , NCCE,2 1}, . . . , {NCCE,max{Mi} 1, NCCE,max{Mi} 1+1, . . . , NCCE,max{Mi} 1} within each downlink sub-frame to the max{Mi} sub-blocks of the block associated with downlink sub-frame of label i; or assigning (b) the ACK channels to the downlink sub-frames by mapping CCE sets with labels of {0, 1, . . . , NCCE,1 1}, {NCCE,1+1, . . . , (NCCE,2 1)}, . . . , {NCCE,Mi 1, NCCE,Mi 1+1, . . . , NCCE,Mi 1} within each downlink sub-frame to the Mi sub-blocks of the block associated with downlink sub-frame of label i; wherein the N is a positive integer, the Mi represents a maximum possible value of n for a downlink sub-frame with a label of i among N downlink sub-frames, the i=0, 1, . . . , N-1, the max{Mi} represents a maximum value of Mi, the NCCE,max{Mi} represents the number of CCEs in the downlink sub-frame when n is equal to max{Mi}, the NCCE,Mi represents the number of CCEs in the downlink sub-frame when n is equal to Mi, the n is the number of symbols occupied by a physical downlink control channel, PDCCH.

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| **对偶主权项** | 专利度:12特征度:10 |  |  |
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A method for assigning ACK channels to a user, which is used to feed back ACKs of N downlink sub-frames in one uplink sub-frame, the method comprising: dividing reserved ACK channels into N blocks, each downlink sub-frame of the N downlink sub-frames corresponding to one block in a preset sequence, wherein the preset sequence is a sequence that a special sub-frame is placed at a last position, or the preset sequence is a sequence that the sub-frame with the maximum actual value of n is placed at a foremost position; dividing each block into max{Mi} or Mi sub-blocks, the sub-blocks belonging to different blocks being interleaved and sub-blocks which are from the different blocks and mapped to a same control channel element, CCE, set of different sub-frames are arranged sequentially according to the preset sequence; and assigning the ACK channels to the downlink sub-frames by mapping CCE sets with labels of {0, 1, . . . , NCCE,1 1}, {NCCE,1, NCCE,1+1, . . . , NCCE,2 1}, . . . , {NCCE,max{Mi} 1, NCCE,max{Mi} 1+1, . . . , NCCE,max{Mi} 1} within each downlink sub-frame to the max{Mi} sub-blocks of the block associated with downlink sub-frame of label i; or assigning (b) the ACK channels to the downlink sub-frames by mapping CCE sets with labels of {0, 1, . . . , NCCE,1 1}, {NCCE,1+1, . . . , (NCCE,2 1)}, . . . , {NCCE,Mi 1, NCCE,Mi 1+1, . . . , NCCE,Mi 1} within each downlink sub-frame to the Mi sub-blocks of the block associated with downlink sub-frame of label i; wherein the N is a positive integer, the Mi represents a maximum possible value of n for a downlink sub-frame with a label of i among N downlink sub-frames, the i=0, 1, . . . , N-1, the max{Mi} represents a maximum value of Mi, the NCCE,max{Mi} represents the number of CCEs in the downlink sub-frame when n is equal to max{Mi}, the NCCE,Mi represents the number of CCEs in the downlink sub-frame when n is equal to Mi, the n is the number of symbols occupied by a physical downlink control channel, PDCCH.

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| **被引用** | 10 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.32 |

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| **同族数** | 35 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Method, apparatus and system for resource immediate assignment**

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| **公开号** | [US9049734](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9049734&sv=6cff78af2daa3be4b0af2452560973dd) | **公开日** | 2015/06/02 |
| **申请号** | 13/774,420 | **申请日** | 2013/02/22 |
| **授权日** | 2015/06/02 | **优先日** | 2010/08/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Fang; Ming | Wang; Jiyong | Shu; Bing |
| **国际 主分类** | H04Q 9/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| Embodiments of the present invention disclose a method, an apparatus, and a system for resource immediate assignment, which includes: constructing an immediate assignment message according to channel request messages of at least two terminals, where the immediate assignment message assigns a channel resource for the at least two terminals according to the channel request messages of the at least two terminals; and sending the immediate assignment message out. By implementing the embodiments of the present invention, in a case that a valid byte of an immediate assignment message is unchanged, one immediate assignment message can assign a packet resource for at least two terminals, thereby satisfying an access requirement of more terminals. |

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| **主权项** | 专利度:13特征度:13 |  |  |
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A method for resource immediate assignment, comprising: constructing an immediate assignment message according to channel request information of at least two terminals, wherein the channel request information is used to indicate the terminals request a channel resource, and the channel resource is a packet resource, and the immediate assignment message comprises a channel resource assigned for each of the at least two terminals and wherein the constructing comprises combining time information of the channel request information sent by the terminals, the channel request information, and packet resource parameters allocated for the terminals into the immediate assignment message; and sending the immediate assignment message out.

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| **对偶主权项** | 专利度:16特征度:4 |  |  |
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A method for resource immediate assignment, comprising: constructing an immediate assignment message according to channel request information of at least two terminals, wherein the channel request information is used to in~~struct~~dicatethe terminals~~to~~request a channel resource, and the channel resource is a packet resource, and the immediate assignment message comprises a channel resource assigned for each of the at least two terminalsand wherein the constructing comprises combining time information of the channel request information sent by the terminals, the channel request information, and packet resource parameters allocated for the terminals into the immediate assignment message; and sending the immediate assignment message out.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for paging processing and information displaying**

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| **公开号** | [US9049677](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9049677&sv=27a12b9dfb73635d1e8870769cc3198b) | **公开日** | 2015/06/02 |
| **申请号** | 13/101,816 | **申请日** | 2011/05/05 |
| **授权日** | 2015/06/02 | **优先日** | 2008/11/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yin; Yu | Yu; Yijun |
| **国际 主分类** | H04W 68/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method, an apparatus, and a system for paging processing and information displaying are disclosed. The paging processing method includes: receiving a paging request message from a Mobile Switching Center (MSC) which a called User Equipment (UE) registers to; and when the called UE is connected, sending a paging notification message to the called UE, and returning a called-UE paging status message to the MSC. In the embodiments of the present invention, after the Mobility Management Entity (MME) receives the paging request message from the MSC, if the called UE is connected, the MME not only sends a Circuit-Switched (CS) paging notification message to the called UE, but also returns a paging status message to the MSC, indicating that the called UE has received the paging notification message. |

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| **主权项** | 专利度:10特征度:18 |  |  |
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A paging processing method, comprising: receiving, by a Mobility Management Entity (MME), a paging request message sent by a Mobile Switching Center (MSC) server for a called User Equipment (UE) registered to the MSC server; sending, by the MME, a paging notification message to the called UE when the called UE is connected to the MME; indicating, by the MME, a status of communication between the called UE and the MME to the MSC server before the MME receives a service request from the called UE; and receiving, by the MME, the service request message from the called UE.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A paging processing method, comprising: receiving, by a Mobility Management Entity (MME),a paging request message sent by a Mobile Switching Center (MSC) server~~which~~fora called User Equipment (UE) register~~s~~edto~~; and sending~~the MSC server; sending, by the MME,a paging notification message to the called UE when the called UE is connected~~, and returning a~~to the MME; indicating, by the MME, a status of communication between thecalled~~-~~UE~~paging status message to the MSC server~~and the MME to the MSC server before the MME receives a service request from the called UE; and receiving, by the MME, the service request message from the called UE.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Spectrum flatness control for bandwidth extension**

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| **公开号** | [US9047875](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9047875&sv=36e833f244bab7d09573e45b19014fa2) | **公开日** | 2015/06/02 |
| **申请号** | 13/185,163 | **申请日** | 2011/07/18 |
| **授权日** | 2015/06/02 | **优先日** | 2010/07/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Gao; Yang |
| **国际 主分类** | G10L 21/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| In accordance with an embodiment, a method of decoding an encoded audio bitstream at a decoder includes receiving the audio bitstream, decoding a low band bitstream of the audio bitstream to get low band coefficients in a frequency domain, and copying a plurality of the low band coefficients to a high frequency band location to generate high band coefficients. The method further includes processing the high band coefficients to form processed high band coefficients. Processing includes modifying an energy envelope of the high band coefficients by multiplying modification gains to flatten or smooth the high band coefficients, and applying a received spectral envelope decoded from the received audio bitstream to the high band coefficients. The low band coefficients and the processed high band coefficients are then inverse-transformed to the time domain to obtain a time domain output signal. |

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| **主权项** | 专利度:31特征度:28 |  |  |
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A method of decoding an encoded audio bitstream at a decoder, the method comprising: receiving, by a decoder, the audio bitstream, the audio bitstream comprising a low band bitstream; decoding the low band bitstream to get low band coefficients in a frequency domain; copying a plurality of the low band coefficients to a high frequency band location to generate high band coefficients; post-processing the high band coefficients to form post-processed high band coefficients, post-processing comprising determining modification gains based on corresponding individual energy values of the high band coefficients, wherein the modification ams are determined by the decoder; flattening and smoothing the high band coefficients comprising modifying an energy envelope of the high band coefficients by multiplying the modification gains with the high band coefficients in the frequency domain to form the post processed high band coefficients, and multiplying a received spectral envelope to the high band coefficients, the received spectral envelope being decoded from the received audio bitstream; and inverse-transforming the low band coefficients and the post-processed high band coefficients to a time domain to obtain a time domain output signal.

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| **对偶主权项** | 专利度:24特征度:8 |  |  |
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A method of decoding an encoded audio bitstream at a decoder, the method comprising: receiving, by a decoder,the audio bitstream, the audio bitstream comprising a low band bitstream; decoding the low band bitstream to get low band coefficients in a frequency domain; copying a plurality of the low band coefficients to a high frequency band location to generate high band coefficients;post-processing the high band coefficients to formpost-processed high band coefficients,post-processing comprising~~modifying an energy envelope of the high band coefficients, modifying comprising~~determining modification gains based on corresponding individual energy values of the high band coefficients, wherein the modification ams are determined by the decoder; flattening and smoothing the high band coefficients comprising modifying an energy envelope of the high band coefficients bymultiplyingthemodification gains~~to flatten or smooth the~~with the high band coefficients in the frequency domain to form the post processedhigh band coefficients, and~~ap~~multiplying a received spectral envelope to the high band coefficients, the received spectral envelope being decoded from the received audio bitstream; and inverse-transforming the low band coefficients and thepost-processed high band coefficients to a time domain to obtain a time domain output signal.

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| **被引用** | 3 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 14 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for updating a key in an active state**

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| **公开号** | [US9031240](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9031240&sv=cc3125ece6f044efbb27a334ca72a545) | **公开日** | 2015/05/12 |
| **申请号** | 13/587,340 | **申请日** | 2012/08/16 |
| **授权日** | 2015/05/12 | **优先日** | 2007/09/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yang; Yanmei | Huang; Min |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd |

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| **摘要** |  |
| A method for updating a key in an active state is disclosed according to the embodiments of the present invention. The method includes steps of: initiating a key update by a user equipment in the active state or a network side when a pre-defined condition is met; updating the key by the network side and the user equipment, and negotiating an activation time of the new keys. An apparatus for updating a key in an active state is also disclosed according to the present invention. With the present invention, the user equipment in an active state and the network side may actively initiate the key update procedure in different cases, thereby solving the problem concerning the key update for a session in an active state. |

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| **主权项** | 专利度:6特征度:23 |  |  |
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A user equipment for updating a key in an active state, comprising: a receiver, configured to receive, from an evolved NodeB (eNB), an intra-cell handover command which is configured to instruct the user equipment to use air-interface keys; wherein the air-interface keys are updated based on a new key KeNB; wherein the new key KeNB is derived based on a key which is generated during a key update procedure; wherein the key update procedure is initiated by a Mobility Management Entity (MME) when a pre-defined condition is met; a transmitter, configured to send an acknowledgement for receiving the intra-cell handover command; and a processor, configured to apply the air interface keys in a security operation to a subsequent message received or sent by the user equipment.

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| **对偶主权项** | 专利度:2特征度:10 |  |  |
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A user equipment for updating a key in an active state, comprising: a receiver, configured to receive, from an evolved NodeB (eNB), an intra-cell handover command which is configured to instruct the user equipment to use air-interface keys; wherein the air-interface keys~~have been updated by the eNB~~are updatedbased on a new key KeNB; wherein the~~eNB is informed by a Mobility Management Entity (MME) of the~~new key KeNBis derived based on a key which isgenerated during a key update procedure; wherein the key update procedure is initiated by~~the~~a Mobility Management Entity (MME)when a pre-defined condition is met; a transmitter, configured to send an acknowledgement for receiving the intra-cell handover command; and a processor, configured to apply the air interface keys in a security operation to a subsequent message received or sent by the user equipment.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Multimedia session call control method and application server**

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| **公开号** | [US9031057](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9031057&sv=d39eb7d6675ad08e703b865884d53f45) | **公开日** | 2015/05/12 |
| **申请号** | 12/772,515 | **申请日** | 2010/05/03 |
| **授权日** | 2015/05/12 | **优先日** | 2007/11/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Long; Shuiping | Jin; Hui |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. odolph; Grant eaulieu; Nicholas K. |

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| **摘要** |  |
| A multimedia session call control method and an Application Server (AS) are provided. The multimedia session call control method includes these steps: a multi-UE party performs a multimedia session with a peer under control of an AS; a master UE of the multi-UE party establishes a session with a third party under control of the AS; and the AS binds a call leg between a slave UE of the multi-UE party and the AS to the session established with the third party. |

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| **主权项** | 专利度:17特征度:30 |  |  |
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A multimedia session call control method, comprising: performing, by a multi-User Equipment (UE) party, a multimedia session with a peer under control of an Application Server (AS); establishing, by a master UE of the multi-UE party, a session with a third party under control of the AS; binding, by the AS, a call leg between a slave UE of the multi-UE party and the AS to the session established with the third party such that the multi-UE party and the third party update a media information of the peer reciprocally through the bound call leg, negotiate the media information between the master UE and the third party, and establish a connection of media streams at a media layer; and sending, by the peer, a Refer message to the third party before the master UE of the multi-UE party establishes the session with the third party under the control of the AS, wherein the Refer message carries an address of the multi-UE party and an identifier (ID) of the call leg between the AS and the peer wherein the process of establishing the session with the third party under control of the AS by the master UE of the multi-UE party comprises; sending, by the third party, an Invite message to the AS, wherein the Invite message carries the address of the multi-UE party and the ID of the call leg; modifying, by the AS, the ID of the call leg in the Invite message to the ID of the call leg between the AS and the multi-UE party; sending the modified Invite message to the master UE; accepting, by the master UE, the invitation; returning an OK message to the AS; and returning, by the AS, the OK message to the third party.

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| **对偶主权项** | 专利度:16特征度:42 |  |  |
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A multimedia session call control method, comprising:performing, by a multi-User Equipment (UE) party, a multimedia session with a peer under control of an Application Server (AS);establishing, by a master UE of the multi-UE party, a session with a third party under control of the AS;~~and~~binding, by the AS, a call leg between a slave UE of the multi-UE party andthe AS to the session established with the third party such that the multi-UE party and the third party update a media information of the peer reciprocally through the bound call leg, negotiate the media information between the master UE and the third party, and establish a connection of media streams at a media layer; and sending, by the peer, a Refer message to the third party before the master UE of the multi-UE party establishes the session with the third party under the control of the AS, wherein the Refer message carries an address of the multi-UE party and an identifier (ID) of the call leg between the AS and the peer wherein the process of establishing the session with the third party under control of the AS by the master UE of the multi-UE party comprises; sending, by the third party, an Invite message to the AS, wherein the Invite message carries the address of the multi-UE party and the ID of the call leg; modifying, bythe AS,t~~o the session established wit~~he ID of the call leg in the Invite message to the ID of the call leg between the AS and the multi-UE party; sending the modified Invite message to the master UE; accepting, by the master UE, the invitation; returning an OK message to the AS; and returning, by the AS, the OK message tothe third party.

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| **被引用** | 4 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Pulse encoding and decoding method and pulse codec**

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| **公开号** | [US9020814](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9020814&sv=d91b4965b53a85858a336dde6b640c2f) | **公开日** | 2015/04/28 |
| **申请号** | 13/725,301 | **申请日** | 2012/12/21 |
| **授权日** | 2015/04/28 | **优先日** | 2010/06/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ma; Fuwei | Zhang; Dejun |
| **国际 主分类** | G10L 19/02 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| In a pulse encoding and decoding method and a pulse codec, more than two tracks are jointly encoded, so that free codebook space in the situation of single track encoding can be combined during joint encoding to become code bits that may be saved. Furthermore, a pulse that is on each track and required to be encoded is combined according to positions, and the number of positions having pulses, distribution of the positions that have pulses on the track, and the number of pulses on each position that has a pulse are encoded separately, so as to avoid separate encoding performed on multiple pulses of a same position, thereby further saving code bits. |

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| **主权项** | 专利度:27特征度:17 |  |  |
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A pulse encoding method performed by a pulse encoder implemented by hardware, comprising: obtaining pulses that are on T tracks and required to be encoded, wherein T is an integer greater than or equal to 2; separately collecting, according to positions, statistics about a pulse that is on each track and required to be encoded, to obtain the number Nt of positions that have pulses on each track, distribution of the positions that have pulses on the track, and the number of pulses on each position that has a pulse, wherein the subscript t represents a tth track, and tε[0, T 1]; according to the number {N0, N1, . . . , NT 1} of positions that have pulses and are on each track, determining a first index I1, wherein the first index I1 corresponds to all possible distribution situations of positions that have pulses and are on each track under the number of the positions having pulses, wherein the number of the positions having pulses is represented by it; determining a second index I2t of each track separately according to distribution of positions that have pulses and are on each track, wherein the second index indicates, among all possible distribution situations corresponding to the first index I1, a distribution situation which corresponds to distribution of current positions having pulses on a corresponding track; determining a third index I3t of each track separately according to the number of pulses on each position that has the pulse and is on each track; and generating a code index Ind, wherein the code index comprises information of the first index and the second and third indexes of each track; wherein: one first index corresponds to one {N0, N1, . . . , NT 1} combination, or, at least one first index corresponds to more than two {N0, N1, . . . , NT 1} combinations; for a track with a non-one Nt value corresponding to the first index, besides determining second and third indexes of the track, an additional index corresponding to the number of current positions that have pulses and are on the track is further determined, the additional index corresponds to all possible distribution situations of positions that have pulses and are on the track under the number of positions having pulses, wherein the number of positions having pulses is represented by it, and the code index further comprises information of the additional index.

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| **对偶主权项** | 专利度:21特征度:9 |  |  |
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A pulse encoding methodperformed by a pulse encoder implemented by hardware, comprising: obtaining pulses that are on T tracks and required to be encoded, wherein T is an integer greater than or equal to 2; separately collecting, according to positions, statistics about a pulse that is on each track and required to be encoded, to obtain the number Nt of positions that have pulses on each track, distribution of the positions that have pulses on the track, and the number of pulses on each position that has a pulse, wherein the subscript t represents a tth track, and tε[0, T 1]; according to the number {N0, N1, . . . , NT~~-~~1} of positions that have pulses and are on each track, determining a first index I1, wherein the first index I1 corresponds to all possible distribution situations of positions that have pulses and are on each track under the number of the positions having pulses, wherein the number of the positions having pulses is represented by it; determining a second index I2t of each track separately according to distribution of positions that have pulses and are on each track, wherein the second index indicates, among all possible distribution situations corresponding to the first index I1, a distribution situation which corresponds to distribution of current positions having pulses on a corresponding track; determining a third index I3t of each track separately according to the number of pulses on each position that has the pulse and is on each track; and generating a code index Ind, wherein the code index comprises information of the first index and the second and third indexes of each track; wherein: one first index corresponds to one {N0, N1, . . . , NT 1} combination, or, at least one first index corresponds to more than two {N0, N1, . . . , NT 1} combinations; for a track with a non-one Nt value corresponding to the first index, besides determining second and third indexes of the track, an additional index corresponding to the number of current positions that have pulses and are on the track is further determined, the additional index corresponds to all possible distribution situations of positions that have pulses and are on the track under the number of positions having pulses, wherein the number of positions having pulses is represented by it, and the code index further comprises information of the additional index.

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| **被引用** | 2 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Wireless communication system, base station device, mobile station device, and communication method**

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| **公开号** | [US9020516](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9020516&sv=d89353311d009d1ec7542fb10ed55ffb) | **公开日** | 2015/04/28 |
| **申请号** | 13/057,723 | **申请日** | 2009/08/04 |
| **授权日** | 2015/04/28 | **优先日** | 2008/08/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Abe; Kazuhiro | Hirakawa; Isao |
| **国际 主分类** | H04W 72/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A reference signal specific to each base station device and a reference signal specific to each mobile station device are not mixed within one OFDM symbol of a resource block, and OFDM symbols including the reference signal specific to each mobile station device are arranged at regular intervals on a time axis. By using such a signal arrangement pattern, it is possible to overcome the problems in Non-Patent Document 1 mentioned above caused by mixing a reference signal specific to each base station device and a reference signal specific to each mobile station device in one OFDM symbol. Thus, it becomes possible to prevent the reference signal specific to each base station device and the reference signal specific to each mobile station device from being mixed within one OFDM symbol of a resource block. |

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| **主权项** | 专利度:33特征度:12 |  |  |
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A method of communication in a network that includes a base station and a mobile station, the method comprising: allocating data, a reference signal specific to said base station, or a reference signal specific to the mobile station onto a first domain defined by frequency and time; allocating a plurality of first domains in a frequency direction, said allocation of said plurality of first domains representing a second domain; allocating a plurality of second domains placed in a time direction, said allocation of said plurality of second domains representing a third domain, wherein the third domain has at least one second domain including more than one first domain having the reference signal specific to said base station while not having the reference signal specific to the mobile station, and a plurality of other second domains including more than one first domain having the reference signal specific to the mobile station while not having the reference signal specific to the base station, wherein the plurality of other second domains are arranged at an equal interval in said time direction; controlling transmittal powers for each of the first domains having the data or the reference signal specific to the base station or the reference signal specific to the mobile station in said third domain, wherein in said second domain: the transmittal powers for the first domains having the reference signal specific to the base station are increased by decreasing a part of the transmittal powers for the first domains having the data, and the transmittal powers for the first domains having the reference signal specific to the base station are different from the transmittal powers for the first domains having the reference signal specific to the mobile station, and in each of said at least one second domain and said plurality of other second domains, ratios of the transmit power between any of the first domains having the data and any of the first domains having the reference signal specific to the mobile station are determined to be constant; and transmitting said data, said reference signal specific to the base station, and said reference signal specific to the mobile station allocated in said third domain.

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| **对偶主权项** | 专利度:40特征度:5 |  |  |
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~~1.-40. (canceled)~~A method of communication in a network that includes a base station and a mobile station, the method comprising: allocating data, a reference signal specific to said base station, or a reference signal specific to the mobile station onto a first domain defined by frequency and time; allocating a plurality of first domains in a frequency direction, said allocation of said plurality of first domains representing a second domain; allocating a plurality of second domains placed in a time direction, said allocation of said plurality of second domains representing a third domain, wherein the third domain has at least one second domain including more than one first domain having the reference signal specific to said base station while not having the reference signal specific to the mobile station, and a plurality of other second domains including more than one first domain having the reference signal specific to the mobile station while not having the reference signal specific to the base station, wherein the plurality of other second domains are arranged at an equal interval in said time direction; controlling transmittal powers for each of the first domains having the data or the reference signal specific to the base station or the reference signal specific to the mobile station in said third domain, wherein in said second domain: the transmittal powers for the first domains having the reference signal specific to the base station are increased by decreasing a part of the transmittal powers for the first domains having the data, and the transmittal powers for the first domains having the reference signal specific to the base station are different from the transmittal powers for the first domains having the reference signal specific to the mobile station, and in each of said at least one second domain and said plurality of other second domains, ratios of the transmit power between any of the first domains having the data and any of the first domains having the reference signal specific to the mobile station are determined to be constant; and transmitting said data, said reference signal specific to the base station, and said reference signal specific to the mobile station allocated in said third domain.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 10 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for measuring aggregated carrier cell**

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| **公开号** | [US9020494](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9020494&sv=eec93056c8f1ee06ff76d763fa413350) | **公开日** | 2015/04/28 |
| **申请号** | 14/284,705 | **申请日** | 2014/05/22 |
| **授权日** | 2015/04/28 | **优先日** | 2010/02/03 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Deng; Tianle | Tang; Binsong | Wang; Jun |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A disclosure for measuring an aggregated carrier cell measuring an aggregated carrier cell configured with multiple component carriers is provided. In the disclosure, a user equipment receives, from a base station, a measurement period parameter for measuring a component carrier. The user equipment calculate a measurement period for a non-active component carrier according to the received measurement period parameter and a signal measurement estimation value of the non-active component carrier, and performs measurement on the non-active component carrier with the calculated measurement period for the non-active component carrier. |

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| **主权项** | 专利度:21特征度:12 |  |  |
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A method for measuring an aggregated carrier cell configured with multiple component carriers, the method comprising: receiving, by a user equipment, a measurement period parameter for component carrier measurement period calculation from a base station; determining, by the user equipment, a measurement period for a non-active component carrier among the multiple component carriers in accordance with the received measurement period parameter and a signal estimation value of the non-active carrier; and performing, by the user equipment, measurement on the non-active component carrier according to the determined measurement period for the non-active component carrier.

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| **对偶主权项** | 专利度:21特征度:12 |  |  |
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A method for measuring an aggregated carrier cell configured with multiple component carriers, the method comprising: receiving, by a user equipment, a measurement period parameter for component carrier measur~~ing~~ement period calculationfrom a base station~~,~~;determining, by the user equipment, a measurement period for a non-active component carrier among the multiple component carriers in accordance with the received measurement period parameter and a signal estimation value of the non-active carrier; and performing, by the user equipment, measurement on the non-active component carrier according to the determined measurement period for the non-active component carrier.

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| **被引用** | 18 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and eNodeB for forwarding downlink and uplink packets based on S1 handover**

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| **公开号** | [US9014139](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9014139&sv=9750f69d721f1de3456c8b3619aa7f6a) | **公开日** | 2015/04/21 |
| **申请号** | 13/276,782 | **申请日** | 2011/10/19 |
| **授权日** | 2015/04/21 | **优先日** | 2007/09/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Huang; Ying |
| **国际 主分类** | H04W 36/02 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for forwarding downlink packets based on S1 handover is disclosed. The method includes: numbering a packet not processed by using PDCP according to a message that comprises PDCP Serial Number (SN) information if downlink packets to be forwarded include the packet not processed by using PDCP; and sending the downlink packets to the UE according to the PDCP SN corresponding to the packet included in the downlink packets. A method for forwarding uplink packets based on S1 handover is disclosed. The method includes: receiving state report information of the packet sent by the target eNodeB; and sending the packet according to the state report information of the packet. Another method for forwarding downlink packets based on S1 handover and an eNodeB are disclosed. Through the embodiments of the present disclosure, the packets are forwarded without loss in the case of S1 handover. |

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| **主权项** | 专利度:8特征度:17 |  |  |
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A method for forwarding downlink packets, comprising: receiving, by a target evolved NodeB (eNodeB), when ensuring a lossless handover for a user equipment (UE), a control message outside a user plane from a source eNodeB, the control message including an initial Packet Data Convergence Protocol (PDCP) serial number (SN) and a defined relationship between the initial PDCP SN and a GPRS tunneling protocol user serial number (GTP-U SN); receiving, by the target eNode B, a plurality of packets without processing (non-PDCP packets), each non-PDCP packet in the plurality of non-PDCP packets being already numbered with its corresponding unique GTP-U SN; processing, by the target eNodeB, the plurality of non-PDCP packets into PDCP packets by assigning the initial PDCP SN for a first non-PDCP packet, and assigning a PDCP SN to each remaining non-PDCP packet in accordance with the GTP-U SN corresponding to the remaining non-PDCP packet and the relationship between the initial PDCP SN and the GTP-U SN of the first non-PDCP packet; and sending, by the target eNodeB, the PDCP packets to the UE.

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| **对偶主权项** | 专利度:22特征度:5 |  |  |
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A method for forwarding downlink packets~~based on S1 handover~~, comprising: receiving, by a target evolved NodeB (eNodeB),~~a message comprising Packet Data Convergence Protocol (PDCP) serial number (SN) information sent by a source eNodeB, the PDCP SN information comprising an initial PDCP~~when ensuring a lossless handover for a user equipment (UE), a control message outside a user plane from a source eNodeB, the control message including an initial Packet Data Convergence Protocol (PDCP) serial number (SN) and a defined relationship between the initial PDCP SN and a GPRS tunneling protocol user serial number (GTP-USN);~~numbe~~receiving, by the target eNodeB, a p~~acket not processed by using~~lurality of packets without processing (non-PDCPpac~~cording to the message, if the downlink packets include the packet not processed by using PDCP; and send~~kets), each non-PDCP packet in the plurality of non-PDCP packets being already numbered with its corresponding unique GTP-U SN; processing, by the target eNodeB, the~~downlink~~plurality of non-PDCPpacketsinto~~a user equipment (UE) accord~~PDCP packets by assigning the initial PDCP SN for a first non-PDCP packet, and assigning~~to~~aPDCP SN~~of~~toeach~~packet in the downlink packets~~remaining non-PDCP packet in accordance with the GTP-U SN corresponding to the remaining non-PDCP packet and the relationship between the initial PDCP SN and the GTP-U SN of the first non-PDCP packet; and sending, by the target eNodeB, the PDCP packets to the UE.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.36 |

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| **同族数** | 18 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for establishing emergency call**

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| **公开号** | [US9001835](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9001835&sv=b6f2e1024aac3b484ff2170c463b17ce) | **公开日** | 2015/04/07 |
| **申请号** | 13/220,301 | **申请日** | 2011/08/29 |
| **授权日** | 2015/04/07 | **优先日** | 2006/07/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yang; Yanfei |
| **国际 主分类** | H04L 12/56 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method for establishing an emergency call includes: if an emergency call request message sent by a User Equipment (UE) contains an Internet Protocol Multimedia Subsystem Public User Identity (IMPU) in a TEL URI format, a Proxy-Call Session Control Function entity (P-CSCF) generates an IMPU in a Session Initiation Protocol (SIP) URI format according to the IMPU in the TEL URI format, sends both IMPUs to a Public Safety Answering Point (PS AP), and receives an emergency callback initiated by the PSAP. The PSAP initiates the emergency callback according to one of the two IMPUs. A system for establishing an emergency call includes a UE, a P-CSCF and a PSAP. The PSAP can always acquire the IMPU in the TEL URI format and the IMPU in the SIP URI format of the UE, and initiate an emergency callback to the UE according to the IMPU in the SIP URI format. |

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| **主权项** | 专利度:5特征度:27 |  |  |
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A method for establishing an emergency call, comprising: receiving, by a Proxy-Call Session Control Function entity (P-CSCF) an emergency call request message from a User Equipment (UE); if the emergency call request message contains an Internet Protocol Multimedia Subsystem Public User Identity (IMPU) in a Telephone Uniform Resource Identifier, (TEL URI), format, obtaining, by the P-CSCF, an IMPU in a Session Initiation Protocol (SIP) URI format of the UE according to a SIP URI of a S-CSCF and the IMPU in the TEL URI format of the UE, wherein the SIP URI of the S-CSCF is saved in advance by the P-CSCF during a registration procedure; and sending, by the P-CSCF, the IMPU in the TEL URI format and the IMPU in the SIP URI format to a Public Safety Answering Point, PSAP.

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| **对偶主权项** | 专利度:14特征度:14 |  |  |
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A method for establishing an emergency call, comprising: receiving, by a Proxy-Call Session Control Function entity (P-CSCF) an emergency call request messagefrom a User Equipment (UE); if the emergency call request message contains an Internet Protocol Multimedia Subsystem Public User Identity (IMPU) in a Telephone Uniform Resource Identifier, (TEL URI), format,~~generat~~obtaining, by the P-CSCF, an IMPU in a Session Initiation Protocol (SIP) URI formatof the UEaccording toa SIP URI of a S-CSCF andthe IMPU in the TEL URI formatof the UE, wherein the SIP URI of the S-CSCF is saved in advance by the P-CSCF during a registration procedure; and sending, by the P-CSCF, the IMPU in the TEL URI format and the IMPU in the SIP URI format to a Public Safety Answering Point, PSAP.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Access control method, access control apparatus and communication system**

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| **公开号** | [US9001785](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US9001785&sv=7fee7a7d2be74834fa2c5b5b27e25ce7) | **公开日** | 2015/04/07 |
| **申请号** | 13/091,367 | **申请日** | 2011/04/21 |
| **授权日** | 2015/04/07 | **优先日** | 2008/10/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| An access control method, an access control apparatus and a communication system are disclosed, and a mechanism for processing Emergency Call (EMC) services is disclosed, and such mechanism ensures continuity of the EMC service while implementing the access control under a Closed Subscriber Group (CSG) mechanism. The access control method includes: obtaining CSG area information of a target area; and controlling the access of a User Equipment (UE) to the target area according to the CSG area information of the target area and/or whether an EMC service exists on the UE. The present invention is applicable to the scenario in which the UE accesses a network. |

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| **主权项** | 专利度:8特征度:26 |  |  |
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An access control method, comprising: determining, by a source core management Network Element (NE) of a source network, that a target area of a target network is a Closed Subscriber Group (CSG) area and that no Allowed CSG List of a User Equipment (UE) exists, wherein determining that the target area is a CSG area further comprises: receiving, by the source core management NE, a Handover Required message sent by a source access NE of the source network during Handover procedure from the source network to the target network, the Handover Required message carrying a Closed Subscriber Group Identifier (CSG ID) of the target area; and controlling, by the source core management NE, access of the UE to the target area according to whether the target area is a CSG area and that no Allowed CSG List of the UE exists and whether an Emergency Call (EMC) service exists on the UE, wherein controlling access of the UE to the target area according to whether the target area is a CSG area and that no Allowed CSG List of the UE exists and whether an EMC service exists on the UE comprises: allowing the UE to access the target area if the target area is a CSG area and no Allowed CSG List of the UE exists but the EMC service exists on the UE, or rejecting the access of the UE to the target area if the target area is a CSG area, no Allowed CSG List of the UE exists, and no EMC service exists on the UE.

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| **对偶主权项** | 专利度:18特征度:7 |  |  |
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An access control method, comprising:~~obtaining Closed Subscriber Group (CSG) area information of a~~determining, by a source core management Network Element (NE) of a source network, that a target area of a target network is a Closed Subscriber Group (CSG) area and that no Allowed CSG List of a User Equipment (UE) exists, wherein determining that the target area is a CSG area further comprises: receiving, by the source core management NE, a Handover Required message sent by a source access NE of the source network during Handover procedure from the source network to the target network, the Handover Required message carrying a Closed Subscriber Group Identifier (CSG ID) of thetarget area; and controlling, bythe~~access of a User Equipment (~~source core management NE, access of the UE to the target area according to whether the target area is a CSG area and that no Allowed CSG List of the UE exists and whether an Emergency Call (EMC) service exists on the UE, wherein controlling access of theUE~~)~~to the target area according to~~the CSG area information of the target area or existence of an Emergency Call (~~whether the target area is a CSG area and that no Allowed CSG List of the UE exists and whether an EMC service exists on the UE comprises: allowing the UE to access the target area if the target area is a CSG area and no Allowed CSG List of the UE exists but the EMC service exists on the UE, or rejecting the access of the UE to the target area if the target area is a CSG area, no Allowed CSG List of the UE exists, and noEMC~~)~~serviceexistson the UE.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**De-registration method, Home NodeB (HNB), and Home NodeB gateway (HNB GW)**

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| **公开号** | [US8996001](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8996001&sv=1d2a87d000dbf6f27be9812943b85373) | **公开日** | 2015/03/31 |
| **申请号** | 14/185,096 | **申请日** | 2014/02/20 |
| **授权日** | 2015/03/31 | **优先日** | 2008/09/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Zheng |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention relates to the field of communication technology, and a de-registration method, a Home NodeB (HNB) and a Home NodeB Gateway (HNB GW) are disclosed. In an embodiment, the present invention provides a de-registration method, comprising: initiating, by an HNB GW, release of pre-registration resources corresponding to user equipment (UE) after the HNB GW receives indication information indicating that the UE moves to another cell from a source HNB. Applying the embodiment of the present invention can release pre-registration resources in time and reduce waste of resources. |

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| **主权项** | 专利度:10特征度:9 |  |  |
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A de-registration method, comprising: receiving, by a Home NodeB gateway (HNB GW), indication information indicating that user equipment (UE) has moved to another cell from a cell of a source Home NodeB (HNB); and according to the indication information, initiating, by the HNB GW, release of pre-registration resources corresponding to the UE; wherein, the indication information is a register request toward the HNB GW initiated by the UE in the another cell.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A de-registration method, comprising: receiving, by a Home NodeB gateway (HNB GW), indication information indicating that user equipment (UE) has moved to another cell from acell of asource Home NodeB (HNB); and~~based on~~according tothe indication information, initiating, by the HNB GW, release of pre-registration resources corresponding to the UE; wherein, the indication information is a register request toward the HNB GW initiated by the UE in the another cell.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Facilitating synchronization between a base station and a user equipment**

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| **公开号** | [US8995419](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8995419&sv=44782ddc6e257ad9326777fe9f67b462) | **公开日** | 2015/03/31 |
| **申请号** | 14/138,031 | **申请日** | 2013/12/21 |
| **授权日** | 2015/03/31 | **优先日** | 2006/09/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Berggren; Fredrik |
| **国际 主分类** | H04W 56/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Methods and apparatus are provided for facilitating synchronization between a base station (BS) and a user equipment (UE) in a mobile communication system. The UE receives a synchronization signal originated by the BS. The synchronization signal is encoded with a selected cyclically permutable (CP) codeword. The selected CP codeword is selected from a set of CP codewords. Encoding of the synchronization signal is facilitated by a repetitive cyclically permutable (RCP) codeword derivable from the selected CP codeword. The RCP codeword has a plurality of codeword elements each associated with a value, the value of at least one codeword element in the RCP codeword being repeated in another codeword element position in the RCP codeword. And the synchronization signal is decoded in accordance with repetitive structure of the RCP codeword. |

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| **主权项** | 专利度:31特征度:23 |  |  |
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A method of facilitating synchronization between a base station (BS) and a user equipment (UE) in a mobile communication system, the method comprising: defining a set of cyclically permutable (CP) codewords, a plurality of cyclic shifts being derivable from each CP codeword, each cyclic shift being distinct from any other cyclic shift derivable from the set of CP codewords; selecting, by the BS, a CP codeword from the set in accordance with a Cell ID; and encoding, by the BS, the selected CP codeword into a synchronization signal to be sent to the UE, the encoding being facilitated by deriving a repetitive cyclically permutable (RCP) codeword from the selected CP codeword and encoding the RCP into the synchronization signal, a plurality of cyclic shifts being derivable from the RCP codeword, each cyclic shift derivable from the RCP codeword being distinct from any other cyclic shift derivable from the RCP codeword, wherein the RCP codeword has a plurality of codeword elements each associated with a value, the value of at least one codeword element in the RCP codeword being repeated in another codeword element position in the RCP codeword, and the synchronization signal comprises a plurality of synchronization sequences being transmitted in a radio frame, wherein allocation of the plurality of synchronization sequences to a plurality of slots of the radio frame is performed in accordance with the RCP codeword.

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| **对偶主权项** | 专利度:36特征度:14 |  |  |
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A method of facilitating synchronization between a base station (BS) and a user equipment (UE) in a mobile communication system, the method comprising: defining a set of cyclically permutable (CP) codewords, a plurality of cyclic shifts being derivable from each CP codeword, each cyclic shift being distinct from any other cyclic shift derivable from the set of CP codewords; selecting, by the BS, a CP codeword from the setin accordance with a Cell ID; and encoding, by the BS, the selected CP codeword into a synchronization signal to be sent to the UE, the encoding being facilitated byderivinga repetitive cyclically permutable (RCP) codeword~~derivable~~from the selected CP codewordand encoding the RCP into the synchronization signal, a plurality of cyclic shifts being derivable from the RCP codeword, each cyclic shift derivable from the RCP codeword being distinct from any other cyclic shift derivable from the RCP codeword, wherein the RCP codeword has a plurality of codeword elements each associated with a value, the value of at least one codeword element in the RCP codeword being repeated in another codeword element position in the RCP codeword, and the synchronization signal comprises a plurality of synchronization sequences being transmitted in a radio frame, wherein allocation of the plurality of synchronization sequences to a plurality of slots of the radio frame is performed in accordance with the RCP codeword.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device of sending and receiving precoding information**

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| **公开号** | [US8989299](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8989299&sv=512a9e63c015467a22c2d24a93e5c35a) | **公开日** | 2015/03/24 |
| **申请号** | 13/681,029 | **申请日** | 2012/11/19 |
| **授权日** | 2015/03/24 | **优先日** | 2010/05/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Yongxing | Wang; Jianguo |
| **国际 主分类** | H04B 15/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| The present invention discloses a method and a device of sending and receiving precoding information. A terminal terminal obtains a wideband precoding matrix indicator PMI. The terminal encodes an MSB of the wideband PMI to obtain encoded information. The MSB of the wideband PMI is encoded separately or jointly with other information and the MSB is a part of the wideband PMI. The terminal sends encoded information to a data sending end. |

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| **主权项** | 专利度:20特征度:21 |  |  |
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A method comprising: encoding, by a terminal, jointly at least one bit but not all bits of a wideband precoding matrix indicator (PMI) with a rank indication (RI) to obtain encoded information, wherein the at least one bit of the wideband PMI jointly encoded with the RI contains no least significant bit (LSB) of the wideband PMI; and sending, by the terminal, the encoded information to a data sending end, wherein when the terminal sends the encoded information through a physical uplink shared channel (PUSCH), the encoded information is mapped to a resource position that is on two sides of a demodulation pilot or a reference signal through a channel interleaver.

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| **对偶主权项** | 专利度:20特征度:9 |  |  |
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A method~~of sending precoding information, the method comprising: obtaining, by a terminal, a wideband precoding matrix indicator (PMI); encoding, by the terminal, an MSB of the wideband PMI~~comprising: encoding, by a terminal, jointly at least one bit but not all bits of a wideband precoding matrix indicator (PMI) with a rank indication (RI)to obtain encoded information, wherein the~~MSB~~at least one bitof the wideband PMI~~is encoded separately or is encoded~~jointlyencodedwith~~o~~the~~r information of N bits, wherein the MSB is a part~~RI contains no least significant bit (LSB)of the wideband PMI;and~~N is a natural number; and~~sending, bythe terminal, the encoded information to a data sending end, wherein whenthe terminal~~,~~sendsthe encoded information t~~o a data sending end~~hrough a physical uplink shared channel (PUSCH), the encoded information is mapped to a resource position that is on two sides of a demodulation pilot or a reference signal through a channel interleaver.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 18 | **国家数** | 10 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Generic access network and method for implementing services by using generic access network**

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| **公开号** | [US8989139](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8989139&sv=5e8773bf9cbf3c5e563098458bd83420) | **公开日** | 2015/03/24 |
| **申请号** | 12/707,167 | **申请日** | 2010/02/17 |
| **授权日** | 2015/03/24 | **优先日** | 2007/08/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Xiaobo | Duan; Xiaoqin | Zhang; Jian | Zhao; Yang | Li; Qingyu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A Generic Access Network (GAN) and a method for implementing services by using the GAN are disclosed. The GAN is configured to connect a generic IP network with a target network, and includes a Generic Access Network Controller (GANC) configured to enable a User Equipment (UE) to access the target network via the generic IP network. The GANC includes: a user interface, configured to connect the UE; and a Policy and Charging Control (PCC) interface, configured to trigger a process of establishing bearers of the generic IP network. |

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| **主权项** | 专利度:12特征度:28 |  |  |
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A Generic Access Network (GAN) configured to connect a generic IP network and a target network, comprising: a Generic Access Network Controller (GANC), configured to enable a User Equipment (UE) to handover from the generic IP network to the target network, wherein the GANC comprises: a transmission interface, configured to: receive a handover request from a Mobility Management Entity (MME) of the generic IP network, wherein the handover request is created by a base station of the generic IP network according to a measurement report sent from the UE; and send a relocation response to the MME according to a handover command from a Mobile Switching Center (MSC) of the target network, wherein the relocation response is delivered to the UE via the base station; and a switch interface, configured to: send the handover request to the MSC, wherein the MSC triggers a Circuit Switched-Circuit Switched (CS-CS) handover process in the target network according to the handover request, and generate the handover command; and receive the generated handover command from the MSC, wherein the target network is one of an SAE network and an LTE network, the transmission interface comprises an S1-MME interface, and the switch interface comprises an S1-U interface.

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| **对偶主权项** | 专利度:20特征度:6 |  |  |
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A Generic Access Network (GAN) configured to connect a generic IP network~~with~~anda target network,~~wherein the GAN~~compris~~es:~~ing:a Generic Access Network Controller (GANC), configured to enable a User Equipment (UE) to~~access the target~~handover from the generic IPnetwork~~via~~tothe~~generic IP~~targetnetwork~~;~~,wherein the GANC comprises: a~~user~~transmissioninterface, configured to~~connect the UE; and a Policy and Charg~~: receive a handover request from a Mobility Management Entity (MME) of the generic IP network, wherein the handover request is created by a base station of the generic IP network according to a measurement report sent from the UE; and send a relocation response to the MME according to a handover command from a Mobile Switching C~~o~~ent~~rol (PCC) interface, connected to a PCC system and configured to~~er (MSC) of the target network, wherein the relocation response is delivered to the UE via the base station; and a switch interface, configured to: send the handover request to the MSC, wherein the MSCtriggersa~~bear establishment process of the generic IP network~~Circuit Switched-Circuit Switched (CS-CS) handover process in the target network according to the handover request, and generate the handover command; and receive the generated handover command from the MSC, wherein the target network is one of an SAE network and an LTE network, the transmission interface comprises an S1-MME interface, and the switch interface comprises an S1-U interface.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for setting up a bearer**

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| **公开号** | [US8989116](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8989116&sv=19fa45d7e71b729218a492559161bc5f) | **公开日** | 2015/03/24 |
| **申请号** | 13/558,691 | **申请日** | 2012/07/26 |
| **授权日** | 2015/03/24 | **优先日** | 2007/10/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Jinyi | Liu; Lan | Guo; Xiaolong | Li; Ming | Chen; Zhe | Yu; Qi |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| Method and system for setting up a bearer are disclosed. The bearer setup method includes these steps: a packet data network gateway (PGW) obtains first quality of service (QoS) information and a first bearer identifier (ID), and sets up a bearer between the PGW and a radio access network (RAN) according to the first QoS information, where the bearer is associated with the first bearer ID; the RAN sets up a radio bearer (RB) with a user equipment (UE) according to second QoS information associated with the first QoS information, where the RB is associated with a second bearer ID associated with the first bearer ID. |

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| **主权项** | 专利度:8特征度:18 |  |  |
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A method for setting up a bearer for communications between a serving general packet radio service support node (SGSN) and a radio access network (RAN) comprising: mapping, by the SGSN, quality of service (QoS) information associated with communications between the SGSN and a packet data network gateway (PGW) to derive QoS information associated with the communications between the SGSN and the RAN according to a mapping relationship referred to by the SGSN; configuring, by the SGSN, the bearer for the communications between the SGSN and the RAN in accordance with the derived QoS information; mapping, by the SGSN, a bearer ID associated with a bearer for the communications between the SGSN and the PGW, to derive a bearer ID for the bearer for communications between the SGSN and the RAN according to a pre-defined mapping relationship referred to by the SGSN; and associating, by the SGSN, the derived bearer ID with the bearer for communications between the SGSN and the RAN.

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| **对偶主权项** | 专利度:20特征度:24 |  |  |
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A method for setting up a bearer~~, comprising: obtaining, by a packet data network gateway (PGW), first quality of service (QoS) information and a first bearer identifier (ID), and setting up a bearer~~for communications between a serving general packet radio service support node (SGSN) and a radio access network (RAN) comprising: mapping, by the SGSN, quality of service (QoS) information associated with communicationsbetween the~~PGW~~SGSNand a~~serving general packet radio service support node (SGSN) according to the first QoS information so that a bear between the SGSN and a user equipment (UE) is set up according to second QoS information, wherein the bear~~packet data network gateway (PGW) to derive QoS information associated with the communications between the SGSN and the RAN according to a mapping relationship referred to by the SGSN; configuring, by the SGSN, the bearer for the communicationsbetween the~~PGW~~SGSNand the~~SGS~~RAN i~~s~~na~~ssociated~~ccordancewith the~~first bearer ID and the bearer between the SGSN and the UE is associated with a secon~~derived QoS information; mapping, by the SGSN, a bearer ID associated with a bearer for the communications between the SGSN and the PGW, to derive abearer ID~~;~~forthe~~second QoS information is associated with the first QoS information; and the second bearer ID is associated with the first bearer ID~~bearer for communications between the SGSN and the RAN according to a pre-defined mapping relationship referred to by the SGSN; and associating, by the SGSN, the derived bearer ID with the bearer for communications between the SGSN and the RAN.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Traffic bearer mapping method and communication device**

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| **公开号** | [US8982811](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8982811&sv=29c22326ccfdf7743e064b392e57cb09) | **公开日** | 2015/03/17 |
| **申请号** | 13/330,311 | **申请日** | 2011/12/19 |
| **授权日** | 2015/03/17 | **优先日** | 2009/06/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Ke | Chang; Ningjuan | Peng; Yan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks, Gilson & Lione |

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| **摘要** |  |
| Embodiments of the present invention provide a traffic bearer mapping method and a communication device. The traffic bearer mapping method includes: obtaining attribute information of a traffic data flow of a user; selecting a relay transmission tunnel according to the attribute information of the traffic data flow of the user; and mapping the received traffic data flow to the relay transmission tunnel for transmission, where the relay transmission tunnel includes a relay link radio bearer Un RB or a bearer including the Un RB. According to the embodiments of the present invention, transmission of a traffic data flow in an LTE-A network after a relay node is introduced into is implemented, thereby ensuring quality of service of multi-service. |

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| **主权项** | 专利度:14特征度:16 |  |  |
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A traffic bearer mapping method, comprising: receiving, by a communication device, a traffic data flow of a user equipment; obtaining, by the communication device, attribute information of the traffic data flow, wherein the attribute information of the traffic data flow is located in a user datagram protocol/Internet protocol (UDP/IP) header; and selecting, by the communication device, a relay transmission tunnel according to the attribute information of the traffic data flow, wherein the relay transmission tunnel comprises a relay link radio bearer (Un RB); and mapping, by the communication device, the traffic data flow to the relay transmission tunnel for transmission.

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| **对偶主权项** | 专利度:20特征度:11 |  |  |
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A traffic bearer mapping method, comprising:receiving, by a communication device, a traffic data flow of a user equipment;obtaining, by~~a~~thecommunication device, attribute information of~~a traffic data flow of a us~~the traffic data flow, wherein the attribute information of the traffic data flow is located in a user datagram protocol/Internet protocol (UDP/IP) header; and selecting, by the communication device, a relay transmission tunnel according to the attribute information of the traffic data flow~~of the user~~, wherein the relay transmission tunnel comprises a relay link radio bearer (Un RB); and mapping, by the communication device, the traffic data flow to the relay transmission tunnel for transmission~~, wherein the relay transmission tunnel comprises a relay link radio bearer (Un RB)~~.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 17 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Precoding codebook and feedback representation**

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| **公开号** | [US8971434](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8971434&sv=042085127ac00cc3d9ad176840678406) | **公开日** | 2015/03/03 |
| **申请号** | 13/235,120 | **申请日** | 2011/09/16 |
| **授权日** | 2015/03/03 | **优先日** | 2009/03/17 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Frenne; Mattias | Liu; Jianghua |
| **国际 主分类** | H04B 7/02 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The invention relates to a technical field of multiple-antenna transmission in a wireless communication system. Communication of feedback representation of and generating a codebook suitable for precoding of multiple-antenna transmission is disclosed. An example matrix representation of precoding of a first number of antenna ports comprises precoding sub-matrices of less antenna ports. |

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| **主权项** | 专利度:16特征度:16 |  |  |
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A method of generating a first codebook A for M′ transmit antenna ports, of multiple-antenna communication in a wireless communication system, comprising at least a first precoding matrix ap, said first precoding matrix ap having M′ rows and R′ columns, where M′ and R′ are natural numbers and comprising at least a first and second sub-matrix having M rows and R1 columns, wherein a first sub-matrix is located at rows m=1 . . . M and columns r=1,2, . . . R1 of a first precoding matrix ap, and a second sub-matrix is located at rows m=M+1, M+2, . . .2×M and columns r=1,2, . . . R1 of a first precoding matrix ap; comprising: selecting, by a device in the wireless communication system, at least a second bi and third bk precoding matrix belonging to a second codebook B for M transmit antenna ports, wherein said second bi and third bk precoding matrices having M rows and R1 columns are same or different precoding matrix from codebook B, where M and R1 are natural numbers and M′=2\* M, M≧2 and R1≧1; and obtaining, by the device in the wireless communication system, said first and second sub-matrices based on said second bi and third bk precoding matrices, respectively, so that the columns in said first precoding matrix ap are orthogonal to each other when R′#x3e;1; wherein at least one of said second and third precoding matrices is multiplied by a complex scalar or matrix in the process of obtaining said first and second sub-matrices; wherein the device comprises a hardware processor.

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| **对偶主权项** | 专利度:28特征度:13 |  |  |
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A method of~~communicating a representation of precoding feedback~~generating a first codebook A for M′ transmit antenna ports,of multiple-antenna~~transmiss~~communication in a wireless communication system, comprising~~: communicating a representation of a first precoding matrix ap of a first codebook A is communicated, wherein~~at least a first precoding matrix ap,said first precoding matrix~~,~~ap~~,~~having M′ rows and R′ columns, where M′ and R′ are natural numbers~~,~~and comprising at least a first and second sub-matrix~~, and wherein said first precoding matrix being based on at least a second precoding matrix, bi, and a~~having M rows and R1 columns, wherein a first sub-matrix is located at rows m=1 . . . M and columns r=1,2, . . . R1 of a first precoding matrix ap, and a second sub-matrix is located at rows m=M+1, M+2, . . .2×M and columns r=1,2, . . . R1 of a first precoding matrix ap; comprising: selecting, by a device in the wireless communication system, at least a second bi andthirdbkprecoding matrix~~, bk,~~belonging to a second codebook~~,~~B~~,~~for M transmit antenna ports, whereinsaid secondbiand thirdbkprecoding matrices having M rows and R1 columnsare same or different precoding matrix from codebook B, where Mand R1 are natural numbers and M′

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| **被引用** | 1 | **自引用** | 0 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.2 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication system, base station apparatus, and mobile station apparatus**

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| **公开号** | [US8971284](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8971284&sv=34f0c1f1bf922cbc8615b74b0e844981) | **公开日** | 2015/03/03 |
| **申请号** | 12/695,814 | **申请日** | 2010/01/28 |
| **授权日** | 2015/03/03 | **优先日** | 2007/07/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Aiba; Tatsushi | Yamada; Shohei |
| **国际 主分类** | H04W 4/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention reduces the amount of control information for specifying the transmission method for simultaneously transmitting the uplink data and the reception quality information as well as the uplink data and the ACK/NACK, reduces delay occurring in changing the transmission method, and realizes the mapping of the uplink data and the reception quality information and that of the uplink data and the ACK/NACK, in compliance with modulation scheme and coding rate of the uplink data specified by the base station apparatus. In the mobile communication system where the base station apparatus allocates, to the mobile station apparatus, resources wherein the base station apparatus transmits, to the mobile station apparatus, control information for specifying a transmission format for the mobile station apparatus to transmit information using the uplink, while the mobile station apparatus simultaneously transmits, to the base station apparatus, the uplink data and the reception quality information based on the specified transmission format in case of having received the control information from the base station apparatus. |

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| **主权项** | 专利度:22特征度:23 |  |  |
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A mobile communication system comprising: a base station configured to: transmit, to a mobile station, a grant signal including resource allocation information specifying uplink resources of a physical uplink shared channel (PUSCH) being allocated to the mobile station, wherein the uplink resources are defined as symbols in a time domain and subcarriers in a frequency domain, and the mobile station configured to: calculate a number of positive acknowledgement or negative acknowledgement (ACK/NACK) symbols pertaining to downlink data to communicate in the PUSCH in accordance with an amount of uplink resources allocated to the mobile station by the resource allocation information; map the number of ACK/NACK symbols onto a part of symbols in the time domain of the uplink resources, wherein the number of ACK/NACK symbols mapped on the uplink resources does not exceed an upper threshold determined by the part of symbols in the time domain of the uplink resources; and transmit, to the base station, the number of ACK/NACK symbols together with uplink data over the PUSCH.

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| **对偶主权项** | 专利度:17特征度:8 |  |  |
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A mobile communication system~~where a mobile station apparatus~~comprising: a base station configured to:transmit~~s~~, to a~~bas~~mobile station,a~~pparatus, ACK or NACK of the Hybrid Automatic Repeat Request (HARQ) for downlink data, wherein said base station apparatus transmits, to said mobile station apparatus, a signal for permitting data transmission in an uplink including resource allocation information for specifying~~grant signal including resource allocation information specifying uplink resources of a physical uplink shared channel (PUSCH) being allocated to the mobile station, wherein the uplink resources are defined as symbols in a time domain and subcarriers in a frequency domain, and the mobile station configured to: calculate a number of positi~~m~~ve~~component or frequency component for an uplink data channel, and said mobile station apparatus calculates, from said resource allocation information, resource amount for ACK or NACK mapped together wi~~acknowledgement or negative acknowledgement (ACK/NACK) symbols pertaining to downlink data to communicate in the PUSCH in accordance with an amount of uplink resources allocated to the mobile station by the resource allocation information; map the number of ACK/NACK symbols onto a part of symbols in the time domain oftheuplink~~data onto said uplink data channel, and transmits, to said base station apparatus, ACK or NACK with said calculated resource amount and said uplink data together by using said uplink data channel~~resources, wherein the number of ACK/NACK symbols mapped on the uplink resources does not exceed an upper threshold determined by the part of symbols in the time domain of the uplink resources; and transmit, to the base station, the number of ACK/NACK symbols together with uplink data over the PUSCH.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 36 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, equipment and mobile communication system for realizing explicit call transfer**

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| **公开号** | [US8964729](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8964729&sv=1cfde34b18b7b4dd1d0e990536420c94) | **公开日** | 2015/02/24 |
| **申请号** | 13/251,638 | **申请日** | 2011/10/03 |
| **授权日** | 2015/02/24 | **优先日** | 2008/06/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Jin; Hui | Long; Shuiping | Duan; Xiaoyan |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method, equipment, and a mobile communication system for realizing explicit call transfer are provided. The method for realizing explicit call transfer includes the following steps. A service centralization &#x26; continuity application server (SCC AS) receives a call request sent by a second user equipment (UE), and sends the call request to a third UE, in which an instruction for replacing a call between a first UE and the third UE is carried in the call request. A message returned by the third UE according to the call request is received, and the third UE is controlled to establish a connection with the second UE and to break a connection with the first UE. The third UE is an IP multimedia subsystem centralized service user equipment (ICS UE). |

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| **主权项** | 专利度:5特征度:22 |  |  |
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A method for realizing explicit call transfer, comprising: by a service centralization #x26; continuity application server (SCC AS) receiving a call request sent by a second user equipment (UE), converting the call request sent by the second UE into a circuit switched service call request message, and sending the circuit switched service call request message to a third UE; carrying a session identifier and a replacement indication identifier in the circuit switched service call request message, wherein the session identifier is a session identifier between a first UE and the third UE, and the replacement indication identifier is used to indicate replacing a session between the first UE and the third UE by a session between the second UE and the third UE; and receiving a message returned by the third UE according to the circuit switched service call request message, controlling the third UE to establish a connection with the second UE, and controlling the third UE to break a connection with the first UE; wherein the third UE is an IP multimedia subsystem centralized service UE (ICS UE).

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| **对偶主权项** | 专利度:6特征度:8 |  |  |
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A method for realizing explicit call transfer, comprising:~~A~~by aservice centralization #x26; continuity application server (SCC AS) receiving a call request sent by a second user equipment (UE), converting the call request~~message~~sent by the second UE into a circuit switched service call request message, and sending the circuit switched service call request message to~~the~~athird UE;~~and~~carrying a session identifier and a replacement indication identifier in the circuit switched service call request message, wherein the session identifier is a session identifier between~~the~~afirst UE and the third UE, and the replacement indication identifier is used to indicate replacing a session between the first UE and the third UE by a session between the second UE and~~a~~thethird UE; andreceiving a message returned by the third UE according to thecircuit switched servicecall requestmessage, controlling the third UE to establish a connection with the second UE, and controlling the third UE to break a connection with the first UE; wherein the third UE is an IP multimedia subsystem centralized service UE (ICS UE).

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Pulse encoding and decoding method and pulse codec**

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| **公开号** | [US8959018](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8959018&sv=839febc3590fbf1f94012643aae8eb73) | **公开日** | 2015/02/17 |
| **申请号** | 14/150,498 | **申请日** | 2014/01/08 |
| **授权日** | 2015/02/17 | **优先日** | 2010/06/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ma; Fuwei | Zhang; Dejun |
| **国际 主分类** | G10L 19/02 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| In a pulse encoding and decoding method and a pulse codec, more than two tracks are jointly encoded, so that free codebook space in the situation of single track encoding can be combined during joint encoding to become code bits that may be saved. Furthermore, a pulse that is on each track and required to be encoded is combined according to positions, and the number of positions having pulses, distribution of the positions that have pulses on the track, and the number of pulses on each position that has a pulse are encoded separately, so as to avoid separate encoding performed on multiple pulses of a same position, thereby further saving code bits. |

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| **主权项** | 专利度:19特征度:19 |  |  |
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A pulse audio encoding method performed by a pulse encoder which is implemented by hardware, comprising: obtaining algebraic codebook pulses that are on T tracks and to be encoded, wherein T is an integer greater than or equal to 2; separately collecting, according to positions, statistics about at least one pulse that is on each track and to be encoded, to obtain the number Nt of positions that have at least one pulse on each track, distribution of the positions that have at least one pulse on each track, and the number of pulses on each position that has at least one pulse, wherein the subscript t represents a tth track, and tε[0, T 1]; according to a {N0, N1, . . . , NT-1} combination of the number of positions that have at least one pulse on the T tracks, determining a first index I1, wherein the first index I1 corresponds to all possible distribution situations of positions that have at least one pulse and are on each track; determining a second index I2t of each track separately according to distribution of positions that have at least one pulse and are on each track, wherein the second index indicates, among all possible distribution situations corresponding to the first index I1, a distribution situation which corresponds to distribution of current positions having at least one pulse on a corresponding track; determining a third index I3t of each track separately according to the number of pulses on each position that has at least one pulse and is on each track; and generating a code index Ind, wherein the code index comprises information of the first index, the second index of each track and the third index of each track.

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| **对偶主权项** | 专利度:21特征度:3 |  |  |
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A pulseaudioencoding methodperformed by a pulse encoder which is implemented by hardware, comprising: obtainingalgebraic codebookpulses that are on T tracks and~~required~~to be encoded, wherein T is an integer greater than or equal to 2; separately collecting, according to positions, statistics about at least onepulse that is on each track and~~required~~to be encoded, to obtain the number Nt of positions that haveat least onepulse~~s~~on each track, distribution of the positions that haveat least onepulse~~s~~on~~th~~eachtrack, and the number of pulses on each position that has at least onepulse, wherein the subscript t represents a tth track, and tε[0, T 1]; according to~~the number~~a{N0, N1, . . . , NT-1}~~of positions that have pulses and are on each~~combination of the number of positions that have at least one pulse on the Ttracks, determining a first index I1, wherein the first index I1 corresponds to all possible distribution situations of positions that haveat least onepulse~~s~~and are on each track~~under the number of the positions having pulses, wherein the number of the positions having pulses is represented by the first index I1~~; determining a second index I2t of each track separately according to distribution of positions that haveat least onepulse~~s~~and are on each track, wherein the second index indicates, among all possible distribution situations corresponding to the first index I1, a distribution situation which corresponds to distribution of current positions havingat least onepulse~~s~~on a corresponding track; determining a third index I3t of each track separately according to the number of pulses on each position that has~~th~~at least one pulse and is on each track; and generating a code index Ind, wherein the code index comprises information of the first index~~and~~,the secondindex of each trackandthethird index~~es~~of each track.

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| **被引用** | 3 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.11 |

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| **同族数** | 13 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Cell load balancing method and devices thereof**

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| **公开号** | [US8958812](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8958812&sv=7af4ca0826a2d71e7b30f0183321ce2e) | **公开日** | 2015/02/17 |
| **申请号** | 14/159,622 | **申请日** | 2014/01/21 |
| **授权日** | 2015/02/17 | **优先日** | 2008/09/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Weiguo; Niu |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A cell load balancing method, a cell load measuring method, and devices thereof are provided. The cell load balancing method includes: acquiring information of the load of a current cell and information of the load an adjacent cell; determining a target cell in which a mobility parameter needs to be modified thereof according to the information of the load of the current cell and the information of the load of the adjacent cell; sending a parameter modification request to the determined target cell; and modifying parameters of the current cell according to content of the parameter modification request if the parameter modification response message is a parameter modification response indicating modification successful. With the above solution, a load balancing solution can be better implemented in a network, thereby improving a capacity of the network, improving a success rate of user access, and reducing access delay. |

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| **主权项** | 专利度:38特征度:18 |  |  |
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A cell load balancing method, comprising: acquiring information of load of a current cell and information of load of at least one adjacent cell neighbouring the current cell; determining a target cell in which a mobility parameter needs to be modified according to the information of the load of the current cell and the information of the load of the at least one adjacent cell, wherein the target cell is one of the at least one adjacent cell; sending a parameter modification request to the target cell; receiving a parameter modification response message returned by the target cell; modifying parameters of the current cell according to content of the parameter modification request if the parameter modification response message i~~ndicate~~saparameter modification~~for the target cell is~~response indicating modificationsuccessful; and abandoning a current modification of the current cell, or initiating a new parameter modification request according to a cause value returned from the target cell~~,~~if the parameter modification response message i~~ndicate~~saparameter modification~~for the target cell~~response indicating modificationfailed.

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| **对偶主权项** | 专利度:38特征度:16 |  |  |
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A cell load balancing method, comprising: acquiring information of load of a current cell and information of load of at least one adjacent cell neighbouring the current cell; determining a target cell in which a mobility parameter needs to be modified according to the information of the load of the current cell and the information of the load of the at least one adjacent cell, wherein the target cell is one of the at least one adjacent cell; sending a parameter modification request to the target cell; receiving a parameter modification response message returned by the target cell; modifying parameters of the current cell according to content of the parameter modification request if the parameter modification response message is a parameter modification response indicating modification successful; and abandoning a current modification of the current cell, or initiating a new parameter modification request according to a cause value returned from the target cell if the parameter modification response message is a parameter modification response indicating modification failed.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Synchronization method, communication handover method, radio network and node**

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| **公开号** | [US8942249](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8942249&sv=7a4e07f4337cf8ce1330893cb6bcc25a) | **公开日** | 2015/01/27 |
| **申请号** | 13/540,221 | **申请日** | 2012/07/02 |
| **授权日** | 2015/01/27 | **优先日** | 2007/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Qiu; Yong |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P |

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| **摘要** |  |
| A synchronization method, a communication handover method, a radio network, and a RAN node are disclosed. The interface information synchronization method includes determining whether a condition for initiating interface information update is fulfilled. Information about the S1 interface between the RAN node and the core network node, is sent. In addition, or alternatively, information about the X2 interface between the RAN node and the neighboring RAN node is sent to the neighboring RAN node if the condition for initiating interface information update fulfilled. |

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| **主权项** | 专利度:18特征度:15 |  |  |
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An interface information synchronization method, comprising: receiving, by a second radio access network (RAN) node, interface information sent by a first RAN node through an X2 interface, wherein the interface information is sent by the first RAN node when a condition for sending interface information is fulfilled, the interface information including information indicating an S1 interface exists between the first RAN node and a core network node, wherein the X2 interface is between the first RAN node and the second RAN node, the condition for sending interface information includes at least one of a change in configuration of the first RAN node, a change in state of interface of the first RAN node and the first RAN node being restarted; and updating, by the second RAN node, interface information of the first RAN node in accordance with the received S1 interface information when previous S1 interface information of the first RAN node existed in second RAN node, or, configuring, by the second RAN node, interface information of the first RAN node in accordance with the received S1 interface information when no previous S1 interface information of the first RAN node existed in the second RAN node.

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| **对偶主权项** | 专利度:12特征度:7 |  |  |
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An interface information synchronization method, comprising: receiving, by a second radio access network (RAN) node, interface information sent by a first RAN node through an X2 interface, wherein the interface information is sent by the first RAN node when a condition for sending interface information is fulfilled, the interface information including information indicating~~whether~~an S1 interface exists between the first RAN node and a core network node, wherein the X2 interface is between the first RAN node and the second RAN node~~; and updating, by the second RAN node, interface information of the second RAN node according to~~, the condition for sending interface information includes at least one of a change in configuration of the first RAN node, a change in state of interface of the first RAN node and the first RAN node being restarted; and updating, by the second RAN node, interface information of the first RAN node in accordance with the received S1 interface information when previous S1 interface information of the first RAN node existed in second RAN node, or, configuring, by the second RAN node, interface information of the first RAN node in accordance withthe receivedS1interface informationwhen no previous S1 interface information of the first RAN node existed in the second RAN node.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.7 |

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| **同族数** | 17 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Tunnel management method, tunnel management apparatus, and communications system**

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| **公开号** | [US8938640](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8938640&sv=465b21f4ca8f854ab323d23a7e2a97bc) | **公开日** | 2015/01/20 |
| **申请号** | 12/982,195 | **申请日** | 2010/12/30 |
| **授权日** | 2015/01/20 | **优先日** | 2008/07/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yin; Yu | Di; Zhiyu |
| **国际 主分类** | G06F 11/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention relates to communications technologies and discloses a tunnel management method, a tunnel management apparatus, and a communications system so that a node that causes failure of a tunnel management request can be determined. According to the present invention, a response returned by a tunnel management node to an initiating node includes not only a cause value of tunnel management request failure but also information of the node that causes failure of the tunnel management request, so that the initiating node can find the node that causes failure of the tunnel management request and determine the error checking direction. The present invention is applicable to network devices in a communications network. |

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| **主权项** | 专利度:8特征度:14 |  |  |
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A tunnel management method, comprising: receiving, by a tunnel management node, a tunnel management request from an initiating node; after receiving the tunnel management request, sending, by the tunnel management node, the tunnel management request to a remote node; receiving, by the tunnel management node, a response message from the remote node responsive to the tunnel management request, wherein the response message comprises a cause value indicating a reason of failure of handling the tunnel management request; modifying, by the tunnel management node, the response message by adding information indicating that the failure is caused by the remote node; and sending, by the tunnel management node, the modified response message to the initiating node.

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| **对偶主权项** | 专利度:16特征度:21 |  |  |
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A tunnel management method, comprising: receiving, by a tunnel management node,a tunnel management request from an initiating node;~~and sending to the initiating~~after receiving the tunnel management request, sending, by the tunnel management node, the tunnel management request to a remote node; receiving, by the tunnel managementnode,a response message~~, which comprises information of a node that causes failure of the tunnel management request when the tunnel management request fails~~from the remote node responsive to the tunnel management request, wherein the response message comprises a cause value indicating a reason of failure of handling the tunnel management request; modifying, by the tunnel management node, the response message by adding information indicating that the failure is caused by the remote node; and sending, by the tunnel management node, the modified response message to the initiating node.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.56 |

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| **同族数** | 24 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover method and system in relay network, relay node, control base station and base station**

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| **公开号** | [US8923869](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8923869&sv=6a87f61f73c031d1c1484e1cb4b58cea) | **公开日** | 2014/12/30 |
| **申请号** | 13/826,358 | **申请日** | 2013/03/14 |
| **授权日** | 2014/12/30 | **优先日** | 2009/12/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhang; Tao |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| Embodiments of the present invention provide a handover method and system in a relay network, a relay node, a control base station and a base station. The method includes: receiving, by a relay node, a first area identifier that identifies the relay node; sending a system information broadcast message carrying the first area identifier to a terminal in a coverage area; receiving a handover request message forwarded by a control base station; and performing, according to the handover request message, a control operation of accessing the relay node on the terminal. The first area identifier that identifies the relay node is allocated to the relay node, so that the terminal in the relay network can be normally handed over from the base station to the relay node. |

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| **主权项** | 专利度:9特征度:16 |  |  |
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A handover method in a relay network, comprising: sending, by a control base station, a response message to a relay node according to a received interface setup request message, wherein the response message carries a first area identifier allocated to the relay node when an interface is setup to connect the relay node; and receiving a handover request message sent by a mobility management entity, and forwarding the handover request message to the relay node by identifying the relay node from the first area identifier obtained from the response message, so that the relay node performs, according to the handover request message, a control operation enabling access to the relay node from a terminal, and wherein the first area identifier enables the mobility management entity to send the handover request message to the control base station.

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| **对偶主权项** | 专利度:6特征度:6 |  |  |
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A handover method in a relay network, comprising: sending, by a control base station, a response message to a relay node according to a received interface setup request message, wherein the response message carries a first area identifier~~that identifies~~allocated tothe relay node~~and is allocated to~~when an interface is setup to connectthe relay node; and receiving a handover request message sent by a mobility management entity, and forwarding the handover request message to the relay nodeby identifying the relay node from the first area identifier obtained from the response message, so that the relay node performs, according to the handover request message, a control operation~~of~~enablingaccess~~ing~~tothe relay node~~on a terminal~~from a terminal, and wherein the first area identifier enables the mobility management entity to send the handover request message to the control base station.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 11 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication system, base station apparatus and mobile station apparatus**

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| **公开号** | [US8923867](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8923867&sv=c2b4828b461bdcb4bf4dbf93df1b2e34) | **公开日** | 2014/12/30 |
| **申请号** | 12/601,507 | **申请日** | 2008/05/16 |
| **授权日** | 2014/12/30 | **优先日** | 2007/05/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Kato; Yasuyuki | Yamada; Shohei |
| **国际 主分类** | H04W 36/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The time spent in handover is shortened when a mobile station apparatus performs random access for handover. In a mobile communication system where a mobile station apparatus 200 uses any signature of a beforehand determined signature group between the mobile station apparatus 200 and a base station apparatus 100 in random access, the base station apparatus 100 selects a signature used by the mobile station apparatus 200 in random access performed at the time of handover, and the mobile station apparatus 200 performs handover using the signature selected in the base station apparatus 100 and judges the presence or absence of transmission and reception of a handover complete message and contention resolution corresponding to the type of signature selected in the base station apparatus 100. |

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| **主权项** | 专利度:8特征度:13 |  |  |
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A method for random access to a first base station at a time of handover, comprising: receiving, by a mobile station, a notification of a number used for random access from a second base station; determining, by the mobile station, whether or not the number indicates a signature ID number for handover; sending, by the mobile station, a random access preamble corresponding to the number if the number indicates a signature ID number for handover; and performing, by the mobile station, contention resolution processing if the number does not indicate a signature ID number for handover.

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| **对偶主权项** | 专利度:16特征度:13 |  |  |
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~~1-16. (canceled)~~A method for random access to a first base station at a time of handover, comprising: receiving, by a mobile station, a notification of a number used for random access from a second base station; determining, by the mobile station, whether or not the number indicates a signature ID number for handover; sending, by the mobile station, a random access preamble corresponding to the number if the number indicates a signature ID number for handover; and performing, by the mobile station, contention resolution processing if the number does not indicate a signature ID number for handover.

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| **被引用** | 19 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 18 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for binding redundancy versions with a system frame number and subframe numbers**

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| **公开号** | [US8923335](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8923335&sv=9f97f1cfc789ac8f527e9f4b42782e43) | **公开日** | 2014/12/30 |
| **申请号** | 13/053,440 | **申请日** | 2011/03/22 |
| **授权日** | 2014/12/30 | **优先日** | 2008/09/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Fan |
| **国际 主分类** | H04J 3/24 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and apparatus for binding Redundancy Versions (RVs) with a System Frame Number (SFN) and subframe numbers are disclosed. The method includes: choosing any 5 continuous subframes within a transmission window of a System Information (SI-x) message according to the subframe numbers of an SFN, and binding the SFN and subframe numbers of the 5 continuous subframes with RVs of the SI-x message. Because RVs are bound with an SFN and subframe numbers, when a transmission window of an SI-x message is longer than or equal to 5 ms, system frames and subframes are bound with RVs of the SI-x message so that the RV retransmission of the SI-x message is guaranteed. |

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| **主权项** | 专利度:36特征度:6 |  |  |
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A method for setting a redundancy version (RV) value of a system information message, comprising: setting, by an enhanced Node-B (eNB), a RV value of the system information message in a first subframe as 0; setting, by the eNB, a RV value of the system information message in a second subframe as 2; setting, by the eNB, a RV value of the system information message in a third subframe as 3; and setting, by the eNB, a RV value of the system information message in a fourth subframe as 1; wherein the first subframe, the second subframe, and third subframe and the fourth subframe are four continuous subframes in a transmission window of the system information message; transmitting, by the eNB, the system information message within the transmission window.

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| **对偶主权项** | 专利度:17特征度:11 |  |  |
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A method for~~bind~~settingaredundancy version~~s~~(RV~~s~~)~~with~~value ofa system~~frame number (SFN) and subframe numbers, comprising: choosing any five continuous subframes within a transmission window~~information message, comprising: setting, by an enhanced Node-B (eNB), a RV value of the system information message in a first subframe as 0; setting, by the eNB, a RV value of the system information message in a second subframe as 2; setting, by the eNB, a RV valueof~~a~~thesystem information~~(SI-x)~~message~~according to subframe numbers of an SFN~~in a third subframe as 3; andsetting~~RVs of the SI-x message accord~~, by the eNB, a RV value of the system information message in a fourth subframe as 1; wherein~~g~~t~~o the SFN and subframe numbers of the five continuous subframes~~he first subframe, the second subframe, and third subframe and the fourth subframe are four continuous subframes in a transmission window of the system information message; transmitting, by the eNB, the system information message within the transmission window.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.27 |

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| **同族数** | 15 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Control method, system and function entity for reporting bearer event of signaling IP flow**

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| **公开号** | [US8923121](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8923121&sv=236e263be0ff8cb03af4a62a4e025bcb) | **公开日** | 2014/12/30 |
| **申请号** | 13/714,272 | **申请日** | 2012/12/13 |
| **授权日** | 2014/12/30 | **优先日** | 2007/03/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Shibi | Zhao; Peng | Mao; Yuxin | Tan; Shiyong | Qiao; Weihua | Li; Yan |
| **国际 主分类** | G01R 31/08 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A control method, system and function entity for reporting a bearer event of a signaling IP flow are provided. Flow identifier information may be generated for a signaling IP flow and a media IP flow, to unify a mechanism for reporting a signaling path status and a mechanism for reporting a bearer event of a media IP flow. In the method, the mechanism for reporting a signaling path status is not limited by the parameter of Flow Usage. |

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| **主权项** | 专利度:8特征度:23 |  |  |
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A method for reporting a bearer event of a signaling IP flow, comprising: receiving, by an apparatus operable to provide a Policy Control and Charging Rules Function, a subscription request for subscribing to a bearer event of a signaling IP flow from an Application Function, wherein the subscription request carries flow identifier information of the signaling IP flow; sending, by the apparatus operable to provide the Policy Control and Charging Rules Function, a bearer event report of the signaling IP flow to the Application Function, wherein the bearer event report carries the flow identifier information of the signaling IP flow, and the flow identifier information comprises a media component number and an IP flow number, and the signaling IP flow is provided with a default media component number 0.

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| **对偶主权项** | 专利度:8特征度:24 |  |  |
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A method for reporting a bearer event of a signaling IP flow, comprising: receiving, byan apparatus operable to providea Policy Control and Charging Rules Function~~having a processor~~, a subscription request for subscribing to a bearer event of a signaling IP flow from an Application Function, wherein the subscription request carries flow identifier information of the signaling IP flow; sending, by theapparatus operable to provide thePolicy Control and Charging Rules Function, a bearer event report of the signaling IP flow to the Application Function, wherein the bearer event report carries the flow identifier information of the signaling IP flow, and the flow identifier information comprises a media component number and an IP flow number, and the signaling IP flow is provided with a default media component number 0.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, equipment and mobile communication system for realizing explicit call transfer**

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| **公开号** | [US8917719](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8917719&sv=d9954302dcf1490f6a94e61f25a9463c) | **公开日** | 2014/12/23 |
| **申请号** | 12/882,722 | **申请日** | 2010/09/15 |
| **授权日** | 2014/12/23 | **优先日** | 2008/06/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Hui | Long; Shuiping | Duan; Xiaoyan |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method, equipment, and a mobile communication system for realizing explicit call transfer are provided. The method for realizing explicit call transfer includes the following steps. A service centralization &#x26; continuity application server (SCC AS) receives a call request sent by a second user equipment (UE), and sends the call request to a third UE, in which an instruction for replacing a call between a first UE and the third UE is carried in the call request. A message returned by the third UE according to the call request is received, and the third UE is controlled to establish a connection with the second UE and to break a connection with the first UE. The third UE is an IP multimedia subsystem centralized service user equipment (ICS UE). |

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| **主权项** | 专利度:4特征度:26 |  |  |
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A method for realizing explicit call transfer, comprising: receiving, by a service centralization #x26; continuity application server (SCC AS), a call request sent by a second user equipment (UE), sending, by the SCC AS, the call request to a third UE, wherein an instruction for replacing a call between a first UE and the third UE is carried in the call request; and receiving, by the SCC AS, a message returned by the third UE according to the call request, controlling, by the SCC AS, the third UE to establish a connection with the second UE, and controlling, by the SCC AS, the third UE to break a connection with the first UE; wherein the third UE is an IP multimedia subsystem centralized service UE (ICS UE); wherein a communication with the third UE is carried out through a circuit switched service control signaling channel; wherein the receiving, by the SCC AS, of the call request sent by the second UE, and sending, by the SCC AS, of the call request to the third UE comprises: converting, by the SCC AS, the call request message sent by the second UE into a circuit switched service call request message, and sending, by the SCC AS, the circuit switched service call request message to the third UE; wherein a session identifier and a replacement indication identifier are carried in the circuit switched service call request message, the session identifier is a session identifier between the first UE and the third UE, and the replacement indication identifier is used to indicate replacing a session between the first UE and the third UE by a session between the second UE and a third UE.

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| **对偶主权项** | 专利度:12特征度:6 |  |  |
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A method for realizing explicit call transfer, comprising: receiving, by a service centralization

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Process method about the service connection between the wireless local area network and user terminal**

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| **公开号** | [US8917710](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8917710&sv=cc4732bd7e0fb5468d3e479b9e6ed036) | **公开日** | 2014/12/23 |
| **申请号** | 13/897,453 | **申请日** | 2013/05/20 |
| **授权日** | 2014/12/23 | **优先日** | 2002/11/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin | Li; Zhiming | Duan; Xiaoqin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for processing a service connection between a user terminal and a Wireless Local Area Network (WLAN) is provided. A WLAN interactive network includes at least a WLAN user terminal, a WLAN access unit, a service control unit and a user information storage unit. The method includes setting flags that represent the attached or detached status of the service connection between the user terminal and the WLAN in the WLAN user terminal and the service control unit respectively; and establishing or canceling the connection between the user terminal and the network through the interaction between the WLAN user terminal and the WLAN, meanwhile modifying the corresponding flags. |

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| **主权项** | 专利度:14特征度:17 |  |  |
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A method for indicating a service connection status of a user terminal, wherein a service connection is between the user terminal and a Wireless Local Area Network (WLAN), comprising: sending, by a service control unit, a detach request to the user terminal, wherein the detach request includes at least one reason about why the user terminal is to be detached from the WLAN; updating, by the service control unit, a first flag set in the service control unit indicating the service connection status of the user terminal as WLAN detached; sending, by the service control unit, a user data updating instruction indicating the service connection status to a user information storage unit; and receiving, by the service control unit, a user data updating response returned from the user information storage unit after the user information storage unit updating a second flag set in the user information storage unit on receiving the user data updating instruction, wherein the second flag indicates the service connection status between the user terminal and the WLAN.

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| **对偶主权项** | 专利度:20特征度:9 |  |  |
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A method for indicating a service connection status of a user terminal,~~comprising: setting, in a service control unit, a flag representing either a Wireless Local Area Network (WLAN) attached status or a WLAN detached status of the user terminal for a service connection between the user terminal and the WLAN; and when the service connection is changed from established to canceled or from canceled to established, modifying, by the service control unit, the flag corresponding to~~wherein a service connection is between the user terminal and a Wireless Local Area Network (WLAN), comprising: sending, by a service control unit, a detach request to the user terminal, wherein the detach request includes at least one reason about why the user terminal is to be detached from the WLAN; updating, by the service control unit, a first flag set in the service control unit indicating the service connection status of the user terminal as WLAN detached; sending, by the service control unit, a user data updating instruction indicating the service connection status to a user information storage unit; and receiving, by the service control unit, a user data updating response returned from the user information storage unit after the user information storage unit updating a second flag set in the user information storage unit on receiving the user data updating instruction, wherein the second flag indicatesthe service connection status~~of~~betweenthe user terminal a~~ccordingly~~nd the WLAN.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.19 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover method, communication device and communication system**

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| **公开号** | [US8913588](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8913588&sv=fa4eb51b15d7b69f8a5e591d75275967) | **公开日** | 2014/12/16 |
| **申请号** | 13/633,020 | **申请日** | 2012/10/01 |
| **授权日** | 2014/12/16 | **优先日** | 2010/06/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Liu; Jing | Chang; Ningjuan | Ke; Wang | Peng; Yan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention provides a handover method. An access node obtains mobility management entity pool MME pool information which is sent by a donor station of the access node and is used for identifying a mobility management entity MME to which a user equipment UE is attached. The access node initiates handover for the UE according to the MME pool information used for identifying the MME to which the UE is attached. The present invention further provides a communication device and a communication system. |

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| **主权项** | 专利度:20特征度:30 |  |  |
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A handover method, used for handing over a user equipment (UE) from a source access node to a target access node in a long term evolution (LTE) system, wherein the source access node accesses a mobility management entity (MME) through a donor station of the source access node; wherein handover types of the LTE system comprise an X2 handover and an S1 handover; wherein in the X2 handover, an X2 interface between two base stations acts as a reference point; wherein in the S1 handover, an S1 interface between an MME and a base station acts as a reference point; and wherein the method comprises: obtaining, by the source access node, a globally unique MME identifier (GUMMEI) sent by the donor station, wherein the GUMMEI is used for identifying a MME to which the UE in coverage of the source access node is attached, and the GUMMEI is sent by the donor station to the source access node through an initial context setup request message or an S1 handover request message; obtaining, by the source access node, MME pool information of the target access node sent by the donor station; determining, by the source access node, a handover type of the handover according to the obtained GUMMEI and the MME pool information of the target access node, wherein the handover type is X2 handover if an MME pool of the MME to which the UE in coverage of the source access node is attached and an MME pool to which the target access node belongs are the same, and wherein the handover type is S1 handover if the MME pool of the MME to which the UE in coverage of the source access node is attached and the MME pool to which the target access node belongs are different; and initiating, by the source access node, the handover according to the determined handover type.

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| **对偶主权项** | 专利度:27特征度:4 |  |  |
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A handover method,~~comprising: obtaining, by an access node, mobility management entity (MME) pool information which is sent by~~used for handing over a user equipment (UE) from a source access node to a target access node in a long term evolution (LTE) system, wherein the source access node accesses a mobility management entity (MME) througha donor station of thesourceaccess node~~and is used for identifying a MME to which a user equipment (UE) in coverage of the access node is attached; and initiating, by the access node, handover for the UE according to the obtained MME pool information used for identifying the MME to which the UE is attached~~;wherein handover types of the LTE system comprise an X2 handover and an S1 handover; wherein in the X2 handover, an X2 interface between two base stations acts as a reference point; wherein in the S1 handover, an S1 interface between an MME and a base station acts as a reference point; and wherein the method comprises: obtaining, by the source access node, a globally unique MME identifier (GUMMEI) sent by the donor station,wherein~~,~~theGUMME~~pool information~~I isused for identifying~~the~~aMME to which the UE i~~s attached is comprised in an S1 application protocol (S1AP) message or an initial context setup request message sent by the donor station to the access node in an initial context setup procedure; or when the UE enters the coverage of the access node through an S1 handover procedure, the access node is a target access node in the S1 handover procedure, and the donor station is a target donor statio~~ncoverage of the source access node is attached, and the GUMMEI is sent by the donor station to the source access node through an initial context setup request message or an S1 handover request message; obtaining, by the source access node, MME pool information of the target access node sent by the donor station; determining, by the source access node, a handover type of the handover according to the obtained GUMMEI and the MME pool information of the target access node, wherein the handover type is X2 handover if an MME pool of the MME to which the UE in coverage of the source access node is attached and an MME pool to which the target access node belongs are the same, and wherein the~~S1~~handover~~procedure, the MME pool information used for identifying the MME to which the UE is attached is comprised in a handover request message or an MME status transfer message or an S1 application protocol (S1AP) message sent by the target donor station to the target access nod~~type is S1 handover if the MME pool of the MME to which the UE in coverage of the source access node is attached and the MME pool to which the target access node belongs are different; and initiating, by the source access node, the handover according to the determined handover type.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system, terminal, and server for transferring video call between access networks**

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| **公开号** | [US8913101](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8913101&sv=0db97dd10441cd5c159ff2d5a3779401) | **公开日** | 2014/12/16 |
| **申请号** | 13/731,411 | **申请日** | 2012/12/31 |
| **授权日** | 2014/12/16 | **优先日** | 2010/08/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Hui | Duan; Xiaoyan |
| **国际 主分类** | H04N 7/14 | **优先 国家** | CN |
| **代理** | Rose, P.C.; Conley udolph; Grant eaulieu; Nicholas K. |

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| **摘要** |  |
| The present invention discloses a method, a system, a terminal, an MSC server, and an SCC application server for transferring a video call between access networks. The method includes: pre-negotiating, in a PS domain and through IMS signaling, a CS video call parameter; and, after a video call of a terminal is transferred from the PS domain to a CS domain, establishing a CS video call according to the pre-negotiated CS video call parameter. By using the technical solutions of the present invention, the CS video call parameter is pre-negotiated before the video call of the terminal is transferred from the PS domain to the CS domain, and after transfer to the CS domain, the CS video call is established by directly using the pre-negotiated CS video call parameter. |

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| **主权项** | 专利度:21特征度:23 |  |  |
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A method for transferring a video call between access networks, comprising: initiating, by an Internet Protocol (IP) multimedia subsystem (IMS) call establishment request message sent by a terminal in a packet switching (PS) domain, an IMS video call of the terminal, wherein the request message for initiating the IMS video call carries an indication that the terminal supports single radio video call continuity (vSRVCC) pre-negotiation; determining whether the terminal and a network side support a pre-negotiated circuit switching (CS) video call parameter; pre-negotiating the CS video call parameter in the PS domain through IMS signaling to obtain the pre-negotiated CS video call parameter when both the terminal and the network side are determined to support the pre-negotiated CS video call parameter; and establishing a CS video call according to the pre-negotiated CS video call parameter after a video call of a terminal is transferred from the PS domain to a CS domain.

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| **对偶主权项** | 专利度:25特征度:10 |  |  |
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A method for transferring a video call between access networks,~~wherein the method comprises: pre-negotiating a circuit switching (CS) video call parameter in a packet switching (~~comprising: initiating, by an Internet Protocol (IP) multimedia subsystem (IMS) call establishment request message sent by a terminal in a packet switching (PS) domain, an IMS video call of the terminal, wherein the request message for initiating the IMS video call carries an indication that the terminal supports single radio video call continuity (vSRVCC) pre-negotiation; determining whether the terminal and a network side support a pre-negotiated circuit switching (CS) video call parameter; pre-negotiating the CS video call parameter in thePS~~)~~domain~~and~~through~~an Internet Protocol (IP) multimedia subsystem (IMS) signaling, to obtain~~IMS signaling to obtain the pre-negotiated CS video call parameter when both the terminal and the network side are determined to supportthe pre-negotiated CS video call parameter; and establishing a CS video call according to the pre-negotiated CS video call parameter after a video call of a terminal is transferred from the PS domain to a CS domain.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Tunnel management method, tunnel management apparatus, and communications system**

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| **公开号** | [US8909975](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8909975&sv=2b532bf817dbc9aa8675c7f6b0048202) | **公开日** | 2014/12/09 |
| **申请号** | 13/729,732 | **申请日** | 2012/12/28 |
| **授权日** | 2014/12/09 | **优先日** | 2008/07/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yin; Yu | Di; Zhiyu |
| **国际 主分类** | G06F 11/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention relates to communications technologies and discloses a tunnel management method, a tunnel management apparatus, and a communications system so that a node that causes failure of a tunnel management request can be determined. According to the present invention, a response returned by a tunnel management node to an initiating node includes not only a cause value of tunnel management request failure but also information of the node that causes failure of the tunnel management request, so that the initiating node can find the node that causes failure of the tunnel management request and determine the error checking direction. The present invention is applicable to network devices in a communications network. |

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| **主权项** | 专利度:20特征度:13 |  |  |
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A tunnel management method performed by a serving gateway (S-GW) in an evolved packet system (EPS) network, comprising: receiving, by the S-GW in the EPS network, a tunnel management request from an initiating node; and sending, by the S-GW, a response message to the initiating node, wherein the response message sent to the initiating node comprises a cause value indicating a cause of a failure of processing the tunnel management request and information indicating which node caused the failure of processing the tunnel management request.

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| **对偶主权项** | 专利度:12特征度:13 |  |  |
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A tunnel management methodperformed by a serving gateway (S-GW) in an evolved packet system (EPS) network, comprising: receiving, by~~a tunnel management node~~the S-GW in the EPS network, a tunnel management request from an initiating node; and sending, by the~~tunnel management node~~S-GW, a response message to the initiating node, wherein the response message sent to the initiating node comprises a cause value~~of~~indicating a cause of a failure of processing thetunnel management request~~failure~~and information~~of a node that causes failure of the tunnel management request when~~indicating which node caused the failure of processingthe tunnel management request~~fails~~.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 24 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for selecting downlink primary carrier for transmitting data**

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| **公开号** | [US8908649](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8908649&sv=b4361371826f22f2bd0b36e69252b682) | **公开日** | 2014/12/09 |
| **申请号** | 13/069,851 | **申请日** | 2011/03/23 |
| **授权日** | 2014/12/09 | **优先日** | 2008/09/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xue; Lixia | He; Yujuan | Li; Chaojun |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method, an apparatus and a system for selecting a downlink primary carrier for transmitting data are disclosed. The method includes the following steps: A terminal obtains primary carrier selection information configured by a network; and the terminal determines a downlink carrier corresponding to an uplink carrier of the terminal as a downlink primary carrier for transmitting data according to the primary carrier selection information. In the embodiments of the present invention, the network selects a downlink carrier corresponding to an uplink carrier of the terminal as a downlink primary carrier for transmitting data. The terminal needs to detect only the downlink primary carrier, and the downlink carrier needs to be switched or detected only if the primary carrier receives a signaling message for detecting or receiving other carriers, so it is not necessary to switch or detect the downlink carrier frequently, which reduces battery consumption of the terminal. |

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| **主权项** | 专利度:39特征度:23 |  |  |
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A method for selecting a downlink primary carrier for transmitting data, comprising: configuring multiple downlink carriers for a terminal; configuring primary carrier selection information of the terminal, wherein the primary carrier selection information indicates that a downlink carrier corresponding to an uplink carrier of the terminal serves as a downlink primary carrier of the terminal, wherein the uplink carrier is an uplink primary carrier; and notifying the primary carrier selection information to the terminal so that the terminal sends ACKnowledgement (ACK)/Negative ACKnowledgement (NACK) messages in multiplexing mode corresponding to the multiple downlink carriers on the uplink primary carrier; wherein at least part of channel resources of the ACK/NACK messages corresponding to the multiple downlink carriers of the terminal on the uplink primary carrier are obtained according to a rule of mapping between at least one Physical Downlink Control Channel (PDCCH) on the downlink primary carrier and at least one ACK/NACK channel on the uplink primary carrier.

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| **对偶主权项** | 专利度:21特征度:7 |  |  |
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A method for selecting a downlink primary carrier for transmitting data, comprising: configuringmultiple downlink carriers for a terminal; configuringprimary carrier selection information of~~a~~theterminal, wherein the primary carrier selection information indicates that a downlink carrier corresponding to an uplink carrier of the terminal serves as a downlink primary carrier of the terminal, wherein the uplink carrier is an uplink primary carrier; and notifying the primary carrier selection information to the terminalso that the terminal sends ACKnowledgement (ACK)/Negative ACKnowledgement (NACK) messages in multiplexing mode corresponding to the multiple downlink carriers on the uplink primary carrier; wherein at least part of channel resources of the ACK/NACK messages corresponding to the multiple downlink carriers of the terminal on the uplink primary carrier are obtained according to a rule of mapping between at least one Physical Downlink Control Channel (PDCCH) on the downlink primary carrier and at least one ACK/NACK channel on the uplink primary carrier.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 4 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Paging processing method, communication apparatus, and communication system**

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| **公开号** | [US8908601](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8908601&sv=a24ac8bc18f5c3f09e61be687daecd1f) | **公开日** | 2014/12/09 |
| **申请号** | 13/333,746 | **申请日** | 2011/12/21 |
| **授权日** | 2014/12/09 | **优先日** | 2009/06/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yin; Yu | Qi; Caixia |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A paging processing method, a communication apparatus, and a communication system are disclosed, which can improve the quality of service provided to a user equipment. The paging processing method includes: receiving, by a mobility management network element, a downlink data notification message which includes service attribute information of a downlink data packet; obtaining the service attribute information; and initiating paging of the user equipment based on different policies according to the service attribute information. Accordingly, embodiments of the present invention also provide a communication apparatus and a communication system. |

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| **主权项** | 专利度:10特征度:15 |  |  |
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A paging processing method, comprising: receiving, by a mobility management network element, a downlink data notification message, wherein the downlink data notification message includes an evolved packet system bearer identity (EBI) of a downlink data packet; obtaining, by the mobility management network element, the EBI from the downlink data notification message; identifying, by the mobility management network, a bearer context according to the EBI; obtaining, by the mobility management network, an access point name (APN) corresponding to the downlink data packet from the bearer context; and initiating, by the mobility management network, paging of a user equipment based on a policy corresponding to the APN.

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| **对偶主权项** | 专利度:15特征度:9 |  |  |
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A paging processing method, comprising: receiving, by a mobility management network element, a downlink data notification message, whereinthe downlink data notification message includes~~service attribute information~~an evolved packet system bearer identity (EBI)of a downlink data packet; obtaining, bythe~~service attribute information; and initiating paging of a user equipment based on different policies according to the service attribute information~~mobility management network element, the EBI from the downlink data notification message; identifying, by the mobility management network, a bearer context according to the EBI; obtaining, by the mobility management network, an access point name (APN) corresponding to the downlink data packet from the bearer context; and initiating, by the mobility management network, paging of a user equipment based on a policy corresponding to the APN.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.7 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for access control handover of user between base stations**

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| **公开号** | [US8903402](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8903402&sv=ed695b60b70612f6d9d90e2b8365fe14) | **公开日** | 2014/12/02 |
| **申请号** | 13/624,794 | **申请日** | 2012/09/21 |
| **授权日** | 2014/12/02 | **优先日** | 2010/03/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Yali | Jiao; Bin |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Embodiments of the present invention provide a method for access control handover of a user between base stations, which includes: acquiring, by one of a first base station and a second base station, a closed subscriber group identifier CSG ID supported by the other base station and CSG membership information of a user equipment UE in the first base station; and if the CSG ID acquired by the one base station is the same as a CSG ID supported by the local base station, performing, by the one base station, access control on the UE according to the acquired CSG membership information of the UE in the first base station and an access mode of the other base station. |

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| **主权项** | 专利度:19特征度:14 |  |  |
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A method for allocating resources, the method comprising: sending, by a second base station, an X2 interface establishment request message to a first base station, wherein the X2 interface establishment request message carries a closed subscriber group identifier (CSG ID) supported by the second base station, so that the first base station determines, according to whether a CSG ID supported by the first base station is the same as the CSG ID supported by the second base station, whether it is allowed to initiate a procedure of handing over a user equipment (UE) from the first base station to the second base station; and if the first base station initiates the procedure of handing over the UE from the first base station to the second base station, receiving, by the second base station, CSG membership information of the UE in the first base station sent by the first base station, and allocating the resources to the UE according to the CSG membership information of the UE in the first base station.

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| **对偶主权项** | 专利度:38特征度:11 |  |  |
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A method for allocating resources, the method comprising: sending, by a second base station,an X2 interface establishment request message to a first base station, wherein the X2 interface establishment request message carriesa closed subscriber group identifier (CSG ID) supported by the second base~~station to a first base~~station, so that the first base station determines, according to whether a CSG ID supported by the first base station is the same as the CSG ID supported by the second base station, whether it is allowed to initiate a procedure of handing over a user equipment (UE) from the first base station to the second base station; and if the first base station initiates the procedure of handing over the UE from the first base station to the second base station, receiving, by the second base station, CSG membership information of the UE in the first base station sent by the first base station, and allocating the resources to the UE according to the CSG membership information of the UE in the first base station.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 14 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier**

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| **公开号** | [US8903389](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8903389&sv=ec69c0fc6d701fc8f02d8cbc2bf40c68) | **公开日** | 2014/12/02 |
| **申请号** | 13/849,299 | **申请日** | 2013/03/22 |
| **授权日** | 2014/12/02 | **优先日** | 2007/07/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Guo; Xiaolong | Li; Ming |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for identifying a UE in an SAE network, and an MME are provided herein. The method includes: receiving an SAE-TMSI which is allocated to a UE that accesses an SAE network and includes at least: a pool-ID, an MME-ID, and a UE temporary identifier; using the SAE-TMSI to temporarily identify the UE in the SAE network. The apparatus includes: a receiving unit and a temporary identifying unit. The MME includes a temporary identifier allocating unit. Moreover, a method for transmitting and allocating a temporary identifier, and a method for receiving and transmitting information according to the temporary identifier are disclosed herein. |

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| **主权项** | 专利度:11特征度:22 |  |  |
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A method for sending identity information in a system architecture evolved (SAE) network, comprising: receiving, by a processor, a system architecture evolved (SAE)-temporary mobile subscriber identity (SAE-TMSI) from a mobility management entity (MME) of the SAE network, wherein the SAE-TMSI comprises: a resource pool identifier (pool-ID), a mobility management entity identifier (MME-ID); and a UE temporary identifier; sending, by the processor, the SAE-TMSI to the MME or a new MME when a user equipment (UE) accesses the SAE network after reselecting the MME or changing to a new MME, wherein the SAE-TMSI is used for the MME or the new MME to identify the UE; and wherein the pool-ID is unique in public land mobile network (PLMN), the MME-ID is unique in a resource pool, and the LIE temporary identifier is unique in an MME.

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| **对偶主权项** | 专利度:9特征度:12 |  |  |
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A method for~~identifying a user equipment (UE)~~sending identity informationin a system architecture evolved (SAE) network, comprising: receiving, by~~the UE~~a processor, a system architecture evolved (SAE)-temporary mobile subscriber identity (SAE-TMSI) from a mobility management entity (MME) of the SAE network, wherein the SAE-TMSI comprises: a resource pool identifier (pool-ID), a mobility management entity identifier (MME-ID); and a UE temporary identifier; sending, by the~~UE~~processor, the SAE-TMSI to the MME or a new MME when~~the~~a user equipment (UE)accesses the SAE network~~next time~~after reselecting the MME or changing to a new MME, wherein the SAE-TMSI is used for the MME or the new MME to identify the UE; and wherein the pool-ID is unique in public land mobile network (PLMN), the MME-ID is unique in a resource pool, and the~~U~~LIE temporary identifier is unique in an MME.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.22 |

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| **同族数** | 36 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Precoding processing method and user equipment**

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| **公开号** | [US8903004](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8903004&sv=4fd86b593fe1e8bcde881313105a40f9) | **公开日** | 2014/12/02 |
| **申请号** | 13/668,747 | **申请日** | 2012/11/05 |
| **授权日** | 2014/12/02 | **优先日** | 2010/05/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Yongxing | Wu; Qiang | Gao; Chi |
| **国际 主分类** | H04B 7/02 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A precoding processing method and user equipment are disclosed. The precoding processing method includes: selecting a codebook vector for performing precoding processing for data among a codebook set of Nt antennas, where the codebook set includes a first codebook vector<br/><br/><br/><br/><br/> <br/> <br/> [<br/> <br/> <br/> <br/> A<br/> <br/> <br/> <br/> <br/> B<br/> <br/> <br/> <br/> ]<br/> <br/><br/><br/><br/><br/>of a uniform linear array and a second codebook vector<br/><br/><br/><br/><br/><br/> <br/> <br/> [<br/> <br/> <br/> <br/> A<br/> <br/> <br/> <br/> <br/> <br/> -<br/> B<br/> <br/> <br/> <br/> <br/> ]<br/> <br/><br/><br/><br/><br/>generated according to the first codebook vector, where A is a (Nt/2)×1 vector composed of a first half of elements of the first codebook vector, B is a (Nt/2)×1 vector composed of a last half of elements of the first codebook vector, and Nt is a positive even number; and sending an index number of the codebook vector to a base station, whereupon the base station uses the codebook vector corresponding to the index number to perform precoding processing for the data to be transmitted by the antennas. Embodiments of the present invention make the codebook set compatible with two types of antenna configuration modes.<br/> |

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| **主权项** | 专利度:6特征度:24 |  |  |
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A precoding processing method, comprising: selecting, by a user equipment (UE), a codebook vector for performing precoding processing for data among a codebook set of Nt antennas, wherein the codebook set comprises a first codebook vector [ A B ] and a second codebook vector [ A - B ] generated according to the first codebook vector, A is a (Nt/2)×1 vector composed of a first half of elements of the first codebook vector, B is a (Nt/2)×1 vector composed of a last half of elements of the first codebook vector, and Nt is a positive even number; and sending, by the UE, an index number of the codebook vector to a base station; wherein: Nt=8, the codebook set comprises K codebooks where K is an integer, an 8×1 codebook vector [ A B ] corresponding to K/2 codebooks in the K codebooks is respectively obtained by using an 8-dimensional discrete Fourier transformation codebook structure, and a number of discrete Fourier transformation groups is K/(2Nt); the codebook vector of the other K/2 codebooks in the K codebooks is [ A - B ] , where A is a vector composed of first 4 elements in the 8×1 codebook vector, and B is a vector composed of last 4 elements in the 8×1 codebook vector; and a codebook design of the first codebook vector [ A B ] utilizes a discrete Fourier transformation codebook structure; wherein the discrete Fourier transformation codebook structure is as follows: m ( g ) = 1 M [ w 0 m ( g ) … w ( M - 1 ) m ( g ) ] T w nm ( g ) = exp { j 2 π n M ( m + g G ) } where superscript T represents a transpose operation, M is a number of dimensions of discrete Fourier transformation and M=8, with m=0, 1 . . . M 1 and n=0, 1 . . . M 1, G is the number of discrete Fourier transformation groups, with g=0, 1, . . . , G 1, and em(g) is a precoding vector in the codebook set, and wnm(g) represents elements in em(g).

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| **对偶主权项** | 专利度:10特征度:7 |  |  |
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A precoding processing method, comprising: selecting, by a user equipment (UE), a codebook vector for performing precoding processing for data among a codebook set of Nt antennas, wherein the codebook set comprises a first codebook vector [ A B ]~~of a uniform linear array~~and a second codebook vector [ A - B ] generated according to the first codebook vector, A is a (Nt/2)×1 vector composed of a first half of elements of the first codebook vector, B is a (Nt/2)×1 vector composed of a last half of elements of the first codebook vector, and Nt is a positive even number; and sending, by the UE, an index number of the codebook vector to a base station~~for precoding processing~~; wherein: Nt=8, the codebook set comprises K codebooks where K is an integer, an 8×1 codebook vector [ A B ] corresponding to K/2 codebooks in the K codebooks is respectively obtained by using an 8-dimensional discrete Fourier transformation codebook structure, and a number of discrete Fourier transformation groups is K/(2Nt); the codebook vector of the other K/2 codebooks in the K codebooks is [ A - B ] , where A is a vector composed of first 4 elements in the 8×1 codebook vector, and B is a vector composed of last 4 elements in the 8×1 codebook vector; and a codebook design of the first codebook vector [ A B ] utilizes a discrete Fourier transformation codebook structure; wherein the discrete Fourier transformation codebook structure is as follows: m ( g ) = 1 M [ w 0 m ( g ) … w ( M - 1 ) m ( g ) ] T w nm ( g ) = exp { j 2 π n M ( m + g G ) } where superscript T represents a transpose operation, M is a number of dimensions of discrete Fourier transformation and M=8, with m=0, 1 . . . M 1 and n=0, 1 . . . M 1, G is the number of discrete Fourier transformation groups, with g=0, 1, . . . , G 1, and em(g) is a precoding vector in the codebook set, and wnm(g) represents elements in em(g).

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for providing information in a cellular wireless communication system**

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| **公开号** | [US8897783](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8897783&sv=010e4dda1c1537a1d0505f90d2a686be) | **公开日** | 2014/11/25 |
| **申请号** | 13/779,099 | **申请日** | 2013/02/27 |
| **授权日** | 2014/11/25 | **优先日** | 2010/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Olofsson; Henrik | Legg; Peter | Johansson; Johan | Wang; Xuelong |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present invention relates to a method for providing information in a cellular wireless communication system, the method comprises: detecting a radio link failure (RLF) for a mobile station while connected to a first cell; re-establishing the connection in a second cell; and providing information about said radio link failure (RLF) only to cells supporting the same radio access technology (RAT) as said first cell and/or a third cell, wherein said third cell is the cell to which said mobile station was connected before said first cell. Furthermore, the invention also relates to a method in a mobile station, a method in a base station, a computer program, a computer program product, a mobile station device and a base station device. |

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| **主权项** | 专利度:17特征度:19 |  |  |
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A method for providing information in a cellular wireless communication system, wherein each cell in said cellular wireless communication system is served by a base station and supports a radio access technology (RAT) for radio communication between a cell and one or more mobile stations connected to said cell; said cellular wireless communication system employing a procedure in which a mobile station is allowed to be handed over from a cell to another cell supporting different radio access technologies (RATs), and further employing a procedure in which a mobile station suffering from a radio link failure (RLF), when being connected to a cell, is allowed to attempt to re-connect to another cell supporting a different radio access technology (RAT), characterised by: detecting a radio link failure (RLF) for a mobile station while connected to a first cell; re-establishing the connection in a second cell; and providing information about said radio link failure (RLF) only to cells supporting the same radio access technology (RAT) as said first cell; wherein said information comprises a RLF report produced by said mobile station, said RLF report includes a cell identity (ID) for said second cell.

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| **对偶主权项** | 专利度:19特征度:20 |  |  |
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~~M~~A method for providing information in a cellular wireless communication system, wherein each cell in said cellular wireless communication system is served by a base station and supports a radio access technology (RAT) for radio communication between a cell and one or more mobile stations connected to said cell; said cellular wireless communication system employing a procedure in which a mobile station is allowed to be handed over from a cell to another cell supporting different radio access technologies (RATs), and further employing a procedure in which a mobile station suffering from a radio link failure (RLF), when being connected to a cell, is allowed to attempt to re-connect to another cell supporting a different radio access technology (RAT), c~~omprising~~haracterised by: detecting a radio link failure (RLF) for a mobile station while connected to a first cell; re-establishing the connection in a second cell; and providing information about said radio link failure (RLF) only to cells supporting the same radio access technology (RAT) as said first cell~~and/or a third cell, wherein said third cell is the cell to which said mobile station was connected be~~; wherein said information comprises a RLF report produced by said mobile station, said RLF report includes a cell identity (ID)for~~e~~said~~first~~secondcell.

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| **被引用** | 18 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for synchronization in communication system**

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| **公开号** | [US8897286](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8897286&sv=f7acccbdc552acd45a848213e5edc837) | **公开日** | 2014/11/25 |
| **申请号** | 13/560,877 | **申请日** | 2012/07/27 |
| **授权日** | 2014/11/25 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Popovic; Branislav | Mauritz; Oskar |
| **国际 主分类** | H04J 3/06 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method can be used for facilitating uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system. The first transceiver receives a signal for the uplink synchronization from the second transceiver. The signal includes a first signature sequence generated, at least in part, from a sequence with a zero-correlation zone. The first transceiver then performs a correlation of the signal for detection of the first signature sequence. |

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| **主权项** | 专利度:30特征度:15 |  |  |
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A method for facilitating an uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system, the method comprising: receiving, by the first transceiver, a synchronization signal designated for the uplink synchronization, the synchronization signal being sent from the second transceiver over a random access channel, a first signature sequence being used in a preamble portion of the synchronization signal, and the first signature sequence being generated, at least in part, from a sequence with a zero-correlation zone, wherein the sequence with a zero-correlation zone is based on a Zadoff-Chu sequence, the Zadoff-Chu sequence being: a ( k ) = { W N k 2 / 2 + qk , N even W N k ( k + 1 ) / 2 + qk , N odd , k = 0 , 1 , … , N - 1 , where W N = exp ( - j2 π r / N ) , where r, q and N are integers, and r is relatively prime to N; and performing, by the first transceiver, a correlation of the synchronization signal, the correlation being designated for detection of the first signature sequence.

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| **对偶主权项** | 专利度:31特征度:11 |  |  |
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A method for facilitating an uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system, the method comprising: receiving, by the first transceiver, a s~~ignal for the uplink synchronization from the second transceiver, wherein the signal comprises a~~ynchronization signal designated for the uplink synchronization, the synchronization signal being sent from the second transceiver over a random access channel, a first signature sequence being used in a preamble portion of the synchronization signal, and thefirst signature sequencebeinggenerated, at least in part, from a sequence with a zero-correlation zone, wherein the sequence with a zero-correlation zone is based on a Zadoff-Chu sequence, the Zadoff-Chu sequence being: a ( k ) = { W N k 2 / 2 + qk , N even W N k ( k + 1 ) / 2 + qk , N odd , k = 0 , 1 , … , N - 1 , where W N = exp ( - j2 π r / N ) , where r, q and N are integers, and r is relatively prime to N; and performing, by the first transceiver, a correlation of the s~~ignal~~ynchronization signal, the correlation being designatedfor detection of the first signature sequence.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 21 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Relay transmission method and network node**

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| **公开号** | [US8897199](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8897199&sv=3eea9e6106031628e6b9b965791f7977) | **公开日** | 2014/11/25 |
| **申请号** | 13/103,627 | **申请日** | 2011/05/09 |
| **授权日** | 2014/11/25 | **优先日** | 2008/11/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Zhongfeng | Shang; Zheng | Gu; Rongting | Jin; Wei |
| **国际 主分类** | H04J 1/10 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A relay transmission method and a network node are disclosed. The method includes: receiving configuration information about a relay link subframe, the relay link subframe is configured in subframes in a period equivalent to an integer multiple of one frame, where the relay link subframe takes on a specific HARQ timeline; and performing relay link transmission according to the relay link subframe. The relay transmission method put forward herein meets various constraint conditions of the LTE FDD system in the relay transmission performed according to the selected relay link subframe, and is backward-compatible with the UE in the existing LTE system. |

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| **主权项** | 专利度:18特征度:19 |  |  |
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A relay transmission method, comprising: receiving, by a relay node, configuration information about a relay link subframe, wherein the relay link subframe is configured according to at least one basic pattern periodically in a period equivalent to four frames, each frame includes 10 subframes, wherein the basic pattern includes downlink (DL) subframes and uplink (UL) subframes, and wherein an interval between the UL subframes is one of 8 ms or 16 ms and a interval between the DL subframes is one of 8 ms or 16 ms; and performing, by the relay node, relay link transmission on the relay link subframe, wherein the maximum number of hybrid automatic repeat request (HARQ) processes on a relay link is equal to the number of basic patterns in the period equivalent to four frames, wherein a subframe number of a UL subframe included in the basic pattern=(a subframe number of a DL subframe included in the basic pattern+4) mod 40.

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| **对偶主权项** | 专利度:20特征度:27 |  |  |
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A relay transmission method, comprising: receiving, by a relay node,configuration information about a relay link subframe,whereinthe relay link subframe is configured~~in subframes in a period equivalent to an integer multiple of one frame; and performing relay link transmission according to the configured relay link subframe~~according to at least one basic pattern periodically in a period equivalent to four frames, each frame includes 10 subframes, wherein the basic pattern includes downlink (DL) subframes and uplink (UL) subframes, and wherein an interval between the UL subframes is one of 8 ms or 16 ms and a interval between the DL subframes is one of 8 ms or 16 ms; and performing, by the relay node, relay link transmission on the relay link subframe, wherein the maximum number of hybrid automatic repeat request (HARQ) processes on a relay link is equal to the number of basic patterns in the period equivalent to four frames, wherein a subframe number of a UL subframe included in the basic pattern=(a subframe number of a DL subframe included in the basic pattern+4) mod 40.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for processing priority services**

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| **公开号** | [US8897176](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8897176&sv=e4bf3f3ea44a66e2000f958a05180b52) | **公开日** | 2014/11/25 |
| **申请号** | 13/572,623 | **申请日** | 2012/08/11 |
| **授权日** | 2014/11/25 | **优先日** | 2010/02/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wanqiang | Wu; Xiaobo | Liu; Hai | Zhu; Wenruo | Deng; Tingting | Jin; Weisheng | Shuai; Yanglai | Hu; Huadong |
| **国际 主分类** | H04W 72/10 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention relates to the communication field and discloses a method, an apparatus, and a system for processing priority services to overcome a problem in the prior art that priority services initiated from a network to a target user cannot be provided. The technical solutions provided in the embodiments of the present invention include: determining a service to be carried out with a target user equipment as a priority service; and creating a priority service bearer for the priority service, and carrying out the priority service by using the priority service bearer. The embodiments of the present invention are applicable in an IMS-based communication system. |

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| **主权项** | 专利度:18特征度:19 |  |  |
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A method for processing a service, the method comprising: receiving, by a mobility management entity (MME), a signaling that comprises information indicating a priority of a service to be carried out with a user equipment (UE), wherein an existing bearer that is used for the service is updated before the MME receives the signaling, wherein the priority of the service is determined by a proxy-call session control function (P-CSCF), and wherein the priority of the service is indicated to a policy and charging rules function (PCRF) by the P-CSCF so as to trigger the update of the existing bearer; and sending, by the MME, a first paging message to a base station attached by the UE, wherein the first paging message comprises an indication of the priority of the service so as to trigger the base station perform a paging procedure with priority.

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| **对偶主权项** | 专利度:17特征度:11 |  |  |
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A method for processing~~priority~~aservice~~s~~, the method comprising:~~determining~~receiving, by a mobility management entity (MME), a signaling that comprises information indicating a priority ofa service to be carried out with a~~target~~user equipment~~as a priority service; creating a~~(UE), wherein an existing bearer that is used for the service is updated before the MME receives the signaling, wherein thepriorityof theservice~~bearer for the priority service; and carrying out the priority service by using~~is determined by a proxy-call session control function (P-CSCF), and wherein the priority of the service is indicated to a policy and charging rules function (PCRF) by the P-CSCF so as to trigger the update of the existing bearer; and sending, by the MME, a first paging message to a base station attached by the UE, wherein the first paging message comprises an indication ofthe priorityof theservice~~bearer~~so as to trigger the base station perform a paging procedure with priority.

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| **被引用** | 19 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Radio communication system and method using spatial diversity and spatial multiplexing modes**

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| **公开号** | [US8892161](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8892161&sv=a86fe4190efc6c59bbd53c0a3d5b1c52) | **公开日** | 2014/11/18 |
| **申请号** | 12/863,147 | **申请日** | 2009/01/16 |
| **授权日** | 2014/11/18 | **优先日** | 2008/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Suzuki; Shigeto | Hikoso; Keiji | Sakamoto; Mitsuru | Takagi; Yuhsuke | Shimonabe; Tadashi | Ohshima; Akira |
| **国际 主分类** | H04B 7/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A radio communication system includes transmission/reception devices which perform communication by dynamically switching a first transmission mode and a second transmission mode having a lower quality than the first transmission mode, wherein the transmission/reception devices have a transmission mode decision means which fixes a transmission mode upon communication to the first transmission mode for a given period of time. |

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| **主权项** | 专利度:16特征度:11 |  |  |
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A communication system comprising: a mobile station device; and a base station device configured to communicate with the mobile station device by setting a spatial diversity mode and a spatial multiplexing mode as transmission modes; wherein the base station device is further configured to transmit by the spatial diversity mode, control information to the mobile station device, the control information being always reported to the mobile station device by the spatial diversity mode during multiple transmission periods upon start of communication with the mobile station device; and by the spatial multiplexing mode or the spatial diversity mode with dynamical configuration, user data to the mobile station device; and the mobile station device is configured to receive by the spatial diversity mode, the control information from the base station device; and by the spatial multiplexing mode or the spatial diversity mode with the dynamical configuration of the base station device, the user data from the base station device.

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| **对偶主权项** | 专利度:22特征度:11 |  |  |
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A~~radio~~communication system comprising:~~transmission/reception devices which perform communication by dynamically switching a first transmission mode and a second transmission mode having a lower quality than the first transmission mode, wherein the transmission/reception devices have a transmission mode decision means which fixes a transmission mode upon communication to the first transmission~~a mobile station device; and a base station device configured to communicate with the mobile station device by setting a spatial diversity mode and a spatial multiplexing mode as transmission modes; wherein the base station device is further configured to transmit by the spatial diversity mode, control information to the mobile station device, the control information being always reported to the mobile station device by the spatial diversity mode during multiple transmission periods upon start of communication with the mobile station device; and by the spatial multiplexing mode or the spatial diversity mode with dynamical configuration, user data to the mobile station device; and the mobile station device is configured to receive by the spatial diversity mode, the control information from the base station device; and by the spatial multiplexingmode~~f~~or~~a given per~~the spatial diversity mode with the dynamical configuratio~~d~~nof t~~im~~he base station device, the user data from the base station device.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for routing user plane data in mobile network**

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| **公开号** | [US8891501](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8891501&sv=98fafa0033c8f53f8b879c64d29c7837) | **公开日** | 2014/11/18 |
| **申请号** | 13/345,140 | **申请日** | 2012/01/06 |
| **授权日** | 2014/11/18 | **优先日** | 2009/07/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Weisheng | Zhu; Wenruo |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method, an apparatus, and a system for routing user plane data in a mobile network are disclosed in the embodiments of the present invention, relate to the field of communications, and solve the problem that transmission delay of packet service data is relatively great in the prior art. The method for routing user plane data in the mobile network includes that: an access network bearer and a PDN gateway bearer of a user equipment are directly interconnected through a tunnel established between an access network and a PDN gateway; and data between a Home NodeB, a Home NodeB Gateway or a macro network access network and the PDN gateway is directly routed through the tunnel. The method, the apparatus, and the system can be applied to a mobile communication system. |

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| **主权项** | 专利度:7特征度:27 |  |  |
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A method for routing user plane data in a mobile network, comprising: establishing a tunnel between an access network and a packet data network (PDN) gateway to interconnect an access network bearer of a user equipment and a PDN gateway bearer of the user equipment; routing data between a Home NodeB of the access network and the PDN gateway through the tunnel; wherein the establishing the tunnel between the access network and the PDN gateway to interconnect the access network bearer of the user equipment and the PDN gateway bearer of the user equipment comprises: receiving, by the access network, a tunnel endpoint identifier of the PDN gateway, wherein the tunnel endpoint identifier of the PDN gateway is sent by a mobility management entity (MME) or a serving GPRS support node (SGSN), and establishing an uplink tunnel corresponding to the tunnel endpoint identifier of the PDN gateway according to the tunnel endpoint identifier of the PDN gateway, so that the access network bearer of the user equipment and the PDN gateway bearer of the user equipment are directly interconnected; further comprising: receiving, by the access network, a user plane uplink address of the PDN gateway, wherein the user plane uplink address of the PDN gateway is sent by the MME or the SGSN, so that the access network establishes an uplink tunnel corresponding to the user plane uplink address of the PDN gateway and the tunnel endpoint identifier of the PDN gateway according to the user plane uplink address of the PDN gateway and the tunnel endpoint identifier of the PDN gateway; and receiving, by the PDN gateway, a user plane downlink address of the access network, wherein the user plane downlink address is sent by a serving gateway (SGW), so that the PDN gateway establishes a downlink tunnel corresponding to the user plane downlink address of the access network and a tunnel endpoint identifier of the access network according to the user plane uplink address of the access network and the tunnel endpoint identifier of the access network.

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| **对偶主权项** | 专利度:15特征度:15 |  |  |
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A method for routing user plane data in a mobile network, comprising: establishing a tunnel between an access network and apacket data network (PDN)gateway to interconnect an access network bearer of a user equipment and a PDN gateway bearer of the user equipment;~~and~~routing data between a Home NodeB of the access network and the PDN gateway through the tunnel; wherein the establishing the tunnel between the access network and the PDN gateway to interconnect the access network bearer of the user equipment and the PDN gateway bearer of the user equipment comprises: receiving, by the access network, a tunnel endpoint identifier of the PDN gateway, wherein the tunnel endpoint identifier of the PDN gateway is sent by a mobility management entity (MME) or a serving GPRS support node (SGSN), and establishing an uplink tunnel corresponding to the tunnel endpoint identifier of the PDN gateway according to the tunnel endpoint identifier of the PDN gateway, so that the access network bearer of the user equipment and the PDN gateway bearer of the user equipment are directly interconnected; further comprising: receiving, by the access network, a user plane uplink address of the PDN gateway, wherein the user plane uplink address of the PDN gateway is sent by the MME or the SGSN, so that the access network establishes an uplink tunnel corresponding to the user plane uplink address of the PDN gateway and the tunnel endpoint identifier of the PDN gateway according to the user plane uplink address of the PDN gateway and the tunnel endpoint identifier of the PDN gateway; and receiving, by the PDN gateway, a user plane downlink address of the access network, wherein the user plane downlink address is sent by a serving gateway (SGW), so that the PDN gateway establishes a downlink tunnel corresponding to the user plane downlink address of the access network and a tunnel endpoint identifier of the access network according to the user plane uplink address of the access network and the tunnel endpoint identifier of the access network.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for service control via I1 interface**

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| **公开号** | [US8886812](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8886812&sv=483795748233720d0bca7c85288e84ac) | **公开日** | 2014/11/11 |
| **申请号** | 13/370,843 | **申请日** | 2012/02/10 |
| **授权日** | 2014/11/11 | **优先日** | 2009/08/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Long; Shuiping | Jin; Hui | Duan; Xiaoyan |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Embodiments of the present invention disclose a method, an apparatus, and a system for service control via an I1 interface. The method includes: sending a Session Initiation Protocol Invite message to a user equipment through a Gm interface; if receiving a response message returned by the user equipment, where the response message indicates that the user equipment chooses to use a circuit switched bearer and use an I1 interface for control, sending an I1 Invite message to the user equipment through the I1 interface, where I1 Invite message carries information indicating that Gm interface control falls back to the I1 interface control and information used to associate the Session Initiation Protocol Invite message. |

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| **主权项** | 专利度:7特征度:17 |  |  |
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A method for service control via an I1 interface, the method comprising: sending a Session Initiation Protocol Invite message for a session to a user equipment through a Gm interface; receiving a response message returned by the user equipment, wherein the response message indicates that the user equipment chooses to use a circuit switched bearer for the session and use an I1 interface for service control for the session; and sending an I1 Invite message to the user equipment through the I1 interface, wherein the I1 Invite message carries information indicating that Gm interface control falls back to I1 interface control and information used to associate the I1 Invite message with the Session Initiation Protocol Invite message.

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| **对偶主权项** | 专利度:13特征度:14 |  |  |
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A method for service control via an I1 interface, the method comprising: sending a Session Initiation Protocol Invite messagefor a sessionto a user equipment through a Gm interface; receiving a response message returned by the user equipment, wherein the response message indicates that the user equipment chooses to use a circuit switched bearerfor the sessionand use an I1 interface for~~control;~~service control for the session; andsending an I1 Invite message to the user equipment through the I1 interface, wherein the I1 Invite message carries information indicating that Gm interface control falls back to~~the~~I1 interface control and information used to associate theI1 Invite message with theSession Initiation Protocol Invite message.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Information processing method, device, and system**

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| **公开号** | [US8885747](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8885747&sv=47351d0cc59aa3ef6f912ed480d9861b) | **公开日** | 2014/11/11 |
| **申请号** | 13/293,673 | **申请日** | 2011/11/10 |
| **授权日** | 2014/11/11 | **优先日** | 2009/05/14 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Han; Chongyang | Chen; Jun | Li; Jing |
| **国际 主分类** | H04B 7/02 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| In the field of communications, an information processing method, device, and system are provided. The information processing method includes: receiving Precoding Control Indications (PCIs); determining a target PCI according to statistics of the PCIs and/or sources of the PCIs; and performing uplink Multiple Input Multiple Output sending control according to the target PCI. A User Equipment and an information processing system are also provided. |

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| **主权项** | 专利度:18特征度:15 |  |  |
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An information processing method, comprising: receiving, by a user equipment (UE), a Precoding Control Indication (PCI); determining, by the UE, a target PCI according to the received PCI; determining, by the UE, a weighting factor corresponding to the target PCI; and applying, by the UE, the weighting factor to send data in an uplink closed-loop transmit diversity manner; wherein the determining, by the UE, the target PCI according to the received PCI comprises: if the received PCI comprises multiple PCIs sent by all or part of cells from a serving Enhanced Dedicated Channel (E-DCH) radio link set of the UE, determining, by the UE, a PCI combined from the multiple PCIs sent by all or part of the cells from the serving E-DCH radio link set of the UE as the target PCI, wherein the multiple PCIs are generated by a NodeB controlling the cells from the serving E-DCH radio link set of the UE with a same PCI value.

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| **对偶主权项** | 专利度:15特征度:42 |  |  |
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An information processing method, comprising: receiving, by a user equipment (UE), aPrecoding Control Indication~~s~~(PCI~~s~~); determining, by the UE,a target PCI according to~~at least one of statistics of~~thereceived PCI; determining, by the UE, a weighting factor corresponding to the target PCI; and applying, by the UE, the weighting factor to send data in an uplink closed-loop transmit diversity manner; wherein the determining, by the UE, the targetPCI~~s~~a~~nd sources of the PCIs; and performing uplink Multiple Input Multiple Output sending control according to the target PCI~~ccording to the received PCI comprises: if the received PCI comprises multiple PCIs sent by all or part of cells from a serving Enhanced Dedicated Channel (E-DCH) radio link set of the UE, determining, by the UE, a PCI combined from the multiple PCIs sent by all or part of the cells from the serving E-DCH radio link set of the UE as the target PCI, wherein the multiple PCIs are generated by a NodeB controlling the cells from the serving E-DCH radio link set of the UE with a same PCI value.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for determining resource indices**

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| **公开号** | [US8885592](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8885592&sv=8c2616460f95fa5c4b6246d816c826ad) | **公开日** | 2014/11/11 |
| **申请号** | 14/063,528 | **申请日** | 2013/10/25 |
| **授权日** | 2014/11/11 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Frenne; Mattias | Liu; Jianghua |
| **国际 主分类** | H04B 7/204 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention relates to a method, apparatus and system for determining resource indices in a wireless communication system, which explores and implements for at least two control channel elements (CCEs) for a user equipment (UE), maps the CCEs to at least two resource indices for the UE according to a predetermined mapping rule. It can determine multiple resource indices to a UE implicitly according to some embodiments of the present invention. |

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| **主权项** | 专利度:10特征度:23 |  |  |
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A method for determining resource indices in a base station in a wireless communication system, wherein said base station communicates with a user equipment (UE) supporting multiple logical antennas transmission, the method comprising: mapping at least two control channel elements (CCEs) allocated to the UE to at least two demodulation reference signal (DRS) indices for the UE according to a predetermined mapping rule; and mapping the CCEs to at least two acknowledgement/negative-acknowledgement (ACK/NACK) indices for the UE according to a predetermined mapping rule; wherein the mapping of the CCEs to at least two DRS indices for the UE according to a predetermined mapping rule further comprises: determining the at least two DRS indices for the UE, wherein each DRS index is determined according to { s + m + a if s + m #x3c; K re mod ( s + m - K re , K ) + a if s + m ≥ K re where s is the first CCE index of the UE, m is an offset, where m≧0, a is a value between 0 and N 1, where N is the number of CCEs for the UE, Kre is the number of available DRS indices in a first resource block (RB), and K is the number of available resources indices within a second RB.

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| **对偶主权项** | 专利度:13特征度:4 |  |  |
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A method for determining resource indices in a base station in a wireless communication system, wherein said base station communicates with a user equipment (UE) supporting multiple logical antennas transmission, the method comprising: mapping at least two control channel elements (CCEs) allocated to the UE to at least two demodulation reference signal (DRS) indices for the UE according to a predetermined mapping rule; and mapping the CCEs to at least two acknowledgement/negative-acknowledgement (ACK/NACK) indices for the UE according to a predetermined mapping rule; wherein the mapping of the CCEs to at least two DRS indices for the UE according to a predetermined mapping rule further comprises: determining the at least two DRS indices for the UE, wherein each DRS index is determined according to { s + m + a if s + m

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile station apparatus, mobile communication system and communication method**

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| **公开号** | [US8885582](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8885582&sv=78beaa42151743ef59b61b2a5d30d104) | **公开日** | 2014/11/11 |
| **申请号** | 13/184,381 | **申请日** | 2011/07/15 |
| **授权日** | 2014/11/11 | **优先日** | 2008/04/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yamada; Shohei | Aiba; Tatsushi |
| **国际 主分类** | H04W 4/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| In a mobile communication system in which an space of a physical downlink control channel for a mobile station apparatus to search is defined based on a mobile station identity assigned from a base station apparatus, the base station apparatus places a physical downlink control channel including a first mobile station identity or a physical downlink control channel including a second mobile station identity in a search space of a physical downlink control channel corresponding to the first mobile station identity when the base station apparatus assigns a plurality of mobile station identities to the mobile station apparatus, and when a plurality of mobile station identities is assigned from the base station apparatus, the mobile station apparatus performs decoding processing of the physical downlink control channel including the first mobile station identity and the physical downlink control channel including the second mobile station identity in the search space of the physical downlink control channel corresponding to the first mobile station identity. |

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| **主权项** | 专利度:12特征度:21 |  |  |
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A mobile communication system in which a mobile station apparatus searches for a physical downlink control channel (PDCCH) transmitted by a base station apparatus in a search space, the search space comprising a plurality of resource elements, the search space corresponding to a cell-radio network temporary identity (C-RNTI) for dynamic scheduling, the mobile communication system comprising: the base station apparatus configured to transmit, to the mobile station apparatus, the PDCCH in the search space, the PDCCH including both a C-RNTI for persistent scheduling and resource allocation information set to a predetermined value; and the mobile station apparatus configured: to search for the PDCCH in the search space, the search space being located by the mobile station apparatus according to the C-RNTI for dynamic scheduling; and to decode the PDCCH according to the C-RNTI for persistent scheduling, when the mobile station apparatus has both the C-RNTI for dynamic scheduling and the C-RNTI for persistent scheduling; wherein the mobile station apparatus is further configured to halt data transmission on persistently-allocated resources when the PDCCH includes the C-RNTI for persistent scheduling and the resource allocation information has been set to the predetermined value.

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| **对偶主权项** | 专利度:22特征度:4 |  |  |
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A mobile communication system in which a~~space of~~mobile station apparatus searches fora physical downlink control channel~~for a mobil~~(PDCCH) transmitted by a base station apparatus~~to~~in asearch~~is defined based on a mobile station identity assigned from a base station apparatus, wherein the base station apparatus: set a physical downlink control channel including a specific mobile station identity different from a first mobile station identity and resource allocation information set to a predetermined value, in a search space of a physical downlink control channel corresponding to the first mobile station identity, when hav~~space, the search space comprising a plurality of resource elements, the search space corresponding to a cell-radio network temporary identity (C-RNTI) for dynamic scheduling, the mobile communication system comprising: the base station apparatus configured to transmit, to the mobile station apparatus, the PDCCH in the search space, the PDCCH including both a C-RNTI for persistent scheduling and resource allocation information set to a predetermined value; and the mobile station apparatus configured: to search for the PDCCH in the search space, the search space being located by the mobile station apparatus according to the C-RNTI for dynamic scheduling;a~~ssigned a plurality of mobile station identities mobile station identities to the mobile station apparatus, and wherein the mobile station apparatus: deactivates persistently-allocated resources by identifying~~nd to decode the PDCCH according to the C-RNTI for persistent scheduling, when the mobile station apparatus has both the C-RNTI for dynamic scheduling and the C-RNTI for persistent scheduling; wherein the mobile station apparatus is further configured to halt data transmission on persistently-allocated resources when the PDCCH includes the C-RNTI for persistent scheduling andthe resource allocation informationhas beenset to the predetermined value~~, when having detected the physical downlink control channel including the specific mobile station identity~~.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 48 | **国家数** | 16 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for signalling in a wireless communication system**

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| **公开号** | [US8885529](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8885529&sv=e652a65298fcf19c4b1be5cb4c485341) | **公开日** | 2014/11/11 |
| **申请号** | 13/165,544 | **申请日** | 2011/06/21 |
| **授权日** | 2014/11/11 | **优先日** | 2008/12/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wennstrom; Mattias | Popovic; Branislav | Liu; Jianghua |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present invention relates to a method in a wireless communication system for signalling number of antenna ports which a transmit node comprises. According to the method a communication signal is transmitted carrying information on number of at least one antenna port of said transmit node, wherein the information on said number of at least one antenna port is partitioned and provided distributed over at least two predefined parts of said communication signal. The invention also relates to a transmit node and a receive node, and methods thereof. |

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| **主权项** | 专利度:30特征度:8 |  |  |
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A method for signalling a quantity of antenna ports of a transmitting apparatus in a wireless communication system, comprising: encoding the quantity of antenna ports of the transmitting apparatus into information bits of a communication signal, the transmitting apparatus supporting more than four antenna ports, wherein the information bits comprise a first predefined part and a second predefined part, the first predefined part relating to a first value being one of the following: one, two and four, the first value relating to a first number of antenna ports, the second predefined part comprising at least one bit indicating a second value, the second value relating to a second number of antenna ports; and transmitting the communication signal for signalling the quantity of antenna ports of the transmitting apparatus.

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| **对偶主权项** | 专利度:16特征度:21 |  |  |
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A method~~in a wireless communication system for signalling the number~~for signalling a quantity of antenna ports of a transmitting apparatus in a wireless communication system, comprising: encoding the quantityof antenna ports~~which a~~of thetransmit~~node comprises, comprising: transmit~~tingapparatus into information bits ofa communication signal~~is~~, thetransmitt~~ed carrying information on the number of at least one antenna~~ing apparatus supporting more than four antenna ports, wherein the information bits comprise a first predefined part and a second predefinedp~~o~~art~~of said transmit node, wherein the information on the number of the at least one antenna port includes and is provided distributed over at least~~, the first predefined part relating to a first value being one of the following: one, two and four, the first value relating to a first number of antenna ports, the second predefined part comprising at least one bit indicating a second value, the second value relatingt~~w~~o~~predefined~~a second number of antennap~~a~~orts~~of said communication signal~~; and transmitting the communication signal for signalling the quantity of antenna ports of the transmitting apparatus.

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.3 |

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| **同族数** | 17 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for improving synchronization and information transmission in a communication system**

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| **公开号** | [US8867636](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8867636&sv=dc900501290cbeda40c45b6fd65e4025) | **公开日** | 2014/10/21 |
| **申请号** | 13/365,889 | **申请日** | 2012/02/03 |
| **授权日** | 2014/10/21 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Popovic; Branislav |
| **国际 主分类** | H04K 1/10 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method is provided for synchronization in a communication system. A receiver receives and processes a signal with a centrally symmetric part s(k) exploitable for synchronization. The signal is based on a uniquely identifiable sequence c(l) from a set of sequences exploitable for information transmission. The centrally symmetric part s(k) is centrally symmetric in the shape of absolute value thereof. The centrally symmetric part s(k) is of arbitrary length N, and the sequence c(l) is a Zadoff-Chu sequence. |

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| **主权项** | 专利度:25特征度:14 |  |  |
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A method of synchronization in a communication system, the method comprising: receiving and processing, by a receiver, a signal with a centrally symmetric part s(k) exploitable for synchronization, wherein the signal is based on a sequence c(l) exploitable for information transmission from a transmitter to the receiver, the centrally symmetric part s(k) is centrally symmetric in a shape of absolute value thereof, the centrally symmetric part s(k) is of arbitrary length N, the sequence c(l) is a Zadoff-Chu sequence defined as c(l)=WLrl(l+1)/2, l=0, 1, . . . , L 1, L is odd, where WL=exp( j2π/L), j=√{square root over ( 1)}, and the sequence c(l) is mapped to a cell identification number.

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| **对偶主权项** | 专利度:20特征度:16 |  |  |
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A method of synchronization in a communication system, the method comprising: receiving and processing, by a receiver, a signal with a centrally symmetric part s(k) exploitable for synchronization, wherein the signal is based on a~~uniquely identifiable sequence c(l) from a set of sequence~~sequence c(l)exploitable for information transmission~~, w~~from a transmitter to there~~in~~ceiver,the centrally symmetric part s(k) is centrally symmetric in~~the~~ashape of absolute value thereof,~~wherein~~the centrally symmetric part s(k) is of arbitrary length N,~~and wherein~~the sequence c(l) is a Zadoff-Chu sequencedefined as c(l)=WLrl(l+1)/2, l=0, 1, . . . , L 1, L is odd, where WL=exp( j2π/L), j=√{square root over ( 1)}, and the sequence c(l) is mapped to a cell identification number.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for recovering invalid downlink data tunnel between networks**

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| **公开号** | [US8867339](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8867339&sv=229a4bf52cd7b9c2f094ad7443590a06) | **公开日** | 2014/10/21 |
| **申请号** | 13/357,366 | **申请日** | 2012/01/24 |
| **授权日** | 2014/10/21 | **优先日** | 2006/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua |
| **国际 主分类** | G06F 11/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| Described herein is a method for processing an invalidation of a downlink data tunnel between networks. The method includes the following steps: (1) a core network user plane anchor receives an error indication of data tunnel sent from an access network device, (2) after deciding that the user plane corresponding to the error indication uses a One Tunnel technology, the core network user plane anchor notifies a relevant core network control plane to request recovering the downlink data tunnel, (3) the core network control plane recovers the downlink data tunnel and notifies the core network user plane anchor to update information of the user plane. In addition, a communication system and a communication device are also provided. The method, system, and device can improve the speed of recovering data transmission after the downlink data tunnel becomes invalid. |

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| **主权项** | 专利度:16特征度:20 |  |  |
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A method for processing an invalidation of a downlink data tunnel between networks, comprising: receiving, by a core network user plane anchor, an error indication of a data tunnel from an access network device; notifying, by the core network user plane anchor, a core network control plane to recover a downlink data tunnel if a user plane corresponding to the error indication uses a One Tunnel technology; receiving b the core network user plane anchor, an update packet data protocol (PDP) context request from the core network control plane; and updating, by the core network user plane anchor, a corresponding PDP context according to the update PDP context request.

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| **对偶主权项** | 专利度:20特征度:9 |  |  |
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A method for processing an invalidation of a downlink data tunnel between networks, comprising: receiving, by a core network user plane anchor, an error indication of a data tunnel from an access network device;~~and~~notifying, by the core network user plane anchor, a core network control plane to recover a downlink data tunnel if a user plane corresponding to the error indication uses a One Tunnel technology; receiving b the core network user plane anchor, an update packet data protocol (PDP) context request from the core network control plane; and updating, by the core network user plane anchor, a corresponding PDP context according to the update PDP context request.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and user equipment for transmitting multi-cell scheduling information**

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| **公开号** | [US8861387](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8861387&sv=41e7a0ac873b8beceb437063b4c604b7) | **公开日** | 2014/10/14 |
| **申请号** | 13/052,961 | **申请日** | 2011/03/21 |
| **授权日** | 2014/10/14 | **优先日** | 2008/09/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wan; Lei | Ma; Sha | Zhou; Mingyu | Sun; Jingyuan | Wang; Chengyu | Zhu; Di | Xia; Yuan | Ren; Xiaotao | Dang; Shujun |
| **国际 主分类** | H04L 12/26 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method, device and user equipment (UE) for transmitting multi-cell scheduling information is provided. When at least two cells are serving the UE, the method for transmitting multi-cell scheduling information includes the following steps: determining a main cell of the UE from the at least two cells; transmitting, in the main cell, the scheduling information of the main cell and an auxiliary cell which are serving the UE. |

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| **主权项** | 专利度:23特征度:13 |  |  |
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A method for transmitting multi-cell scheduling information, when at least two cells are serving a user equipment (UE), the method comprising: determining, by an Evolved NodeB (eNB), a main cell of the UE from the at least two cells; and transmitting by the eNB, in the main cell, scheduling information of the main cell and an auxiliary cell that are serving the UE, to the UE, wherein the scheduling information comprises information about scheduling allocation, and the information about scheduling allocation includes an indication of resources adopted by the UE to send uplink control signals in the main cell and the auxiliary cell.

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| **对偶主权项** | 专利度:20特征度:14 |  |  |
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A method for transmitting multi-cell scheduling information, when at least two cells are servingauser equipment (UE), the method comprising: determining, by an Evolved NodeB (eNB),a main cell of the UE from the at least two cells; and transmittingby the eNB, in the main cell, scheduling information of the main cell and an auxiliary cell that are serving the UE, to the UE, wherein the scheduling information comprises information about scheduling allocation, and the information about scheduling allocation includes an indication of resources adopted by the UE to send uplink control signals in the main cell and the auxiliary cell.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for accessing and obtaining user equipment context and user equipment identity**

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| **公开号** | [US8842569](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8842569&sv=ccda701da2f685f3bb6700679ade9576) | **公开日** | 2014/09/23 |
| **申请号** | 14/012,554 | **申请日** | 2013/08/28 |
| **授权日** | 2014/09/23 | **优先日** | 2008/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and device for accessing and obtaining user equipment (UE) context and UE identity are provided. The method for access includes: when a UE accesses a System Architecture Evolution (SAE) network, judging, by a network node, whether a Globally Unique Mobility Management Entity Identifier (GUMMEI) carried by the UE or a Mobility Management Entity Group Identity (MMEGI) in the GUMMEI is allocated or mapped by the SAE network; if the GUMMEI or MMEGI is allocated by the SAE network, selecting, by the network node, a Mobility Management Entity (MME) according to the GUMMEIA network device includes an identity attribute obtaining module and a network resource node allocation module. Therefore, the access of the UE is achieved. |

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| **主权项** | 专利度:4特征度:7 |  |  |
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A method for obtaining a user equipment (UE) context, the method comprising: obtaining, by a UE, a temporary identity indicated by a Temporary Identity used in Next update (TIN) of the UE and obtaining an additional temporary identity of the UE; determining, by the UE, whether the temporary identity indicated by the TIN of the UE is the same as the additional temporary identity of the UE; and if the temporary identity indicated by the TIN of the UE is the same as the additional temporary identity of the UE transmitting, by the UE, the temporary identity indicated by the TIN to a base station, wherein the temporary identity indicated by the TIN is used by the base station to identify the UE context of the UE.

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| **对偶主权项** | 专利度:4特征度:12 |  |  |
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A method for obtaining a user equipment (UE) context, the method comprising: obtaining, by a UE, a temporary identity indicated by a Temporary Identity used in Next update (TIN) of the UE andobtainingan additional temporary identity of the UE; determining, by the UE,whetherthe temporary identity indicated by the TIN of the UE is~~consistent wi~~the same as the additional temporary identity of the UE; and if the temporary identity indicated by the TIN of the UE is the same asthe additional temporary identity of the UE~~; and~~transmitting, by the UE, the temporary identity indicated by the TIN to a base station, wherein the temporary identity indicated by the TIN is used by the base station to identify~~a~~theUE context of the UE~~according to the temporary identity indicated by the TIN~~.

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| **被引用** | 20 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.23 |

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| **同族数** | 31 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Location intercept method and apparatus**

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| **公开号** | [US8837359](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8837359&sv=6c18d76911a26c38e449cb145d2ba577) | **公开日** | 2014/09/16 |
| **申请号** | 12/956,825 | **申请日** | 2010/11/30 |
| **授权日** | 2014/09/16 | **优先日** | 2008/06/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yin; Yu | Zhou; Qing |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present disclosure discloses a location monitoring method and apparatus. The method includes: creating a tracking area (TA) list for user equipment (UE) according to a monitoring precision indication and sending the TA list to the UE; and obtaining location information of the UE when the UE executes a location update according to the TA List and reporting the location information to a monitoring center. With the present disclosure, the monitoring location precision of a monitoring target may be set so that more accurate location information of the monitoring target can be obtained and that the needs of various monitoring tasks can be satisfied. |

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| **主权项** | 专利度:9特征度:18 |  |  |
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A location monitoring method, comprising: creating, in an evolved packet system (EPS), a tracking area (TA) list for a user equipment (UE) according to an intercept precision indication and sending the TA list to the UE, wherein the intercept precision indication comprises intercept location precision information of the UE which is an intercepting distance, and the creating comprises: according to the intercept location precision information of the UE, choosing number of TAs corresponding to the intercept location precision information and creating the TA list for the UE according to the chosen number and according to a current TA of the UE and surrounding TA; obtaining, first location information of the UE initiating a location update before the location update and second location information after the location update, wherein the location update is initiated by the UE when the UE detects that the current TA is not in the TA list, or the location update is a periodic location update initiated by the UE; and reporting the first location information and the second location information to an intercept center.

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| **对偶主权项** | 专利度:8特征度:37 |  |  |
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A location monitoring method, comprising:~~obtain~~creating, in an evolved packet system (EPS),~~first location information of a user equipment (UE) performing a location update before the location update and second location information after the location update~~a tracking area (TA) list for a user equipment (UE) according to an intercept precision indication and sending the TA list to the UE, wherein the intercept precision indication comprises intercept location precision information of the UE which is an intercepting distance, and the creating comprises: according to the intercept location precision information of the UE, choosing number of TAs corresponding to the intercept location precision information and creating the TA list for the UE according to the chosen number and according to a current TA of the UE and surrounding TA; obtaining, first location information of the UE initiating a location update before the location update and second location information after the location update, wherein the location update is initiated by the UE when the UE detects that the current TA is not in the TA list, or the location update is a periodic location update initiated by the UE; and reporting the first location information and the second location information to a~~monitoring~~n interceptcenter.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.14 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for reporting and obtaining channel state information, eNodeB, and user equipment**

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| **公开号** | [US8824329](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8824329&sv=ff18aa5593c08f8c304c5ffbcf155c59) | **公开日** | 2014/09/02 |
| **申请号** | 13/590,987 | **申请日** | 2012/08/21 |
| **授权日** | 2014/09/02 | **优先日** | 2010/07/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Xingwei | Lv; Yongxia | Cheng; Yan |
| **国际 主分类** | G01R 31/08 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for reporting and obtaining channel state information, an eNodeB, and a user equipment are disclosed. The method for reporting channel state information includes: determining a reported content in channel state information (CSI) of downlink component carriers according to priorities of contents-in-CSI, where the CSI of the downlink component carriers includes the reported content and a content that is not to be reported; and reporting the reported content to an eNodeB on a physical uplink control channel (PUCCH). By determining a reported content in CSI according to a priority, the shortage of a CSI reporting resource may be relieved. |

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| **主权项** | 专利度:8特征度:17 |  |  |
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A method for reporting channel state information CSI, the method comprising: obtaining CSI of downlink component carriers; identifying a reported content and a non-reported content from all contents included in the CSI of the downlink component carriers according to priorities of contents-in-CSI, wherein the priorities of the contents-in-CSI are set as follows: a rank indicator RI greater than a wideband channel quality indicator CQI greater than a subband CQI; reporting the reported content to an eNodeB on a physical uplink control channel PUCCH; and dropping the non-reported content.

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| **对偶主权项** | 专利度:11特征度:9 |  |  |
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A method for reporting channel state information CSI, the method comprising: obtaining CSI of downlink component carriers;ide~~termi~~ntifying a reported contentand a non-reported content from all contents includedin the CSI of the downlink component carriers according to priorities of contents-in-CSI~~; and~~, wherein the priorities of the contents-in-CSI are set as follows: a rank indicator RI greater than a wideband channel quality indicator CQI greater than a subband CQI;reporting the reported content to an eNodeB on a physical uplink control channel PUCCH; and dropping the non-reported content.

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| **被引用** | 9 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 12 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Session processing method, device, and communication system**

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| **公开号** | [US8817778](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8817778&sv=1197fe5310bed2695224fb2b0c79c776) | **公开日** | 2014/08/26 |
| **申请号** | 13/396,307 | **申请日** | 2012/02/14 |
| **授权日** | 2014/08/26 | **优先日** | 2009/08/14 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Long; Shuiping | Jin; Hui | Duan; Xiaoyan | Yi; Qiang |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| Embodiments of the present invention disclose a session processing method, device, and communication system. The session processing method includes: when a first User Equipment (UE) is to set up an IP Multimedia Subsystem (IMS) session with a second UE, triggering setup of an unstructured supplementary service data (USSD) transaction between a Circuit Switched (CS) network and the first UE; and sending, by using the USSD transaction, an I1 protocol message used to bear IMS session control signaling. With the technical solutions of the present invention, when a UE is to set up an IMS session, a USSD transaction is set up between the UE and the CS network; I1 protocol messages exchanged between the UE and the Service Centralization and Continuity (SCC) Application Server (AS) (SCC-AS) are sent reliably by using the USSD transaction, which facilitates reliable control over IMS services. |

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| **主权项** | 专利度:11特征度:27 |  |  |
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A session processing method, comprising: when a first User Equipment (UE) is to set up an IP Multimedia Subsystem (IMS) session with a second UE, triggering setup of an unstructured supplementary service data (USSD) transaction between a Circuit Switched (CS) network and the first UE; and sending, by using the USSD transaction, an I1 protocol (IMS Centralized Services (ICS) protocol) message used to bear IMS session control signaling; wherein the sending, by using the USSD transaction, an I1 protocol message used to bear IMS session control signaling further comprises: sending, by the first UE, a specific I1 protocol message to a SCC-AS (Service Centralization and Continuity (SCC) Application Server (AS)) by using the USSD transaction to transfer a turn of data transmission to the SCC-AS; or sending, by the SCC-AS, a specific I1 protocol message to the first UE by using the USSD transaction to transfer a turn of data transmission to the first UE.

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| **对偶主权项** | 专利度:11特征度:11 |  |  |
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A session processing method, comprising: when a first User Equipment (UE) is to set up an IP Multimedia Subsystem (IMS) session with a second UE, triggering setup of an unstructured supplementary service data (USSD) transaction between a Circuit Switched (CS) network and the first UE; and sending, by using the USSD transaction, an I1 protocol(IMS Centralized Services (ICS) protocol)message used to bear IMS session control signaling; wherein the sending, by using the USSD transaction, an I1 protocol message used to bear IMS session control signalingfurthercomprises: sending, by the first UE, a specific I1 protocol message to~~the~~aSCC-AS(Service Centralization and Continuity (SCC) Application Server (AS))by using the USSD transaction to transfer a turn of data transmission to the SCC-AS; or sending, by the SCC-AS, a specific I1 protocol message to the first UE by using the USSD transaction to transfer a turn of data transmission to the first UE.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 4 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system of handover**

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| **公开号** | [US8817751](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8817751&sv=e62b15bd4bc489e5b7b387c1ea595764) | **公开日** | 2014/08/26 |
| **申请号** | 12/707,236 | **申请日** | 2010/02/17 |
| **授权日** | 2014/08/26 | **优先日** | 2007/08/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Jian | Wu; Xiaobo | Duan; Xiaoqin | Li; Qingyu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A handover method includes an evolved mobile switching center (eMSC) that receives a relocation request from a first network and forwards the relocation request to a second network requesting the second network to establish its own media plane association. The eMSC establishes a media plane association with the second network. The eMSC instructs a user equipment (UE) to access the second network. With the handover method, the UE may be handed over between different networks by using the eMSC. A method for reattaching a UE to the eMSC is also provided so that the UE can be reattached to a target eMSC when the eMSC to which the UE is attached is changed. A handover apparatus and a handover system are also provided. |

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| **主权项** | 专利度:9特征度:31 |  |  |
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A method of handover for a user equipment (UE), comprising: receiving, by an evolved NodeB (eNB), in a first network, a measurement parameter from the UE; wherein the first network is a packet switched (PS) domain network; analyzing, by the eNB, that whether a neighbor cell belongs to a circuit switched (CS) domain, and judging whether the neighbor cell has CS capability according to the measurement parameter reported from the UE; determining, by the eNB, the relocation is a PS domain-CS domain relocation if the neighbor cell belongs to the CS domain and the neighbor cell has the CS capability; sending, by the eNB, a relocation request to a target mobility management entity, MME, in the PS domain network, so as to enable the MME sends a relocation command to an evolved mobile switching centre (eMSC); wherein the relocation request carries a relocation cause value, a target cell list and a context ID of a bearer that needs to be forwarded to a peer entity, and the relocation cause value indicates that the relocation is a PS domain-CS domain relocation.

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| **对偶主权项** | 专利度:15特征度:10 |  |  |
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A method of handoverfor a user equipment (UE), comprising: receiving, by an evolved~~mobile switching centre (eMSC), a relocation request from a first network; sending, by the eMSC, a prepare handover request to a second network to request the second network to establish a media stream association of the second network, wherein the first network is a packet switched (~~NodeB (eNB), in a first network, a measurement parameter from the UE; wherein the first network is a packet switched (PS) domain network; analyzing, by the eNB, that whether a neighbor cell belongs to a circuit switched (CS) domain, and judging whether the neighbor cell has CS capability according to the measurement parameter reported from the UE; determining, by the eNB, the relocation is aPS~~)~~domain~~network, and the second network is a circuit switched (~~-CS domain relocation if the neighbor cell belongs to theCS~~)~~domain~~network; est~~and the neighbor cell has the CS capabili~~sh~~ty; sending, by the e~~MSC~~NB, a~~media stream association between the eMSC and the second network; and instructing, by the eMSC, a user equipment (UE) to access the second network through the media stream ass~~relocation request to a target mobility management entity, MME, in the PS domain network, so as to enable the MME sends a relocation command to an evolved mobile switching centre (eMSC); wherein the relocation request carries a reloc~~i~~ation~~between the eMSC and the second network and the media stream ass~~cause value, a target cell list and a context ID of a bearer that needs to be forwarded to a peer entity, and the reloc~~i~~ation~~of the second network~~cause value indicates that the relocation is a PS domain-CS domain relocation.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.20 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for negotiating security capability when terminal moves**

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| **公开号** | [US8812848](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8812848&sv=bee5c44f9c0c6ed8a16ace234ceadcba) | **公开日** | 2014/08/19 |
| **申请号** | 14/147,179 | **申请日** | 2014/01/03 |
| **授权日** | 2014/08/19 | **优先日** | 2007/08/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Chengdong |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method, user equipment (UE) and system are provided for negotiating a security capability during idle state mobility of the UE from a non-long term evolution (non-LTE) network to a long term evolution (LTE) network. The UE sends UE security capabilities supported by the UE to the LTE network for a non-access stratum (NAS) security algorithm selection use. The UE then receives from the LTE network selected NAS security algorithm. The UE further generates a root key from an authentication vector-related key stored at the UE and then derives, from the generated root key, a NAS protection key for security communication with the LTE network. |

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| **主权项** | 专利度:24特征度:21 |  |  |
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A user equipment (UE) comprising: a transmitter configured to send, in situations where the UE moves in idle state from a non-long term evolution (non-LTE) network to a long term evolution (LTE) network, UE security capabilities supported by the UE to the LTE network for a non-access stratum (NAS) security algorithm selection use; a receiver configured to receive a selected NAS security algorithm from the LTE network; and a processor configured to generate a root key from an authentication vector-related key available at the UE and to derive, from the generated root key, according to the NAS security algorithm, a NAS protection key for communicating with the LTE network.

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| **对偶主权项** | 专利度:24特征度:4 |  |  |
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A user equipment (UE) comprising: a transmitter configured to send, in situations where the UE moves in idle state from a non-long term evolution (non-LTE) network to a long term evolution (LTE) network, UE security capabilities supported by the UE to the LTE network for a non-access stratum (NAS) security algorithm selection use; a receiver configured to receive a selected NAS security algorithm from the LTE network; and a processor configured to generate a root key from an authentication vector-related key available at the UE and to derive, from the generated root key,according to the NAS security algorithm,a NAS protection key for communicating with the LTE network.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 20 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for allocating communication resources**

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| **公开号** | [US8811330](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8811330&sv=7245230812e75e0da130f18b373993eb) | **公开日** | 2014/08/19 |
| **申请号** | 13/920,760 | **申请日** | 2013/06/18 |
| **授权日** | 2014/08/19 | **优先日** | 2005/06/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Van De Beek; Jaap | Mauritz; Oskar | Popovic; Branislav |
| **国际 主分类** | H04W 72/08 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of allocating communication resources for a communication between a transmitter and a receiver in a communication system, the communication resources being divided in time periods and frequency sub-bands. The transmitter receives a channel quality measurement sent by the receiver. The transmitter performs allocation of a first part of the communication resources to the receiver according to the channel quality measurement if allocation of the first part is selected, or allocation of a second part of the communication resources to the receiver if allocation of the first part is not selected. The transmitter informs the receiver of allocated communication resources, and the allocated communication resources being designated for frequency localized channels or for frequency distributed channels. |

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| **主权项** | 专利度:48特征度:19 |  |  |
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A method of allocating communication resources for a communication between a transmitter and a receiver in a communication system, the communication resources being divided in time periods and frequency sub-bands, the method comprising: receiving, by the transmitter, a channel quality measurement sent by the receiver; conditionally performing, by the transmitter, allocation of a first part of the communication resources (FPCR) for the receiver according to the channel quality measurement in a case that allocation of the FPCR is selected, and allocation of a second part of the communication resources (SPCR) for the receiver in a case that allocation of the FPCR is not selected, the FPCR being designated for frequency localized channels (FLC) for providing multiuser-diversity, the SPCR being designated for frequency distributed channels (FDC) for providing link-diversity, the FPCR coexisting with and being distinct from the SPCR in a time period; in the case that allocation of the FPCR is selected, informing the receiver, by the transmitter, of the FPCR being allocated for the receiver, and of an indication that the FPCR is designated for the FLC; in the case that allocation of the SPCR is selected, informing the receiver, by the transmitter, of SPCR being allocated for the receiver, and of an indication that the SPCR is designated for the FDC; in the case that allocation of the FPCR is selected, obtaining, by the receiver, the FPCR and the indication that the FPCR is designated for the FLC; and in the case that allocation of the SPCR is selected, obtaining, by the receiver, the SPCR and the indication that the SPCR is designated for the FDC.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A method of allocating communication resources for a communication between a transmitter and a receiver in a communication system, the communication resources being divided in time periods and frequency sub-bands, the method comprising: receiving, by the transmitter, a channel quality measurement sent by the receiver; conditionally performing, by the transmitter, allocation of a first part of the communication resources~~to~~(FPCR) forthe receiver according to the channel quality measurement i~~f~~n a case thatallocation of the~~first part~~FPCRis selected, and allocation of a second part of the communication resources~~to~~(SPCR) forthe receiver i~~f~~n a case thatallocation of the~~first part~~FPCRis not selected, the~~first part of the communication resources~~FPCRbeing designated for frequency localized channels(FLC)for providing multiuser-diversity, the~~second part of the communication resources~~SPCRbeing designated for frequency distributed channels(FDC)for providing link-diversity, the~~first part~~FPCRcoexisting with and being distinct from the~~second part~~SPCRin a time period; in~~forming the receiver, by the transmitter, of allocated communication resources, and one of (a) the allocated communication resources being designated for the frequency localized channels and (b) the allocated communication resources being design~~the case that allocation of the FPCR is selected, informing the receiver, by the transmitter, of the FPCR being allocated for the receiver, and of an indication that the FPCR is designated for the FLC; in the case that allocation of the SPCR is selected, informing the receiver, by the transmitter, of SPCR being allocated for the~~f~~re~~quency distributed channels; obtaining, by the re~~ceiver,and of an indication that the SPCR is designated for the FDC; in the caseth~~e~~atallocat~~ed communication resources; and obtaining, by the receiver, one of (a) the allocated communication resources being designated for the frequency localized channels and (b) the allocated communication resources being designated for the frequency distributed channels~~ion of the FPCR is selected, obtaining, by the receiver, the FPCR and the indication that the FPCR is designated for the FLC; and in the case that allocation of the SPCR is selected, obtaining, by the receiver, the SPCR and the indication that the SPCR is designated for the FDC.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 21 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Subframe processing method and device**

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| **公开号** | [US8811256](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8811256&sv=578bc025db2154a2c820557dcfc2e15a) | **公开日** | 2014/08/19 |
| **申请号** | 13/433,876 | **申请日** | 2012/03/29 |
| **授权日** | 2014/08/19 | **优先日** | 2009/09/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Qufang | Liu; Wenji | Zeng; Qinghai |
| **国际 主分类** | H04H 20/71 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A subframe processing method and device are disclosed. The subframe processing method includes: if data packets that are not received by an evolved NodeB (eNB) include at least two consecutive Multimedia Broadcast Multicast Service (MBMS) data packets to be scheduled in a Dynamic Schedule Period (DSP) by the eNB, setting a subframe of the eNB that is used to transmit Dynamic Schedule Information (DSI) corresponding to the DSP to null. When the eNB finds that consecutive MBMS data packets are lost and/or that a type 0 Protocol Data Unit (PDU) group is lost, a subframe used to transmit the DSI may be set to null, thereby preventing the eNB from transmitting incorrect DSI which may interfere with other eNBs and cause incorrect data receiving of a user equipment (UE). |

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| **主权项** | 专利度:17特征度:15 |  |  |
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A subframe processing method, the method comprising: determining, by an evolved NodeB (eNB), that a type 0 control packet group is not received; determining that the eNB is not able to generate complete Dynamic Schedule Information (DSI) corresponding to a Dynamic Schedule Period (DSP); and keeping mute in a subframe, by the eNB, wherein the subframe is to be used to transmit the DSI corresponding to the DSP, wherein the DSP is used to transmit Multimedia Broadcast Multicast Service (MBMS) data packets corresponding to the type 0 control packet group.

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| **对偶主权项** | 专利度:17特征度:15 |  |  |
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A subframe processing method, the method comprising:~~if~~determining, byan evolved NodeB (eNB)~~does not receive at least~~, that a type 0 control packet group is not received; determining that the eNB is not ablet~~w~~o~~consecutive Multimedia Broadcast Multicast Service (MBMS) data packets to be scheduled in~~generate complete Dynamic Schedule Information (DSI) corresponding toa Dynamic Schedule Period (DSP)~~,~~; andkeeping~~, by the eNB,~~mute in a subframe,~~the subframe being supposed to be used to transmit Dynamic Schedule Information (DSI) corresponding to the DSP~~by the eNB, wherein the subframe is to be used to transmit the DSI corresponding to the DSP, wherein the DSP is used to transmit Multimedia Broadcast Multicast Service (MBMS) data packets corresponding to the type 0 control packet group.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for generating demodulation reference signal sequences**

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| **公开号** | [US8804651](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8804651&sv=3d93b679fc651a4f1fb59fa078a80a62) | **公开日** | 2014/08/12 |
| **申请号** | 13/729,045 | **申请日** | 2012/12/28 |
| **授权日** | 2014/08/12 | **优先日** | 2010/06/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yang | Zhou; Mingyu | Xia; Yuan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| The embodiments of the present invention disclose resource configuration methods and devices of a demodulation reference signal. The method includes determining the first number of a first transmission layers of a user equipment (UE) for transmitting uplink data; selecting a combination of a Cyclic Shift (CS) resource and an Orthogonal Cover Code (OCC) sequence from one combination item according to the first number of the first transmission layers for each of the first transmission layers; wherein the one combination item is among a plurality of predetermined combination items, each of the plurality of predetermined combination items comprises the second number of predetermined CS resources and OCC sequences respectively corresponding to the maximum number of transmission layers supportable by the communication system. The solutions of the present invention can simplify the complexity of a protocol describing the DMRS resource configurations, and is helpful for reducing inter-codeword DMRS interferences. |

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| **主权项** | 专利度:24特征度:21 |  |  |
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A method for generating demodulation reference signal (DMRS) sequences in a communication system, comprising: determining, by an access network device, quantity of transmission layers of a user equipment (UE) for transmitting uplink data; selecting, by the access network device, a combination item among a plurality of predetermined combination items, wherein the combination item comprises N combinations of a Cyclic Shift (CS) resource and an Orthogonal Cover Code (OCC) sequence, the N combinations correspond to N transmission layers supported by the communication system, wherein N is an integer larger than or equal to the quantity of transmission layers of the UE for transmitting uplink data; and one combination is used for generating a DMRS sequence for each transmission layer of the UE; generating, by the access network device, a control signaling containing the determined quantity of the transmission layers of the UE for transmitting uplink data, and an item number corresponding to the selected combination item; sending, by the access network device, the control signaling to the UE; and receiving, by the access network device, the DMRS sequences generated by the UE according to the control signaling, wherein the DMRS sequences are such that spacing between the CS resources for generating the DMRS sequences corresponding to transmission layers mapped to a same codeword is larger than spacing between the CS resources for generating the DMRS sequences corresponding to transmission layers mapped to different codewords.

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| **对偶主权项** | 专利度:28特征度:16 |  |  |
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A method for generating demodulation reference signal (DMRS) sequences in a communication system,~~the method~~comprising: determining, by an access network device,~~the first number of a first~~quantity oftransmission layers of a user equipment (UE) for transmitting uplink data; selecting, by the access network device, a combination~~of a Cyclic Shift (CS) resource and an Orthogonal Cover Code (OCC) sequence for each of the first transmission layers, th~~item among a plurality of predetermined combination items, wherein the combination item comprises N combinations of a Cyclic Shift (CS) resource and an Orthogonal Cover Code (OCC) sequence, the N combinations correspond to N transmission layers supported by the communication system, wherein N is an integer larger than or equal to the quantity of transmission layers of the UE for transmitting uplink data; and one combination is used for generating a DMRS sequence for~~the corresponding~~eachtransmission layerof the UE; generating, by the access network device, a control signaling containing~~an indication of the selected combination(s) of the CS resource and OCC sequence; and~~the determined quantity of the transmission layers of the UE for transmitting uplink data, and an item number corresponding to the selected combination item;sending, by the access network device, the control signaling to the UE~~, wherein the selected combination(s) of the CS resource and~~; and receiving, by the access network device,the~~OCC~~DMRSsequence~~is/are obtained from one combination item according to the first number of the first transmission layers, the one combination item is among a plurality of predetermined combination items, each of the plurality of predetermined combination items comprises the second number of predetermined CS resources and the second number of predetermined OCC sequences respectively corresponding to the maximum number of transmission layers supportable by the communication system, and wherein the second number is identical to the maximum number of transmission layers supportable by the communication system~~s generated by the UE according to the control signaling, wherein the DMRS sequences are such that spacing between the CS resources for generating the DMRS sequences corresponding to transmission layers mapped to a same codeword is larger than spacing between the CS resources for generating the DMRS sequences corresponding to transmission layers mapped to different codewords.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for transmitting information**

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| **公开号** | [US8797980](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8797980&sv=7f2b925a61806659661b309d077f4577) | **公开日** | 2014/08/05 |
| **申请号** | 13/305,138 | **申请日** | 2011/11/28 |
| **授权日** | 2014/08/05 | **优先日** | 2007/10/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Ma; Jie | Lin; Bo |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for transmitting information includes by a NodeB, receiving a message for setting up/reconfiguring a shared Enhanced Dedicated Channel (E-DCH) transmission channel from a Radio Network Controller (RNC); and setting up the shared E-DCH transmission channel according to parameters in the message, and exchanging information with the RNC through an established shared E-DCH transmission bearer. |

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| **主权项** | 专利度:14特征度:22 |  |  |
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A method for transmitting information,the methodcomprising: receiving, by a NodeB, a message for setting up a shared~~e~~Enhanced~~d~~Dedicated~~c~~Channel (E-DCH) from a~~r~~Radio~~n~~Network~~c~~Controller (RNC)~~, wherein the shared E-DCH is an E-DCH shared among a plurality of user equipments (UEs) and seized by one of the UEs via competition~~; and setting up, by the NodeB, the shared E-DCH according toa parameter inthe message; wherein theparameter in themessage comprises~~the following parameters that are needed when a UE~~at least one of these items: a signature list required when a User Equipment (UE)performs~~a~~random access~~procedure through the shared~~through anE-DCH~~:~~;a~~signature list; a relevant E-DCH physical layer parameter; a transmission channel parameter; and~~relevant physical layer channel parameter required when a User Equipment (UE) performs random access through an E-DCH; a relevant E-DCH physical layer parameter required when a User Equipment (UE) performs random access through an E-DCH;a transmission~~bearer~~channelparameter~~; and wherein the signature list i~~required when a User Equipment (UE) performs~~t~~ran~~smitted to the NodeB by the RNC in a same manner~~dom access through an E-DCH; anda~~s~~transmi~~tting a preamble signature in a physical~~ssion bearer parameter required when a User Equipment (UE) performsrandom access~~channel (PRA~~through an E-DCH~~)~~.

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| **对偶主权项** | 专利度:20特征度:20 |  |  |
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A method for transmitting information, the method comprising: receiving, by a NodeB, a message for setting up a shared Enhanced Dedicated Channel (E-DCH) from a Radio Network Controller (RNC); and setting up, by the NodeB, the shared E-DCH according to a parameter in the message; wherein the parameter in the message comprises at least one of these items: a signature list required when a User Equipment (UE) performs random access through an E-DCH; a relevant physical layer channel parameter required when a User Equipment (UE) performs random access through an E-DCH; a relevant E-DCH physical layer parameter required when a User Equipment (UE) performs random access through an E-DCH; a transmission channel parameter required when a User Equipment (UE) performs random access through an E-DCH; and a transmission bearer parameter required when a User Equipment (UE) performs random access through an E-DCH.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.27 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover control method, apparatus and system**

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| **公开号** | [US8792892](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8792892&sv=79e45322e55f6d6409ae1b1609b0bbc0) | **公开日** | 2014/07/29 |
| **申请号** | 13/279,744 | **申请日** | 2011/10/24 |
| **授权日** | 2014/07/29 | **优先日** | 2009/04/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A handover control method is disclosed, including: obtaining an access mode and a closed subscriber group (CSG) identifier (ID) of a target area; deciding whether to allow an UE to be handed over to the target area according to the access mode and/or whether the CSG ID of the target area is included in the allowed CSG list of the UE. The handover control method can ensure the handover of the UE to the target area that the UE is allowed to access, therefore ensuring service continuity of the UE. A handover control apparatus and a handover control system are also disclosed. |

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| **主权项** | 专利度:13特征度:21 |  |  |
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A~~method for controlling a handover control for a User Equipment (UE), comprising: initiating a handover procedure for a UE by a first Network Element (NE), the first NE being: a source access NE, a target access NE, a target Access Gateway, a source cor~~handover control method, comprising: obtaining an access mode and a closed subscriber group (CSG) identifier (ID) of a target area; and if the access mode of the target area is a Hybrid Access Mode, allowing the UE to be~~m~~han~~agement NE, or a target core management NE; determining an~~ded over to the target area; or if theaccess mode of~~a~~thetarget area~~based on obtained information of an access mode~~is a Closed Access Mode, determining whether the CSG ID of the target area is comprised inan~~d~~a~~c~~llo~~s~~wed~~subscriber group (CSG) identifier (~~CSG list of the UE; if the CSGID~~)~~of the target area~~; informing a target access NE whether the UE is a CSG member in~~is not comprised in the allowed CSG list of the UE, allowing the UE to be handed over to the target area; or if the CSG ID of the target area is not comprised in the allowed CSG list of the UE, determining the access mode ofthe target area;~~and when~~ifthe access mode of the target area is a Hybrid Access Mode,~~performing~~allowing the UE to behandedover~~of the UE to the target area before the UE is notified of being~~to the target area; or if the allowed CSG list of the UE does not exist, determining the access mode of the target area; if the access mode of the target area is the Hybrid Access Mode, allowing the UE to behanded over to the target area.

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| **对偶主权项** | 专利度:21特征度:21 |  |  |
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A handover control method, comprising: obtaining an access mode and a closed subscriber group (CSG) identifier (ID) of a target area; and if the access mode of the target area is a Hybrid Access Mode, allowing the UE to be handed over to the target area; or if the access mode of the target area is a Closed Access Mode, determining whether the CSG ID of the target area is comprised in an allowed CSG list of the UE; if the CSG ID of the target area is not comprised in the allowed CSG list of the UE, allowing the UE to be handed over to the target area; or if the CSG ID of the target area is not comprised in the allowed CSG list of the UE, determining the access mode of the target area; if the access mode of the target area is a Hybrid Access Mode, allowing the UE to be handed over to the target area; or if the allowed CSG list of the UE does not exist, determining the access mode of the target area; if the access mode of the target area is the Hybrid Access Mode, allowing the UE to be handed over to the target area.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.15 |

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| **同族数** | 7 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover method and system in relay network, relay node, control base station and base station**

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| **公开号** | [US8781477](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8781477&sv=aacde0ab992b46cf4f001523cd435c5d) | **公开日** | 2014/07/15 |
| **申请号** | 13/535,924 | **申请日** | 2012/06/28 |
| **授权日** | 2014/07/15 | **优先日** | 2009/12/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Tao |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Staas & Hasley LLP |

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| **摘要** |  |
| Embodiments of the present invention provide a handover method and system in a relay network, a relay node, a control base station and a base station. The method includes: receiving, by a relay node, a first area identifier that identifies the relay node; sending a system information broadcast message carrying the first area identifier to a terminal in a coverage area; receiving a handover request message forwarded by a control base station; and performing, according to the handover request message, a control operation of accessing the relay node on the terminal. The first area identifier that identifies the relay node is allocated to the relay node, so that the terminal in the relay network can be normally handed over from the base station to the relay node. |

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| **主权项** | 专利度:4特征度:22 |  |  |
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A handover method in a relay network, comprising: receiving, by a relay node, an evolved universal terrestrial radio access network cell global identifier (ECGI) allocated by an operation administration and maintenance (OAM), wherein the ECGI is used to identify the relay node and includes an identifier of a control base station controlling the relay node; broadcasting, by the relay node, the ECGI to a terminal in the coverage area of the relay node through a system information broadcast message; obtaining, by a base station, the identifier of the control base station from the ECGI after receiving a measurement report carrying the ECGI sent by the terminal; creating, by the base station, a handover required message carrying the identifier of the control base station obtained by the base station from the ECGI; sending, by the base station, the handover required message to a mobility management entity (MME) so that the MME sends a handover request message carrying the ECGI to the control base station according to the identifier of the control base station carried in the handover required message.

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| **对偶主权项** | 专利度:15特征度:16 |  |  |
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A handover method in a relay network, comprising: receiving, by a relay node, a~~first area identifier that identifies the relay node; sending a system information broadcast message carrying the first area identifier to a terminal~~n evolved universal terrestrial radio access network cell global identifier (ECGI) allocated by an operation administration and maintenance (OAM), wherein the ECGI is used to identify the relay node and includes an identifier of a control base station controlling the relay node; broadcasting, by the relay node, the ECGI to a terminal in the coverage area of the relay node through a system information broadcast message; obtaining, by a base station, the identifier of the control base station from the ECGI after receivinga~~coverage area; and receiving~~measurement report carrying the ECGI sent by the terminal; creating, by the base station,a handover requ~~est~~iredmessage~~, which is forwarded by a control base station according to the first area identifier, and performing, according to the handover message, a control operation of accessing the relay node on the terminal~~carrying the identifier of the control base station obtained by the base station from the ECGI; sending, by the base station, the handover required message to a mobility management entity (MME) so that the MME sends a handover request message carrying the ECGI to the control base station according to the identifier of the control base station carried in the handover required message.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.12 |

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| **同族数** | 11 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Uplink control information transmission**

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| **公开号** | [US8780847](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8780847&sv=ca287761f5dfe7faa1300118502b2638) | **公开日** | 2014/07/15 |
| **申请号** | 13/629,277 | **申请日** | 2012/09/27 |
| **授权日** | 2014/07/15 | **优先日** | 2010/06/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Berggren; Fredrik | Frenne; Mattias | Popovic; Branislav |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Uplink control information transmission method, and a network node and a UE implementing the method are disclosed. According to an embodiment of the invention, uplink control information is transmitted from a UE to a network node by defining a set including at least one of the of uplink component carriers being usable for carrier aggregation for the UE. For this set, a priority indication is assigned to each one of the at least one uplink component carrier included in the set. Then, if this set includes at least one uplink component carrier comprising an uplink shared channel, one of these at least one uplink component carrier comprising an uplink shared channel is selected for transmission of uplink control information in that uplink shared channel. Selection based on at least one of the at least one assigned priority indication, when selecting uplink component carrier, is disclosed. |

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| **主权项** | 专利度:31特征度:15 |  |  |
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A method for uplink control information transmission in a radio communication system utilizing carrier aggregation, wherein a plurality of uplink component carriers can be aggregated for communication between a User Equipment (UE) and a network node in the system, the method comprising: determining, by the UE, that a set including one or more uplink component carriers of the plurality of uplink component carriers includes at least one uplink component carrier that comprises an uplink shared channel, and selecting, by the UE, one of said at least one uplink component carrier that comprises an uplink shared channel for transmission of uplink control information in the uplink shared channel, wherein the selection is based on priority indication information in which each of said one or more uplink component carriers of said set is assigned a priority indication; wherein the priority indication assigned to each of the one or more uplink component carriers of the set, respectively, is based on priority indication of an integer value received from a network node.

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| **对偶主权项** | 专利度:30特征度:22 |  |  |
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A method for uplink control information transmission in a radio communication system utilizing carrier aggregation, wherein a plurality of uplink component carriers can be aggregated for communication between a User Equipment (UE) and a network node in the system, the method comprising: de~~f~~termining, by the UE, thata set including one or more uplink component carriers of the plurality of uplink component carriers~~; assigning a priority indication to the one or more one uplink component carriers of the set; and if the set compris~~includes at least one uplink component carrier that comprises an uplink shared channel,andselecting~~an~~, by the UE, one of said at least oneuplink component carrier that comprises an uplink shared channel for transmission of uplink control information in the uplink shared channel, wherein the selection is based on~~at least one of the assigned~~priority indicationinformation in which each of said one or more uplink component carriers of said set is assigned a priority indication; wherein the priority indication assigned to each of the one or more uplink component carriers of the set, respectively, is based on priority indication of an integer value received from a network node.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for transmitting information**

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| **公开号** | [US8780822](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8780822&sv=57868e1fe3b24469f276f3d52f6f9293) | **公开日** | 2014/07/15 |
| **申请号** | 12/769,809 | **申请日** | 2010/04/29 |
| **授权日** | 2014/07/15 | **优先日** | 2007/10/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ma; Jie | Lin; Bo |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for transmitting information includes: by a NodeB, receiving a message for setting up/reconfiguring a shared Enhanced Dedicated Channel (E-DCH) transmission channel from a Radio Network Controller (RNC); and setting up the shared E-DCH transmission channel according to parameters in the message, and exchanging information with the RNC through an established shared E-DCH transmission bearer. A system and NodeB for transmitting information are also provided. With the present invention, the NodeB and the RNC can share the E-DCH transmission bearer, thus saving the channel resources between the NodeB and the RNC while speeding up the information transmission between the RNC and the NodeB. |

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| **主权项** | 专利度:16特征度:28 |  |  |
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A method for transmitting information, comprising: sending, by a radio network controller (RNC), a message for setting up or reconfiguring a shared enhanced dedicated channel (shared E-DCH) to a NodeB; receiving, by the RNC, information from the NodeB about the shared E-DCH that the NodeB set up or reconfigured according to the message from the RNC to the NodeB; exchanging, by the RNC, information with the NodeB through the shared E-DCH; wherein the message from the RNC to the NodeB comprises the following parameters that are needed when a user equipment (UE) performs a random access procedure through the shared E-DCH: a signature list, a relevant physical layer parameter, and a transmission bearer parameter; and wherein the signature list is sent from the RNC to the NodeB in a same manner as sending a preamble signature in a physical random access channel (PRACH); and wherein the exchanging information with the NodeB through the shared E-DCH comprises: receiving, by the RNC, E-DCH data including a UE identity (ID) from the NodeB, and resolving, by the RNC, the E-DCH data received including the UE ID to obtain the UE ID; wherein the E-DCH data including the UE ID is obtained by adding, by the NodeB, the UE ID of a UE into information received from the UE and converting, by the NodeB, data and the UE ID in the information into the E-DCH data including the UE ID, wherein the information received from the UE does not include any UE ID.

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| **对偶主权项** | 专利度:14特征度:12 |  |  |
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A method for transmitting information, comprising:~~receiv~~sending, by a~~NodeB~~radio network controller (RNC), a message for setting up~~/~~orreconfiguring a shared~~E~~enhanced~~D~~dedicated~~C~~channel (sharedE-DCH) t~~ransmission channel from a Radio Network Controller (RNC); setting up, by the NodeB, the shared E-DCH transmission channel according to parameters in the message~~o a NodeB; receiving, by the RNC, information from the NodeB about the shared E-DCH that the NodeB set up or reconfigured according to the message from the RNC to the NodeB; exchanging, by the RNC, information with the NodeB through the shared E-DCH; wherein the message from the RNC to the NodeB comprises the following parameters that are needed when a user equipment (UE) performs a random access procedure through the shared E-DCH: a signature list, a relevant physical layer parameter, and a transmission bearer parameter; and wherein the signature list is sent from the RNC to the NodeB in a same manner as sending a preamble signature in a physical random access channel (PRACH);andwherein theexchanging information with the~~RNC~~NodeBthrough~~an established shared E-DCH transmission bearer~~the shared E-DCH comprises: receiving, by the RNC, E-DCH data including a UE identity (ID) from the NodeB, and resolving, by the RNC, the E-DCH data received including the UE ID to obtain the UE ID; wherein the E-DCH data including the UE ID is obtained by adding, by the NodeB, the UE ID of a UE into information received from the UE and converting, by the NodeB, data and the UE ID in the information into the E-DCH data including the UE ID, wherein the information received from the UE does not include any UE ID.

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| **被引用** | 9 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.65 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for measuring aggregated carrier cell**

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| **公开号** | [US8774792](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8774792&sv=b1a89c92c5612dcd5833854f8fd8cac3) | **公开日** | 2014/07/08 |
| **申请号** | 13/565,052 | **申请日** | 2012/08/02 |
| **授权日** | 2014/07/08 | **优先日** | 2010/02/03 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Deng; Tianle | Tang; Binsong | Wang; Jun |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method for measuring an aggregated carrier cell includes: obtaining, by a user equipment, measurement configuration information of an aggregated carrier cell, where the measurement configuration information includes signal estimation value information and a corresponding measurement period thereof; obtaining, by the user equipment, a measurement period of a non-active component carrier according to a signal estimation value of the non-active component carrier in the aggregated carrier cell and the measurement configuration information; and measuring the non-active component carrier according to the measurement period. With the method of the present invention, the user equipment can measure different component carriers in an aggregated carrier cell in different periods. |

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| **主权项** | 专利度:21特征度:10 |  |  |
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A method for measuring an aggregated carrier cell configured with multiple component carriers, the method comprising: obtaining, by a user equipment, a current signal estimation value of a non-active component carrier among the multiple component carriers; selecting, by the user equipment, a measurement period for the non-active component carrier from a plurality of measurement periods available for the user equipment, according to the current signal estimation value of the non-active component carrier; performing, by the user equipment, measurement on the non-active component carrier according to the measurement period selected for the non-active component carrier, wherein the plurality of available measurement periods each has a corresponding relationship with a different signal estimation value range, and the measurement period selected for the non-active component carrier corresponds to the current signal estimation value of the non-active component carrier according to a signal estimation value range for the measurement period selected.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method for measuring an aggregated carrier cell~~, comprising: obtaining, by a user equipment, measurement configuration information of an aggregated carrier cell, wherein the measurement configuration information comprises signal estimation value information and a corresponding measurement period thereof; obtaining, by~~configured with multiple component carriers, the method comprising: obtaining, by a user equipment, a current signal estimation value of a non-active component carrier among the multiple component carriers; selecting, by the user equipment, a measurement period for the non-active component carrier from a plurality of measurement periods available forthe user equipment, according to~~a~~the currentsignal estimation value of~~a~~thenon-active component carrier~~in the aggregated carrier cell and the measurement configuration information, a~~; performing, by the user equipment, measurement on the non-active component carrier according to the measurement period selected for the non-active component carrier, wherein the plurality of available measurement periods each has a corresponding relationship with a different signal estimation value range, and themeasurement period~~of~~selected forthe non-active component carrier~~; and measuring, by the user equipment, the non-active component carrier according to the measurement period of the non-active component carrier~~corresponds to the current signal estimation value of the non-active component carrier according to a signal estimation value range for the measurement period selected.

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| **被引用** | 19 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.5 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for triggering terminal to send sounding reference signal, terminal, and base station**

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| **公开号** | [US8767629](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8767629&sv=f261030d68822d3d2d0ef8e48f9a6464) | **公开日** | 2014/07/01 |
| **申请号** | 13/633,311 | **申请日** | 2012/10/02 |
| **授权日** | 2014/07/01 | **优先日** | 2010/07/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Li; Qiang | Mazzarese; David |
| **国际 主分类** | H04Q 7/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for triggering a terminal to send a sounding reference signal includes: obtaining requirement information of measurement, where the requirement information includes a position and a bandwidth of a frequency hand to be measured; selecting a resource for a terminal from at least two preset resource patterns according to the requirement information, where multiple types of resource information are preset in each resource pattern of the at least two preset resource patterns to indicate a resource; and triggering the terminal to utilize the selected resource to send, a sounding reference signal. |

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| **主权项** | 专利度:19特征度:15 |  |  |
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A method for triggering a terminal to send a sounding reference signal, comprising: configuring at least two preset resource patterns for the terminal through higher-layer signaling, wherein multiple types of resource information are preset in each resource pattern of the at least two preset resource patterns to indicate a resource; obtaining requirement information of measurement, wherein the requirement information comprises a position and a bandwidth of a frequency hand to be measured; selecting a resource for the terminal in the at least two preset resource patterns according to the requirement information; and sending a triggering Physical Downlink Control Channel (PDCCH) to the terminal on a trigger subframe, so as to trigger the terminal to utilize the selected resource to send the sounding reference signal, wherein the trigger subframe is for indicating, to the terminal, a subframe to which the selected resource is applied; wherein the higher-layer signaling is based on a higher layer than the triggering PDCCH.

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| **对偶主权项** | 专利度:19特征度:10 |  |  |
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A method for triggering a terminal to send a sounding reference signal, comprising:configuring at least two preset resource patterns for the terminal through higher-layer signaling, wherein multiple types of resource information are preset in each resource pattern of the at least two preset resource patterns to indicate a resource; obtaining requirement information of measurement, wherein the requirement information comprises a position and a bandwidth of a frequency hand to be measured; selecting a resource for the terminal in the at least two preset resource patterns according to the requirement information; and sending a triggering Physical Downlink Control Channel (PDCCH) to the terminal on a trigger subframe, so as to trigger the terminal to utilize the selected resource to send the sounding reference signal, wherein the trigger subframe is for indicating, to the terminal, a subframe to~~W~~which the selected resource is applied; wherein the higher-layer signaling is based on a higher layer than the triggering PDCCH.

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| **被引用** | 21 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, user equipment and server for multimedia session transfer**

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| **公开号** | [US8761159](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8761159&sv=a31ae76b47da8c036fe48d7df95bc8c8) | **公开日** | 2014/06/24 |
| **申请号** | 13/713,659 | **申请日** | 2012/12/13 |
| **授权日** | 2014/06/24 | **优先日** | 2008/11/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Hui |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention discloses a method, User Equipment (UE), and server for multimedia session transfer, and relates to a mobile communication technology, and in particular, to a technology for transferring multimedia sessions from a Circuit Switched (CS) network to a Packet Switched (PS) network. The method includes: receiving a session transfer request sent by a UE, where the session transfer request carries a static Session Transfer Identifier (STI); executing a procedure for transferring the active CS session according to the CS session transfer request, sending the dynamic STI corresponding to the held CS session to the UE, and receiving the request for transferring the held CS session and executing a procedure for transferring the held CS session. Further, a UE and a server are provided. |

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| **主权项** | 专利度:7特征度:16 |  |  |
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A method for multimedia session transfer by a server, comprising: receiving, by the server, a session transfer request sent by a User Equipment (UE), wherein the session transfer request carries a static Session Transfer Identifier (STI); executing, by the server, a procedure for transferring an active Circuit Switched CS) session according to the static STI; sending by the server, to the UE, a dynamic STI allocated to a held CS session during a session transfer; and receiving, by the server, another session transfer request sent by the UE, wherein the other session transfer request carries the dynamic STI sent to the UE during the session transfer; and executing, by the server, a procedure for transferring the held CS session according to the received other session transfer request carrying the dynamic STI.

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| **对偶主权项** | 专利度:7特征度:19 |  |  |
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A method for multimedia session transferby a server, comprising: receiving, by the server,a session transfer request sent by a User Equipment (UE), wherein the session transfer request carries a static Session Transfer Identifier (STI); executing, by the server,a procedure for transferring an active Circuit Switched~~(~~CS) session according to the static STI; sendingby the server, to the UE,a dynamic STI allocated to a held CS session~~to the UE; and receiving~~during a session transfer; and receiving, by the server,another session transfer request sent by the UE, wherein the other session transfer request carries the dynamic STIsent to the UE during the session transfer; andexecuting, by the server,a procedure for transferring the held CS session according to thereceivedother session transfer requestcarrying the dynamic STI.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 15 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**User equipment, method for determining resource, method for reporting resource, and system for distributing resource**

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| **公开号** | [US8761113](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8761113&sv=d5adfce547519e727edbc60c0aecd825) | **公开日** | 2014/06/24 |
| **申请号** | 13/728,231 | **申请日** | 2012/12/27 |
| **授权日** | 2014/06/24 | **优先日** | 2008/12/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Yi | Ma; Jie | Wang; Haidan | He; Chuanfeng | Zhang; Cunfei |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A User Equipment (UE), a method for determining a resource, a method for reporting a resource, and a system for distributing a resource are provided. The method for determining a resource includes: if transmission data on the carrier reaches maximum transmission data supported in a scope allowed by Service Grant (SG), and a transmission power of the UE is capable of improving a data transmission rate of the carrier, and the carrier and the other one carrier of the dual carriers are incapable of completing transmitting total buffer status data in the same delay period, determining that a resource distributed to a UE on one carrier of dual carriers of the UE is insufficient; otherwise, determining that the resource distributed for the UE on the carrier is sufficient. Therefore, a solution for reporting the resource of the dual carriers is provided, so as to improve a network performance. |

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| **主权项** | 专利度:18特征度:20 |  |  |
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A method implemented in a user equipment (UE) configured with multiple carriers, the method comprising: determining, by the UE, whether a first condition is met on a carrier of the multiple carriers, the first condition indicating that transmission data on the carrier reaches maximum transmission data allowed by a current service grant (SG) on the carrier; determining, by the UE, whether a second condition is met on the carrier, the second condition indicating that the UE has enough transmission power available to improve a data transmission rate on the carrier; determining, by the UE, whether a third condition is met, the third condition indicating that the carrier together with at least one of other carriers from the multiple carriers, with a product of the current SG and a ratio of active processes to a total number of processes on the carrier plus a product of a current SG and a ratio of active processes to a total number of processes on each of the at least one of the other carriers, are incapable of finishing transmission of total buffer status data in a configured time period; and determining, by the UE, that resource allocated to the UE on the carrier is insufficient in a situation where the first, second, and third conditions are met.

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| **对偶主权项** | 专利度:6特征度:12 |  |  |
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A method~~for distributing a resource, comprising: receiving, by a base station, a result reported by a user equipment, UE, of determining whether a resource distributed on dual~~implemented in a user equipment (UE) configured with multiple carriers, the method comprising: determining, by the UE, whether a first condition is met on a carrier of the multiple carriers, the first condition indicating that transmission data on the carrier reaches maximum transmission data allowed by ac~~a~~urr~~iers is sufficient; the determining whether the resource distributed~~ent service grant (SG) on the carrier; determining, by the UE, whether a second condition is meton the~~dual~~carrier~~s is sufficient, comprising: if~~, the second condition indicating that the UE has enough transmission power available to improve a datatransmission~~d~~rat~~a~~eon~~on~~the carrier~~of the dual carriers of the UE reaches maximum transmission data supported in a scope allowed by service grant, SG, and a transmission power of the UE is capable of improving a data transmission rate~~; determining, by the UE, whether a third condition is met, the third condition indicating that the carrier together with at least one of other carriers from the multiple carriers, with a product of the current SG and a ratio of active processes to a total number of processeso~~f~~nthe carrier~~, and the carrier and the other one carrier of the dual~~plus a product of a current SG and a ratio of active processes to a total number of processes on each of the at least one of the othercarriers~~both~~,are incapable of~~complet~~finishing transmi~~tting~~ssion oftotal buffer status data in a~~same delay~~configured timeperiod~~,~~; anddetermining~~that~~, by the UE,th~~e~~atresource~~distribu~~allocated to the UE on the carrier is insufficient~~; otherwise, determining that the resource distributed to the UE on the carrier is sufficien~~in a situation where the first, second, and third conditions are met.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.9 |

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| **同族数** | 17 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for maintaining traffic continuity**

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| **公开号** | [US8761107](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8761107&sv=e86fd169172cb92722518ac58f11df1d) | **公开日** | 2014/06/24 |
| **申请号** | 13/467,848 | **申请日** | 2012/05/09 |
| **授权日** | 2014/06/24 | **优先日** | 2009/11/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Weisheng | Xu; Xiaoying | Xu; Min |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for maintaining traffic continuity through a Traffic Offload Function (TOF) entity includes the following steps: the TOF entity receives a downlink packet of offload traffic of a User Equipment (UE), where the downlink packet of the offload traffic is sent by a Packet Data Network (PDN); the TOF entity sends a Core Network (CN) paging message to the UE; the TOF entity receives a paging response sent by the UE to the CN, where the paging response includes a service request message of the UE; and the TOF entity forwards the service request message to the CN so that the CN sets up a Radio Access Bearer (RAB) after the service request message is received. With the method, the communication between the CN and the UE can be restored to guarantee the transmission of traffic. Accordingly, a TOF entity is also disclosed according to the present invention. |

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| **主权项** | 专利度:14特征度:22 |  |  |
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A method for maintaining traffic continuity, the method comprising: receiving, by a Traffic Offload Function (TOF) entity, a downlink packet of offload traffic of a User Equipment (UE) sent by a Packet Data Network (PDN); sending, by the TOF entity, a Core Network (CN) paging message to the UE; receiving, by the TOF entity, a paging response sent by the UE to the CN, wherein the paging response comprises a service request message of the UE, the service request message comprising a Service Type field indicating the paging response; modifying, by the TOF entity, the Service Type field, wherein the modified Service Type field is used to indicate Data; and forwarding, by the TOF entity, the service request message to the CN, the service request message being used by the CN to set up a Radio Access Bearer (RAB) after the forwarded service request message is received.

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| **对偶主权项** | 专利度:20特征度:25 |  |  |
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~~1-20. (canceled)~~A method for maintaining traffic continuity, the method comprising: receiving, by a Traffic Offload Function (TOF) entity, a downlink packet of offload traffic of a User Equipment (UE) sent by a Packet Data Network (PDN); sending, by the TOF entity, a Core Network (CN) paging message to the UE; receiving, by the TOF entity, a paging response sent by the UE to the CN, wherein the paging response comprises a service request message of the UE, the service request message comprising a Service Type field indicating the paging response; modifying, by the TOF entity, the Service Type field, wherein the modified Service Type field is used to indicate Data; and forwarding, by the TOF entity, the service request message to the CN, the service request message being used by the CN to set up a Radio Access Bearer (RAB) after the forwarded service request message is received.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for notification of emitted energy**

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| **公开号** | [US8761067](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8761067&sv=7dc677e028b312851dcbc8af214aa97e) | **公开日** | 2014/06/24 |
| **申请号** | 13/469,512 | **申请日** | 2012/05/11 |
| **授权日** | 2014/06/24 | **优先日** | 2009/11/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ren; Xiaotao | Wan; Lei | Yan; Zhiyu | Zhao; Yajun | Fan; Xiaoan |
| **国际 主分类** | G08C 17/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention discloses a method and an apparatus for notification of emitted energy. The method includes: performing an emitted energy decrease on resource elements in a current cell that have a same time-frequency location as part or all of resource elements where a reference signal of a neighboring cell is located; obtaining an emitted energy parameter of an energy non-decreased resource element (NRE) in the current cell according to a decreased amount of emitted energy of an emitted energy decreased resource element (DRE); and notifying the emitted energy parameter of the NRE to a user equipment (UE). According to embodiments of the present invention, the waste of emitted energy may be avoided, the emitted energy of part of REs is increased, and further, the signal to interference plus noise ratio (SINR) and throughput of service data may be increased. |

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| **主权项** | 专利度:14特征度:18 |  |  |
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A method for notifying emitted energy, comprising: performing an emitted energy decrease on a resource element in a current cell that has a same time-frequency location as part or all of resource elements where a reference signal of a neighboring cell is located; obtaining an emitted energy parameter of an energy non-decreased resource element (NRE) in the current cell; wherein the emitted energy parameter of the NRE is a ratio of the emitted energy of the NRE to standard emitted energy, ρ c = EPRE NRE EPRE Std ,  or a difference ρc=EPRENRE−EPREStd, wherein EPREStd is the standard emitted energy, EPRENRE is the emitted energy of the NRE, and the standard emitted energy EPRE Std is emitted energy EPRECRS of a common reference signal (CRS) or emitted energy EPRECSI-RS of a channel state information reference signal (CSI-RS); and notifying the emitted energy parameter of the NRE to a user equipment (UE) through signaling.

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| **对偶主权项** | 专利度:20特征度:18 |  |  |
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A method for notifying emitted energy, comprising: performing an emitted energy decrease on a resource element in a current cell that has a same time-frequency location as part or all of resource elements where a reference signal of a neighboring cell is located; obtaining an emitted energy parameter of an energy non-decreased resource element (NRE) in the current cell~~according to a decreased amount of emitted energy of an emitted energy decreased resource element (DRE~~; wherein the emitted energy parameter of the NRE is a ratio of the emitted energy of the NRE to standard emitted energy, ρ c = EPRE NRE EPRE Std ,  or a difference ρc=EPRENRE−EPREStd, wherein EPREStd is the standard emitted energy, EPRENRE is the emitted energy of the NRE, and the standard emitted energy EPRE Std is emitted energy EPRECRS of a common reference signal (CRS) or emitted energy EPRECSI-RS of a channel state information reference signal (CSI-RS); and notifying the emitted energy parameter of the NRE to a user equipment (UE)through signaling.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for physical cell identifier communication and selection**

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| **公开号** | [US8744505](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8744505&sv=40366c746ad864ca5a7d851027f18ce4) | **公开日** | 2014/06/03 |
| **申请号** | 13/303,832 | **申请日** | 2011/11/23 |
| **授权日** | 2014/06/03 | **优先日** | 2008/09/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Olofsson; Henrik | Wang; Xuelong | Tang; Binsong | Zhang; Huan | Shi; Xiaoli |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method and apparatus of allocating a Physical Cell Identifier (PCI) is disclosed in an embodiment of the present invention allowing different cells to operate on different frequencies while eliminating or reducing risk of PCI conflicts. Thereby PCI allocation is provided that is effective also in a multi-frequency environment. |

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| **主权项** | 专利度:23特征度:7 |  |  |
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A method for obtaining physical cell identifier for a first cell in a wireless cellular communication system, comprising: obtaining a first list of physical cell identifiers; obtaining a second list of physical cell identifiers; obtaining a third list of physical cell identifiers by removing, from the first list, the physical cell identifiers in the second list; selecting, for the first cell, a physical cell identifier from the third list; wherein radio frequency information of the first cell is contained in an X2 setup request message, and wherein the obtaining of the second list is performed by communicating radiofrequency information and physical cell identifier over X2 interface.

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| **对偶主权项** | 专利度:23特征度:11 |  |  |
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A method for obtaining physical cell identifier for a first cell in a wireless cellular communication system, comprising: obtaining a first list of physical cell identifiers; obtaining a second list of physical cell identifiers; obtaining a third list of physical cell identifiers by removing, from the first list, the physical cell identifiers in the second list; selecting, for the first cell, a physical cell identifier from the third list; whereinradio frequency information of the first cell is contained in an X2 setup request message, and whereinthe obtaining of the second list is performed by communicatingradiofrequency information and physical cell identifier over X2 interface.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 2 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for establishing or modifying local IP access bearer**

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| **公开号** | [US8743829](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8743829&sv=c53b7d5301f10ab9d45840c5bba833ac) | **公开日** | 2014/06/03 |
| **申请号** | 13/432,876 | **申请日** | 2012/03/28 |
| **授权日** | 2014/06/03 | **优先日** | 2009/09/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guan; Zhi | Chen; Guoqiao | Wang; Rui | Liu; Juan |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method and device for establishing or modifying a local IP access bearer are provided by the embodiments of the present invention, said method includes: a handover request message transmitted by an evolved Node Base station is received, said handover request message carries an evolved Node Base station identifier, said evolved Node Base station identifier is the same as the local packet data network gateway identifier; the local breakout ability of said evolved Node Base station is obtained; according to said evolved Node Base station identifier, the local breakout ability of said evolved Node Base station and the local IP access point name, the local IP access bearer is established or modified between a serving gateway and the local packet data network gateway, said serving gateway is located in the core network or the evolved Node Base station. |

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| **主权项** | 专利度:13特征度:34 |  |  |
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A method for establishing or modifying a local Internet Protocol (IP) access bearer, the method comprising: receiving a handover request message transmitted by an evolved Node Base station, wherein, said handover request message carries an evolved Node Base station identifier, said evolved Node Base station includes a source evolved Node Base station or a target evolved Node Base station, said evolved Node Base station identifier is the same as a local packet data network gateway identifier; obtaining the local breakout ability of said evolved Node Base station; according to said evolved Node Base station identifier, the local breakout ability of said evolved Node Base station and a local IP access point name, establishing or modifying a local IP access bearer between a serving gateway and the local packet data network gateway, wherein said serving gateway is located in a core network or the evolved Node Base station; before receiving the handover request message transmitted from said evolved Node Base station, establishing a local IP access bearer, wherein establishing a local IP access bearer comprises: selecting the local packet data network gateway and the serving gateway, according to the local IP access point name and the home base station identifier; sending a create or modify bearer request message to said serving gateway; receiving a create or modify bearer response message returned from said serving gateway, and completing the procedure of establishing or modifying bearer between said serving gateway and the local packet data network gateway, before selecting the local packet data network gateway and the serving gateway according to the local IP access point name and the home base station identifier, the method comprises: receiving a tracking area update message transmitted by the user terminal, wherein said tracking area update message carries said local IP access point name; obtaining said home base station identifier from an allowed closed subscriber group list of the user terminal, wherein said home base station identifier represents a home base station identifier that can serve as the local IP breakout in the closed subscriber group cells that allow the UE's access; according to said local IP access point name and said base station identifier, selecting the serving gateway and the local packet data network gateway, and sending the create or modify bearer request message to said serving gateway; and receiving the create or modify bearer response message returned from said serving gateway, and completing the procedure of establishing or modifying a local IP access bearer between said serving gateway and said local packet data network gateway.

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| **对偶主权项** | 专利度:15特征度:9 |  |  |
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A method for establishing or modifying a local I~~P~~nternet Protocol (IP)access bearer, the method comprising: receiving a handover request message transmitted by an evolved Node Base station, wherein, said handover request message carries an evolved Node Base station identifier, said evolved Node Base station includes a source evolved Node Base station or a target evolved Node Base station, said evolved Node Base station identifier is the same as a local packet data network gateway identifier; obtaining the local breakout ability of said evolved Node Base station; according to said evolved Node Base station identifier, the local breakout ability of said evolved Node Base station and a local IP access point name, establishing or modifying a local IP access bearer between a serving gateway and the local packet data network gateway, wherein said serving gateway is located in a core network or the evolved Node Base station; before receiving the handover request message transmitted from said evolved Node Base station, establishing a local IP access bearer, wherein establishing a local IP access bearer comprises: selecting the local packet data network gateway and the serving gateway, according to the local IP access point name and the home base station identifier; sending a create or modify bearer request message to said serving gateway; receiving a create or modify bearer response message returned from said serving gateway, and completing the procedure of establishing or modifying bearer between said serving gateway and the local packet data network gateway, before selecting the local packet data network gateway and the serving gateway according to the local IP access point name and the home base station identifier, the method comprises: receiving a tracking area update message transmitted by the user terminal, wherein said tracking area update message carries said local IP access point name; obtaining said home base station identifier from an allowed closed subscriber group list of the user terminal, wherein said home base station identifier represents a home base station identifier that can serve as the local IP breakout in the closed subscriber group cells that allow the UE's access; according to said local IP access point name and said base station identifier, selecting the serving gateway and the local packet data network gateway, and sending the create or modify bearer request message to said serving gateway; and receiving the create or modify bearer response message returned from said serving gateway, and completing the procedure of establishing or modifying a local IP access bearer between said serving gateway and said local packet data network gateway.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for controlling execution of an automatic process**

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| **公开号** | [US8732289](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8732289&sv=15664d5d9229c035216edb42e4cb4df2) | **公开日** | 2014/05/20 |
| **申请号** | 13/235,929 | **申请日** | 2011/09/19 |
| **授权日** | 2014/05/20 | **优先日** | 2009/03/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yuping | Wang; Wei | Zou; Lan |
| **国际 主分类** | G06F 15/173 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention discloses a method for controlling execution of an automatic process. The method includes: receiving a resume command that carries stoppoint information; determining whether the stoppoint information carried in the resume command is the same as information about a current stoppoint of a current automatic process; and resuming the current automatic process from the current stoppoint when the stoppoint information carried in the resume command is the same as the information about the current stoppoint. The present invention also discloses another method for controlling execution of an automatic process, a system, a management apparatus, an automatic apparatus, a computer program product, and a computer readable storage medium, ensuring that the automatic process is executed in accordance with user expectations. |

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| **主权项** | 专利度:16特征度:13 |  |  |
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A method for controlling execution of an automatic process, comprising: sending, by a first device to a second device, a notification message that carries information about a first stop point which is set in the first device, and information about a first automatic process which is currently running on the first device, wherein when the first automatic process runs to the first stop point, the first device stops running the first automatic process; receiving, by the first device, a resume command that carries information about a second stop point and information about a second automatic process sent from the second device after the notification message is received by the second device, wherein the resume command further carries time information indicating a time point; determining, by the first device, whether the information about the first automatic process is the same as the information about the second automatic process; if it has been determined by the first device that the information about the first automatic process is the same as the information about the second automatic process, determining, by the first device, whether the information of the second stop point carried in the resume command is the same as the information of the first stop point; resuming, by the first device, the first automatic process from the first stop point according to the resume command only when the information of the second stop point carried in the resume command is the same as the information of the first stop point; and waiting, by the first device, at the first stop point of the first automatic process, when the information of the second stop point carried in the resume command is not the same as the information of the first stop point.

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| **对偶主权项** | 专利度:20特征度:3 |  |  |
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A method for controlling execution of an automatic process, comprising:~~receiving a resume command that carrie~~sending, by a first device to a second device, a notification message that carries information about a firststoppoint~~information; determi~~which is set in the first device, and information about a first automatic process which is currently running on the first device, wherein when the first automatic process runs to the first stop point, the first device stops running~~w~~the~~ther the~~first automatic process; receiving, by the first device, a resume command that carries information about a secondstoppointandinformation~~carried in the resume command is the same as information about a current stoppoint of a current automatic process; and resuming the current automatic process from the curren~~about a second automatic process sent from the second device after the notification message is received by the second device, wherein the resume command further carries time information indicating a time point; determining, by the first device, whether the information about the first automatic process is the same as the information about the second automatic process; if it has been determined by the first device that the information about the first automatic process is the same as the information about the second automatic process, determining, by the first device, whether the information of the second stop point carried in the resume command is the same as the information of the first stop point; resuming, by the first device, the first automatic process from the first stop point according to the resume command only when the information of the second stop point carried in the resume command is the same as the information of the first stoppoint~~when the~~; and waiting, by the first device, at the firststoppoint~~information~~of the first automatic process, when the information of the second stop pointcarried in the resume command isnotthe same as the information~~about the curren~~of the first stoppoint.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Energy saving management method for base station, apparatus and system**

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| **公开号** | [US8731601](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8731601&sv=d5a39d480954d8632dfefdae7e418179) | **公开日** | 2014/05/20 |
| **申请号** | 13/450,623 | **申请日** | 2012/04/19 |
| **授权日** | 2014/05/20 | **优先日** | 2009/10/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xia; Haitao |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| An energy saving (ES) management method for a base station includes: An integration reference point manager (IRPManager) initiates an ES enable/disable procedure or an ES activation/resumption procedure to an integration reference point agent (IRPAgent), where the ES enable/disable procedure is used to allow or prohibit an ES operation on the base station or a cell, and the ES activation/resumption procedure is used to cause the base station or the cell to go into or go out of an ES state. The technical solutions according to the embodiments of the present invention enable operators to perform unified management on an ES procedure for a base station at a base station level or a cell level. |

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| **主权项** | 专利度:26特征度:16 |  |  |
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A method for facilitating energy management in a mobile communication network, comprising: initiating, by a network manager entity (NM), an operation of enabling energy saving (ES) or an operation of disabling ES for a base station or a cell in the mobile communication network via a network element manager entity (NEM), the NM being responsible for operation, maintenance, and administration of the mobile communication network, the NEM being responsible for operation, maintenance, and administration of a plurality of network elements of the mobile communication network, the operation of enabling ES being designated for allowing the base station or the cell to perform an ES operation, and the operation of disabling ES being designated for prohibiting the base station or the cell to perform an ES operation; and receiving, by the NM, a notification sent by the NEM, the notification relating to an ES state of the base station or the cell.

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| **对偶主权项** | 专利度:18特征度:9 |  |  |
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A~~n energy saving (ES) management method for a base station, comprising: initiating, by an integration reference point manager (IRPManager), an ES enable/disable procedure or an ES activation/resumption procedure to an integration reference point agent (IRPAgent); wherein the ES enable/disable procedure is used to allow or prohibit an ES operation on a~~method for facilitating energy management in a mobile communication network, comprising: initiating, by a network manager entity (NM), an operation of enabling energy saving (ES) or an operation of disabling ES for a base station or a cell in the mobile communication network via a network element manager entity (NEM), the NM being responsible for operation, maintenance, and administration of the mobile communication network, the NEM being responsible for operation, maintenance, and administration of a plurality of network elements of the mobile communication network, the operation of enabling ES being designated for allowing thebase station or~~a~~thecell~~,~~t~~he ES activation/resumption procedure is used to cause the base station or the cell to go into or go out of an ES state~~o perform an ES operation, and the operation of disabling ES being designated for prohibiting the base station or the cell to perform an ES operation; and receiving, by the NM, a notification sent by the NEM, the notification relating to an ES state of the base station or the cell.

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| **被引用** | 10 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for transmitting precoding martrix index and performing precoding**

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| **公开号** | [US8731043](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8731043&sv=ecc782ed9850cd07468b4b8b0aba5d2f) | **公开日** | 2014/05/20 |
| **申请号** | 13/667,402 | **申请日** | 2012/11/02 |
| **授权日** | 2014/05/20 | **优先日** | 2010/05/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Qiang | Frenne; Mattias | Sun; Weijun | Zhou; Yongxing |
| **国际 主分类** | H03K 7/08 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A method and an apparatus for sending a Precoding Matrix Index (PMI) and performing precoding are provided in the embodiments of the present invention. The method for sending the PMI comprises the following steps: a user equipment acquires the transmission channel capability of carrying the PMI; according to the transmission channel capability of carrying the PMI, the precoding matrices are selected from a locally-stored first codebook set to form a second codebook set; a first precoding matrix is selected from the second codebook set; an index corresponding to the first precoding matrix is sent to a base station over the transmission channel so as to make the base station can find out the first precoding matrix according to the index and precode the data according to the first precoding matrix. The embodiments of the present invention can realize the flexible configuration and use of the PMI. |

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| **主权项** | 专利度:24特征度:14 |  |  |
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A method for transmitting precoding matrix index (PMI), comprising: selecting a first precoding matrix from a second codebook set by a user equipment (UE), wherein the second codebook set is selected from a first codebook set locally stored on the UE according to a capability of a transmission channel to carry PMI; transmitting, by the UE, an index item corresponding to the first precoding matrix to a base station (BS) over the transmission channel, so as to enable the BS to search for the first precoding matrix according to the index item and perform precoding on data according to the first precoding matrix.

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| **对偶主权项** | 专利度:24特征度:13 |  |  |
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A method for transmitting precoding matrix index (PMI), comprising: selecting a first precoding matrix from a second codebook set by a user equipment (UE), wherein the second codebook set is se~~t up~~lected from a first codebook set locally stored on the UEaccording to a capability of a transmission channel to carry PMI; transmitting, by the UE, an index item corresponding to the first precoding matrix to a base station (BS) over the transmission channel, so as to enable the BS to search for the first precoding matrix according to the index item and perform precoding on data according to the first precoding matrix.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 19 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for transmitting information**

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| **公开号** | [US8730887](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8730887&sv=21cca8cba9bef860f4f2aac45f07f0d6) | **公开日** | 2014/05/20 |
| **申请号** | 13/114,209 | **申请日** | 2011/05/24 |
| **授权日** | 2014/05/20 | **优先日** | 2007/10/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ma; Jie | Lin; Bo |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for transmitting information includes: by a NodeB, receiving information reported by a User Equipment (UE) through an Enhanced Dedicated Channel (E-DCH) transmission channel, and determining the UE corresponding to the received information according to UE ID information carried in the received information. A system and NodeB for transmitting information are also provided. Therefore, when random access data is transmitted between the UE and the NodeB, the NodeB can determine the UE from which the data is received, thus ensuring practicability of the transmission solution that uses High Speed Uplink Packet Access (HSUPA) to implement random access. |

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| **主权项** | 专利度:9特征度:36 |  |  |
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A method for transmitting information, comprising: receiving, by a base station, a protocol layer data packet including data and a user equipment (UE) identity (ID) of a UE which are sent by the UE through an Enhanced Dedicated Channel (E-DCH), wherein the E-DCH is shared among a plurality of UEs including the UE and seized by the UE via competition; determining, by the base station, which UE the protocol layer data packet belongs to according to the UE ID included in the protocol layer data packet; converting, by the base station, the received protocol layer data packet into a Frame Protocol (FP) frame with the UE ID of the UE; and sending, by the base station, the FP frame with the UE ID of the UE to a radio network control device through the E-DCH to inform the radio network which UE the FP frame belongs to; wherein the method further comprises: receiving, by the base station, a request for setting up or reconfiguring the E-DCH, sent by the radio network control device; setting up or reconfiguring, depending on the request received, by the base station, the E-DCH in accordance with a parameter in the received request; and sending, by the base station, a response to the radio network control device to indicate information of the E-DCH; wherein the parameter in the received request comprises at least one of: a signature list used when the UE performs a random access procedure through the E-DCH, and other parameter required when the UE performs the random access procedure through the E-DCH, wherein the other parameter comprise at least one of a relevant physical-layer parameter, a transmission channel parameter and a transmission bearer parameter.

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| **对偶主权项** | 专利度:15特征度:21 |  |  |
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A method for transmitting information, comprising: receiving, by a base station,~~information sent by~~a protocol layer data packet including data anda~~U~~user~~E~~equipment (UE)~~through an Enhanced Dedicated Channel (E-DCH); determining, by the base station, the UE corresponding to the received information~~identity (ID) of a UE which are sent by the UE through an Enhanced Dedicated Channel (E-DCH), wherein the E-DCH is shared among a plurality of UEs including the UE and seized by the UE via competition; determining, by the base station, which UE the protocol layer data packet belongs toaccording to~~a~~theUE ID~~carr~~included in the~~received information~~protocol layer data packet; converting, by the base station, the received~~information~~protocol layer data packetinto a Frame Protocol (FP) frame with the UE ID of the UE; and sending, by the base station, the FP frame~~to a RNC through a transmission channel between~~with the UE ID of the UE to a radio network control device through the E-DCH to inform the radio network which UE the FP frame belongs to; wherein the method further comprises: receiving, by the base station, a request for setting up or reconfiguring the E-DCH, sent by the radio network control device; setting up or reconfiguring, depending on the request received, by the base station, the E-DCH in accordance with a parameter in the received request; and sending, bythe base station,a~~nd the RNC, wherein the transmission channel is an E-DCH~~response to the radio network control device to indicate information of the E-DCH; wherein the parameter in the received request comprises at least one of: a signature list used when the UE performs a random access procedure through the E-DCH, and other parameter required when the UE performs the random access procedure through the E-DCH, wherein the other parameter comprise at least one of a relevant physical-layer parameter, a transmission channel parameter and a transmission bearer parameter.

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| **被引用** | 28 | **自引用** | 4 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.43 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for control of discontinuous reception (DRX) by a mobile device in a wireless communications network supporting voice-over-internet-protocol (VoIP)**

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| **公开号** | [US8724547](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8724547&sv=ef2042768c626c23a7202d468ed1733f) | **公开日** | 2014/05/13 |
| **申请号** | 13/012,668 | **申请日** | 2011/01/24 |
| **授权日** | 2014/05/13 | **优先日** | 2007/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xu; Shugong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and system for controlling discontinuous reception (DRX) in a mobile device in a wireless communications network that supports voice-over-internet-protocol (VoIP) and that uses an automatic repeat-request (ARQ) method, like a hybrid automatic repeat-request (HARQ) method, uses autonomous DRX control after initial VoIP traffic setup. If the mobile device transmits a negative-acknowledgement signal (NACK) indicating unsuccessful receipt of a VoIP packet, then it autonomously turns on a predetermined delay time later to receive the retransmission of the VoIP packet, where the predetermined delay time is related to the time for the base station to process the NACK and prepare the VoIP packet for retransmission. When the mobile device transmits or retransmits a VoIP packet, reception is deactivated, but is autonomously activated the predetermined delay time later to receive an acknowledgement signal (ACK) or NACK. VoIP packets may be transmitted from the mobile device the predetermined delay time before VoIP packets are transmitted from the base station. This alignment allows an ACK or NACK to be transmitted from the base station in the same transmission time interval (TTI) as a VoIP packet. |

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| **主权项** | 专利度:8特征度:12 |  |  |
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A method of discontinuous reception for a mobile station in a communication system that executes transmitting and/or receiving during each fixed time interval, the method comprising: determining whether receipt of downlink data, transmitted from a base station, has succeeded; transmitting an indication of whether or not receipt of the downlink data has succeeded to the base station; determining whether receipt of retransmission downlink data retransmitted from the base station has succeeded after a first number of time intervals pass from a time interval in which the receipt of the downlink data from the base station has not succeeded; and responsive to determining that the receipt of the retransmission downlink data from the base station has not succeeded after the first number of time intervals, determining to maintain reception at least at the next time interval for receiving the retransmission downlink data.

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| **对偶主权项** | 专利度:2特征度:13 |  |  |
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A method~~for~~ofdiscontinuous receptionfor a mobile stationin a communication system that executes transmitting and/or receiving during each fixed time interval, the method comprising~~the steps of~~:determining whetherrecei~~ving~~pt ofdownlink data,transmitted from a base station~~and~~, has succeeded; transmitting anindicat~~es~~ion ofwhether or not~~the~~receiptof the downlink datahas succeeded to the base station;~~receiving~~determining whether receipt ofretransmission downlink data retransmitted from the base stationhas succeededafter a first number of time intervals pass from a time interval in which the~~downlink data has been received; maintaining reception until receiving the retransmission downlink data when~~receipt of the downlink data from the base station has not succeeded; and responsive to determining that the receipt ofthe retransmission downlink data~~is not received~~from the base stationhas not succeededafter the first number of time intervals~~; and periodically monitoring the~~, determining to maintain reception at least at the next time interval for receiving the retransmissiondownlink data.

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| **被引用** | 20 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 22 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for realizing IP multimedia subsystem disaster tolerance**

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| **公开号** | [US8719617](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8719617&sv=8e3ec5ac6be9eed72a608ea3ecb777be) | **公开日** | 2014/05/06 |
| **申请号** | 13/285,681 | **申请日** | 2011/10/31 |
| **授权日** | 2014/05/06 | **优先日** | 2006/10/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Gu; Jiongjiong | Wen; Kai | Liang; Feng | Shen; Linfei | Shi; Shufeng |
| **国际 主分类** | G06F 11/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for realizing an Internet protocol (IP) multimedia subsystem (IMS) disaster tolerance includes the steps as follows. An S-CSCF receives a user registration, and backs up necessary data which is required when a user service processing is restored on a storage entity in a network. An I-CSCF of user's home domain receives a service request of the user, and if it is found that the S-CSCF currently providing a service for the user fails, assigns a new S-CSCF to the user, and forwards the service request to the newly assigned S-CSCF. The newly assigned S-CSCF interrogates and acquires subscription data of the user and the necessary data backed up by the original S-CSCF from the storage entity, and then restores the user service processing according to the subscription data and the backup data. A device for realizing an IMS disaster tolerance is also provided. |

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| **主权项** | 专利度:10特征度:19 |  |  |
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~~In a serving call session control function (S-CSCF), a~~Amethod for realizing an Internet protocol multimedia subsystem (IMS) disaster tolerance,~~the method~~comprising: receiving, bya servi~~ce request of a user forwarded by an interrogating CSCF~~ng call session control function(~~I~~S-CSCF)~~when it is determined that a previous S-CSCF failed in providing a service to the user; send~~, a user registration, and backing up necessary data which is required when a user service processing is restored on a storage entityin~~g~~a~~request for subscription data of the user and restoration data stored in a storage entity and used for restor~~network; receiving, by an interrogating CSCF (I-CSCF) of the user's home domain, a service request of the user, and if it is found that the S-CSCF currently providing~~the~~aservice~~that failed~~for the user fails, assigning a new S-CSCFto the user,~~where~~and forwardingthe~~restoration data is stored by the previous S-CSCF; receiving the stored data that includes the subscription data of the user and the restoration data; and based on the received data,~~service request to the newly assigned S-CSCF; and interrogating and acquiring, by the newly assigned S-CSCF, subscription data of the user and the necessary data backed up by the original S-CSCF from the storage entity, and thenrestoring theuserservice~~to the user~~processing according to the subscription data and the necessary data.

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| **对偶主权项** | 专利度:28特征度:28 |  |  |
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A method for realizing an Internet protocol multimedia subsystem (IMS) disaster tolerance, comprising: receiving, by a serving call session control function (S-CSCF), a user registration, and backing up necessary data which is required when a user service processing is restored on a storage entity in a network; receiving, by an interrogating CSCF (I-CSCF) of the user's home domain, a service request of the user, and if it is found that the S-CSCF currently providing a service for the user fails, assigning a new S-CSCF to the user, and forwarding the service request to the newly assigned S-CSCF; and interrogating and acquiring, by the newly assigned S-CSCF, subscription data of the user and the necessary data backed up by the original S-CSCF from the storage entity, and then restoring the user service processing according to the subscription data and the necessary data.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for informing a serving cell handover**

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| **公开号** | [US8718651](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8718651&sv=b50b6484524eecb91a31d4d64798c678) | **公开日** | 2014/05/06 |
| **申请号** | 13/127,651 | **申请日** | 2009/12/01 |
| **授权日** | 2014/05/06 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Gao; Yongqiang | Zheng; Xiaoxiao | Meng; Yan |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| The present disclosure provides a method, an apparatus and a system for informing a serving cell handover, which relate to radio communication technology, and can greatly reduce delay of the handover of the HS-DSCH serving cell, decrease the drop call rate, and enhance user's experience. The method for informing a serving cell handover includes: a radio network controller (RNC) sets up a radio link with a candidate cell, and sets configuration for the candidate cell during the process of setting up the radio link; the RNC sends configuration information of the candidate cell to user equipment (UE); and after acquiring an optimum cell, the RNC informs, through an Iub interface signaling message, a target base station of sending a serving cell handover instruction to the UE. The serving cell handover instruction instructs the UE to hand over to the optimum cell according to the configuration information. The present disclosure is suitable for occasions where the serving cell hands over in the radio network. |

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| **主权项** | 专利度:19特征度:29 |  |  |
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A method for informing a serving cell handover, comprising: setting up, by a radio network controller (RNC) a radio link with a candidate cell, and setting configuration for the candidate cell during the process of setting up the radio link; sending, by the RNC, configuration information of the candidate cell to a user equipment (UE); and informing, by the RNC, after acquiring an optimum cell, through an Iub interface signaling message, a target base station of sending a serving cell handover instruction to the UE, wherein the Iub interface signaling message carries the number of repeated times of a Shared Control Channel for High-Speed Downlink Shared Channel (HS-SCCH) order, and wherein the serving cell handover instruction is used to instruct the UE to hand over to the optimum cell according to the configuration information and wherein the Iub interface signaling message comprises mode indication information to indicate one of a synchronous or asynchronous mode.

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| **对偶主权项** | 专利度:14特征度:21 |  |  |
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A method for informing a serving cell handover, comprising: setting up, by a radio network controller (RNC) a radio link with a candidate cell, and setting configuration for the candidate cell during the process of setting up the radio link; sending, by the RNC, configuration information of the candidate cell to a user equipment (UE); and informing, by the RNC, after acquiring an optimum cell, through an Iub interface signaling message, a target base station of sending a serving cell handover instruction to the UE, wherein the~~serving cell handover instruction is used to instruct the UE to hand over to the optimum cell according to the configuration information~~Iub interface signaling message carries the number of repeated times of a Shared Control Channel for High-Speed Downlink Shared Channel (HS-SCCH) order, and wherein the serving cell handover instruction is used to instruct the UE to hand over to the optimum cell according to the configuration information and wherein the Iub interface signaling message comprises mode indication information to indicate one of a synchronous or asynchronous mode.

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| **被引用** | 19 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.6 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for establishing cell reselection list**

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| **公开号** | [US8718642](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8718642&sv=ae088cec186b24f3349dae68d45d1e26) | **公开日** | 2014/05/06 |
| **申请号** | 13/447,924 | **申请日** | 2012/04/16 |
| **授权日** | 2014/05/06 | **优先日** | 2009/10/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Jiyong | Yu; Yongjun | Zhao; Yang | Fang; Ming |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The embodiments of the present invention disclose a method for establishing a cell reselection list is provided. A network and a terminal establish frequency indexes for the cell reselection list, so that when a network side delivers an RAT and frequency priority information, the priority information may be delivered according to frequency indexes in a frequency list, thus implementing cell reselection that is based on the priority for the terminal. |

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| **主权项** | 专利度:9特征度:9 |  |  |
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A method for establishing a cell reselection list and/or a frequency list, comprising: obtaining a system message, wherein the system message comprises a first system message and optionally further comprises a second system message, the first system message comprises frequency information used in a 3G neighbor cell list, and if the system message further comprises the second system message, the second system message comprises frequency information that is used in a cell reselection list but not used in the 3G neighbor cell list; establishing a cell reselection list and/or a frequency list according to the system message; establishing indexes in ascending order in the cell reselection list and/or the frequency list according to an appearance order from first to last of the frequency information that is used in the 3G neighbor cell list in the system message; and if the system message further comprises the second system message that comprises the frequency information that is used in the cell reselection list but not used in the 3G neighbor cell list, establishing indexes at bottom of the cell reselection list and/or the frequency list according to an appearance order from first to last of the frequency information that is used in the cell reselection list but not used in the 3G neighbor cell list in the second system message, wherein when the first system message further comprises the frequency information that is used in the cell reselection list but not used in the 3G neighbor cell list, and the method further comprises: establishing the indexes in descending order for the frequencies that are used in the cell reselection list but not used in the 3G neighbor cell list in the first system message; and establishing the indexes in descending order for the frequencies of the second system message via obtaining subsequent values of the indexes.

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| **对偶主权项** | 专利度:32特征度:14 |  |  |
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A method for establishing a cell reselectionlist and/or a frequencylist, comprising: obtaining a system message, wherein the system message comprisesa first system message and optionally further comprises a second system message, the first system message comprisesfrequency information used in a 3G neighbo~~u~~r cell list, and~~optionally~~if the system message further comprises the second system message, the second system messagecomprises frequency information that is used in a cell reselection list but not used in the 3G neighbo~~u~~r cell list;~~and~~establishing a cell reselection list and/or a frequency list according to the system message; establishing indexes in ascending order in the cell reselection list and/or the frequency list according to an appearance order from first to last of the frequency information that is used in the 3G neighbo~~u~~r cell list in the system message; and~~when the~~if the system message further comprises the secondsystem messagethatcomprises the frequency information that is used in the cell reselection list but not used in the 3G neighbo~~u~~r cell list, establishing indexes at~~the~~bottom of the cell reselection list and/or the frequency list according to an appearance order from first to last of the frequency information that is used in the cell reselection list but not used in the 3G neighbo~~ur cell list in the system message~~r cell list in the second system message, wherein when the first system message further comprises the frequency information that is used in the cell reselection list but not used in the 3G neighbor cell list, and the method further comprises: establishing the indexes in descending order for the frequencies that are used in the cell reselection list but not used in the 3G neighbor cell list in the first system message; and establishing the indexes in descending order for the frequencies of the second system message via obtaining subsequent values of the indexes.

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| **被引用** | 15 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 2.22 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Multi-network access control method, communication system, and relevant devices**

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| **公开号** | [US8718031](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8718031&sv=b0afe19726558433090dfac64fcc755d) | **公开日** | 2014/05/06 |
| **申请号** | 13/243,142 | **申请日** | 2011/09/23 |
| **授权日** | 2014/05/06 | **优先日** | 2009/04/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Ying | Wang; Shanshan | Wang; Ningshen |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| Embodiments of the present invention disclose a multi-network access control method, a communication system, and relevant devices to prevent interruption of normal network communication when the multi-access function is used. The method includes the following steps: A User Equipment (UE) receives multi-access indication information sent by a network device; the UE judges, according to the multi-access indication information, whether the UE uses a multi-access function; and the UE initiates an access connectivity establishment from multi-networks if the multi-access function is used. The embodiments of the present invention further provide a communication system and relevant devices. The embodiments of the present invention may prevent interruption of normal network communication when the multi-access function is used. |

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| **主权项** | 专利度:12特征度:17 |  |  |
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A multi-network access control method, comprising: receiving by a User Equipment (UE) wherein the UE is multi-access-enabled, multi-access indication information sent by an access node, wherein the multi-access indication information indicates whether a data gateway supports a multi-access function, wherein the multi-access function comprises a function which enables a first set of services being visited by the UE through the data gateway via a non-3GPP access network while a second set of services being visited by the UE through the data gateway via a 3GPP access network; determining by the UE, whether the data gateway supports the multi-access function according to the received multi-access indication information sent by the access node; and if so, based on the received multi-access indication information, while the UE visiting at least two services through the data gateway via the non-3GPP access network, initiating by the UE, an access connectivity establishment to access the 3GPP access network in order to switch a part of the at least two services to the 3G access network to be visited through the data gateway while a remaining part of the at least two services is retained in the non-3GPP access network and visited through the data gateway.

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| **对偶主权项** | 专利度:24特征度:5 |  |  |
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A multi-network access control method, comprising: receiving~~,~~by a User Equipment (UE)wherein the UE is multi-access-enabled, multi-access indication information sent by a~~network device; judg~~n access node, wherein the multi-access indication information indicates whether a data gateway supports a multi-access function, wherein the multi-access function comprises a function which enables a first set of services being visited by the UE through the data gateway via a non-3GPP access network while a second set of services being visited by the UE through the data gateway via a 3GPP access network; determining~~,~~by the UE,whether the data gateway supports the multi-access functionaccording to thereceivedmulti-access indication information~~, whether the UE uses a multi-access function; and~~sent by the access node; and if so, based on the received multi-access indication information, while the UE visiting at least two services through the data gateway via the non-3GPP access network,initiating~~,~~by the UE, an access connectivity establishment~~from multi-networks if the multi-access function is used~~to access the 3GPP access network in order to switch a part of the at least two services to the 3G access network to be visited through the data gateway while a remaining part of the at least two services is retained in the non-3GPP access network and visited through the data gateway.

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| **被引用** | 4 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for sending and receiving messages**

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| **公开号** | [US8699988](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8699988&sv=3abf3be85f4d5a2fd562f4082ebd5c56) | **公开日** | 2014/04/15 |
| **申请号** | 12/544,880 | **申请日** | 2009/08/20 |
| **授权日** | 2014/04/15 | **优先日** | 2008/09/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Roberts; Michael | Huang; Min | Zhao; Junhui |
| **国际 主分类** | H04M 11/04 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, a device, and a system for sending and receiving messages are provided. The method for sending messages includes: receiving, by a Mobility Management Entity (MME), an Earthquake and Tsunami Warning System (ETWS) message; setting an information change identifier if the received ETWS message is different from the ETWS message stored by the MME; and sending the received ETWS message and the information change identifier. In the embodiments of the present disclosure, the MME decides whether to send the ETWS message to the eNB. Therefore, the eNB needs only to transmit the received message to the UE transparently, and does not need to judge the content of the ETWS message, thus simplifying the process of the eNB sending the ETWS message and reducing the load of the access network device. |

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| **主权项** | 专利度:4特征度:13 |  |  |
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A method for receiving a message, comprising: acquiring, by a User Equipment (UE), a system message when the UE is handed over or reselected from a cell A to a cell B, wherein the system message includes an area identifier and an Earthquake and Tsunami Warning System (ETWS) message, wherein the area identifier indicates an area that covers the cell B; reading the acquired area identifier and judging whether the acquired area identifier is different from a stored area identifier stored by the UE; on condition that the acquired area identifier is different from the stored area identifier, reading the acquired ETWS message; and on condition that the acquired area identifier is the same as the stored area identifier, not reading the acquired ETWS message.

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| **对偶主权项** | 专利度:8特征度:22 |  |  |
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A method for receiving a message, comprising:~~handing over or reselect~~acquiring, by a User Equipment (UE),~~from a cell A to a neighboring cell B; acquiring, by the UE, an area identifier carried by a system message of the neighboring cell B, wherein the area identifier indicates an area that covers the neighboring cell B; and acquiring an Earthquake and Tsunami Warning System (ETWS) message carried in the system message if the area identifier is different from the area identifier stored by the UE~~a system message when the UE is handed over or reselected from a cell A to a cell B, wherein the system message includes an area identifier and an Earthquake and Tsunami Warning System (ETWS) message, wherein the area identifier indicates an area that covers the cell B; reading the acquired area identifier and judging whether the acquired area identifier is different from a stored area identifier stored by the UE; on condition that the acquired area identifier is different from the stored area identifier, reading the acquired ETWS message; and on condition that the acquired area identifier is the same as the stored area identifier, not reading the acquired ETWS message.

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| **被引用** | 20 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.26 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**De-registration method, home NodeB (HNB), and home NodeB gateway (HNB GW)**

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| **公开号** | [US8694005](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8694005&sv=5321a9f530f1ecbec6a1d77df6709760) | **公开日** | 2014/04/08 |
| **申请号** | 13/647,778 | **申请日** | 2012/10/09 |
| **授权日** | 2014/04/08 | **优先日** | 2008/09/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Zheng |
| **国际 主分类** | H04Q 7/20 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention relates to the field of communication technology, and a de-registration method, a Home NodeB (HNB) and a Home NodeB Gateway (HNB GW) are disclosed. In an embodiment, the present invention provides a de-registration method, comprising: initiating, by an HNB GW, release of pre-registration resources corresponding to user equipment (UE) after the HNB GW receives indication information indicating that the UE moves to another cell from a source HNB. Applying the embodiment of the present invention can release pre-registration resources in time and reduce waste of resources. |

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| **主权项** | 专利度:9特征度:10 |  |  |
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A de-registration method, comprising: receiving, by a Home NodeB gateway (HNB GW), a register request sent by a first Home NodeB (HNB) toward the HNB GW, wherein the register request is initiated by a user equipment (UE); detecting, by the HNB GW, whether a pre-registration resource in the HNB GW corresponding to the UE exist according to the register request, and if the pre-registration resource in the HNB GW corresponding to the UE exists, sending a de-register request to a second HNB associated with the pre-registration resource to notify the second HNB to release a pre-registration resource in the second HNB corresponding to the UE.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A de-registration method, comprising: receiving, by a Home NodeB gateway (HNB GW),~~indication information indicating that user equipment (UE) has moved to another cell from a source Home NodeB (HNB); and based on the indication information, initiating, by the~~a register request sent by a first Home NodeB (HNB) toward the HNB GW, wherein the register request is initiated by a user equipment (UE); detecting, by the HNB GW, whether a pre-registration resource in the HNB GW corresponding to the UE exist according to the register request, and if the pre-registration resource in the HNB GW corresponding to the UE exists, sending a de-register request to a second HNB associated with the pre-registration resource to notify the secondHNB~~GW,~~torelease~~of~~apre-registration resource~~s~~in the second HNBcorresponding to the UE.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.12 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for falling back to 2G/3G network, relevant device and communication system**

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| **公开号** | [US8688126](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8688126&sv=12ca08e0954d89612cca8803cd30f736) | **公开日** | 2014/04/01 |
| **申请号** | 13/572,594 | **申请日** | 2012/08/10 |
| **授权日** | 2014/04/01 | **优先日** | 2010/02/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Xiaobo | Liu; Hai |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Embodiments of the present invention provides a method for falling back to a 2G/3G network, a relevant device and a system. The embodiments of the present invention includes: receiving, by a mobility management entity, a first message from an access network device, where the first message carries location area information of a target 2G/3G cell to which a user equipment UE prepares to connect; sending a second message for requesting to perform a location update on the UE to a mobile switching center MSC corresponding to a location area of the target 2G/3G cell; receiving a third message from the MSC, where the third message carries a temporary mobile station identity TMSI allocated to the UE by the MSC; and sending, to the UE, a fourth message carrying the TMSI, so that the UE, after being connected to the target 2G/3G cell, communicates with the MSC by using the TMSI. |

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| **主权项** | 专利度:8特征度:16 |  |  |
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A method for initiating a fallback to a 2G/3G network, the method comprising: receiving, by an access network device, an instruction that a user equipment (UE) requires initiating a circuit switching fallback (CSFB) process, the instruction is comprised in a context setup message and sent by a mobility management entity (MME); and selecting, by the access network device, a target 2G/3G cell according to a measurement report reported by the UE; and sending, from the access network device to the MME, a message carrying location area information of the target 2G/3G cell according to the instruction, wherein the message carrying the location area information of the target 2G/3G cell comprises a handover request message.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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~~1-20. (canceled)~~A method for initiating a fallback to a 2G/3G network, the method comprising: receiving, by an access network device, an instruction that a user equipment (UE) requires initiating a circuit switching fallback (CSFB) process, the instruction is comprised in a context setup message and sent by a mobility management entity (MME); and selecting, by the access network device, a target 2G/3G cell according to a measurement report reported by the UE; and sending, from the access network device to the MME, a message carrying location area information of the target 2G/3G cell according to the instruction, wherein the message carrying the location area information of the target 2G/3G cell comprises a handover request message.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for supporting time shift playback in adaptive HTTP streaming transmission solution**

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| **公开号** | [US8683071](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8683071&sv=564394384e1d150f14bb03f0ee007d57) | **公开日** | 2014/03/25 |
| **申请号** | 13/768,002 | **申请日** | 2013/02/15 |
| **授权日** | 2014/03/25 | **优先日** | 2010/08/17 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yue; Peiyu | Yuan; Weizhong | Shi; Teng | Liu; Guangyuan | Zhang; Yuanyuan | Tian; Yonghui | Zhang; Renzhou | Wu; Lingyan | Zhang; Chuxiong |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. odolph; Grant eaulieu; Nicholas K. |

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| **摘要** |  |
| A method and an apparatus for supporting time shift playback in an adaptive HTTP streaming transmission solution are disclosed. The method includes: sending a live MPD request message to a media server; receiving a response message that includes MPD for a current time period, where the MPD further includes media presentation information for another time period; determining that a moment of a media segment to be requested currently exceeds a time range corresponding to the MPD; acquiring the corresponding MPD according to the media presentation information corresponding to the media segment, and requesting, according to the acquired corresponding MPD, the media segment. In this manner, a client supports time shift playback of a larger time range, and at the same time, the size of the MPD is capable of remaining in an acceptable range. |

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| **主权项** | 专利度:9特征度:22 |  |  |
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A method for supporting time shift playback in a client device for Hypertext Transfer Protocol (HTTP) streaming transmission, comprising: sending a live media presentation description (MPD) request message to a media server; receiving a response message returned from the media server that comprises a first MPD for a current first time period, wherein the first MPD comprises media presentation information for other time periods, and wherein the media presentation information comprises a second time period and an address of a second MPD for the second time period; determining that a moment of a media segment to be requested currently exceeds a time range corresponding to the first MPD; determining, according to the second time period in the first MPD, the address of the second MPD for the second time period comprised in the media presentation information corresponding to the media segment to be requested currently; acquiring the second MPD according to the address of the second MPD; and requesting, from the media server according to the acquired second MPD, the media segment to be requested currently.

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| **对偶主权项** | 专利度:12特征度:18 |  |  |
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A method for supporting time shift playback in a~~n adaptive~~client device forHypertext Transfer Protocol (HTTP) streaming transmission~~solution~~,comprising: sending a live media presentation description (MPD) request message to a media server; receiving a response message returned from the media server that comprisesa firstMPD for a currentfirsttime period, wherein thefirstMPD comprises media presentation information for~~an~~othertime periods, and wherein the media presentation information comprises a second time period and an address of a second MPD for the secondtime period; determining that a moment of a media segment to be requested currently exceeds a time range corresponding to thefirstMPD; determining, according to the~~media presentat~~second time perio~~n~~din~~formation~~the first MPD, the address of the second MPDfor the~~another~~secondtime period~~,~~comprised inthe media presentation information corresponding to the media segment to be requested currently; acquiring the~~corresponding~~secondMPD according to the~~media presentation information corresponding to the media segment to be requested currently~~address of the second MPD; and requesting, from the media server according to the acquiredsecondMPD, the media segment to be requested currently.

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| **被引用** | 13 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.80 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Cell load balancing method, cell load measuring method, and devices thereof**

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| **公开号** | [US8676186](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8676186&sv=e91ead0db944b2cddd18353a1c0b8bb9) | **公开日** | 2014/03/18 |
| **申请号** | 13/069,802 | **申请日** | 2011/03/23 |
| **授权日** | 2014/03/18 | **优先日** | 2008/09/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Niu; Weiguo |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A cell load balancing method, a cell load measuring method, and devices thereof are provided. The cell load balancing method includes: acquiring information of the load of a current cell and information of the load an adjacent cell; determining a target cell in which a mobility parameter needs to be modified thereof according to the information of the load of the current cell and the information of the load of the adjacent cell; sending a parameter modification request to the determined target cell; and performing a corresponding operation according to information indicating whether the parameter is successfully modified and fed back from the adjacent cell. With the above solution, a load balancing solution can be better implemented in a network, thereby improving a capacity of the network, improving a success rate of user access, and reducing access delay. |

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| **主权项** | 专利度:30特征度:27 |  |  |
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A cell load balancing method, comprising: acquiring information of load of a current cell and information of load of an adjacent cell; determining a target cell in which a mobility parameter needs to be modified according to the information of the load of the current cell and the information of the load of the adjacent cell; sending a parameter modification request to the determined target cell; and performing a corresponding operation according to information indicating whether the mobility parameter is successfully modified and feedback from the adjacent cell; wherein the mobility parameter contains one or more of a cell handover parameter or a cell reselection parameter; wherein the acquiring the information of the load of the adjacent cell comprises: sending a resource status request message carrying an indication parameter to the adjacent cell, wherein the indication parameter is configured to indicate that the adjacent cell reports the information of the load if an event threshold is satisfied, or that the adjacent cell reports the information of the load if a report period is reached and an event threshold is satisfied; and receiving the information of the load sent from the adjacent cell; and wherein the sending the resource status request message to the adjacent cell comprises one or more of: sending the resource status request message through an interface with a node to which the adjacent cell belongs; transmitting the resource status request message through a mobility management entity (MME) to which the current cell belongs; transmitting the resource status request message through an MME to which the current cell belongs and a core network entity to which the adjacent cell belongs; or transmitting the resource status request message through an element management system (EMS) or a network management system (NMS).

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| **对偶主权项** | 专利度:37特征度:13 |  |  |
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A cell load balancing method, comprising: acquiring information of load of a current cell and information of load of an adjacent cell; determining a target cell in which a mobility parameter needs to be modified according to the information of the load of the current cell and the information of the load of the adjacent cell; sending a parameter modification request to the determined target cell; and performing a corresponding operation according to information indicating whether the mobility parameter is successfully modified and fe~~d back from the adjacent cell~~edback from the adjacent cell; wherein the mobility parameter contains one or more of a cell handover parameter or a cell reselection parameter; wherein the acquiring the information of the load of the adjacent cell comprises: sending a resource status request message carrying an indication parameter to the adjacent cell, wherein the indication parameter is configured to indicate that the adjacent cell reports the information of the load if an event threshold is satisfied, or that the adjacent cell reports the information of the load if a report period is reached and an event threshold is satisfied; and receiving the information of the load sent from the adjacent cell; and wherein the sending the resource status request message to the adjacent cell comprises one or more of: sending the resource status request message through an interface with a node to which the adjacent cell belongs; transmitting the resource status request message through a mobility management entity (MME) to which the current cell belongs; transmitting the resource status request message through an MME to which the current cell belongs and a core network entity to which the adjacent cell belongs; or transmitting the resource status request message through an element management system (EMS) or a network management system (NMS).

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| **被引用** | 16 | **自引用** | 3 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.85 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for transferring user equipment in mobile communication system**

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| **公开号** | [US8670426](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8670426&sv=bc49fb7d6ca93d0b26d8ffa01f21720a) | **公开日** | 2014/03/11 |
| **申请号** | 13/662,419 | **申请日** | 2012/10/27 |
| **授权日** | 2014/03/11 | **优先日** | 2006/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Li; Qingyu | Guo; Xiaolong | Sun; Ying |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| A method and system for transferring user equipment (UE) in a mobile communication system are disclosed. According to the method, a source core (CN) network determines to transfer a UE that it serves and sends a transfer instruction carrying UE transfer restriction information to the UE; an access network receives a transfer request that is sent by the UE according to the restriction information carried in the transfer instruction; the access network selects a target CN entity that is different from the source CN entity for the UE; and the UE is transferred to the target CN entity. The method and system provided by the present invention are applicable to user transferring between CN entities in any communication network. The transferring is initiated by a network side entity, and a more preferable CN entity is selected for the UE to provide a better service. |

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| **主权项** | 专利度:20特征度:10 |  |  |
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A method for transferring~~a~~user equipment (UE) in a mobile communication system, comprising: receiving, by~~the~~aUE, a transfer instruction carrying UE transfer restriction information from a source core network (CN) element serving the UE, wherein the UE transfer restriction information comprises information for transferring the UE to a target CN element that is different from the source CN element; and sending, by the UE, a transfer request to an access networkentitybased on the received transfer instruction; wherein the transfer request comprises information for the access networkentityto select a target CN element that is different from the source CN element, and to transfer the UE to the target CN element.

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| **对偶主权项** | 专利度:20特征度:26 |  |  |
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A method for transferring user equipment (UE) in a mobile communication system, comprising: receiving, by a UE, a transfer instruction carrying UE transfer restriction information from a source core network (CN) element serving the UE, wherein the UE transfer restriction information comprises information for transferring the UE to a target CN element that is different from the source CN element; and sending, by the UE, a transfer request to an access network entity based on the received transfer instruction; wherein the transfer request comprises information for the access network entity to select a target CN element that is different from the source CN element, and to transfer the UE to the target CN element.

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| **被引用** | 10 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.94 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for non-access stratum message processing during handover in evolved network**

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| **公开号** | [US8665820](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8665820&sv=e80b50e5225d48daae237801f760af6a) | **公开日** | 2014/03/04 |
| **申请号** | 12/704,906 | **申请日** | 2010/02/12 |
| **授权日** | 2014/03/04 | **优先日** | 2007/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Hongzhuo | Qiu; Yong | Huang; Ying | Wang; Qiang |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method and an apparatus for non-access stratum (NAS) message processing during handover in an evolved network are provided. The method includes the following steps. An evolved packet core (EPC) receives a message which indicates that a UE is being handed over sent by a source evolved NodeB (S-eNB), and stops sending an NAS message to the UE temporarily. The EPC receives a message which indicates that the UE returns to an S-eNB service area sent by the S-eNB. The EPC sends the NAS message to the UE through the S-eNB, if needed. With the method and the apparatus, the EPC can acquire a location of the UE in time in the case of a handover failure of the UE, a time limit of a retransmission timer is set precisely, and a specific implementation for forwarding an NAS message through an X2 interface is provided. |

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| **主权项** | 专利度:4特征度:12 |  |  |
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A method for~~processing a~~Non-access Stratum (NAS) messageprocessingduring~~a~~handover~~of a User Equipment (UE)~~in an evolved network,~~the method~~comprising: sending, by a~~mobility management entity (MME~~n Evolved Packet Core (EPC), a direct-transfer message to an Source-eNodeB (S-eNB)~~during the handover of the UE, the direct-transfer message including the NAS message;~~, wherein the direct-transfer message contains an NAS message to be sent by the EPC to a User Equipment (UE); andreceiving, by the~~MM~~EPC, a~~reply from the S-eNB, the reply including a cause value and the NAS message, the cause value indicating the NAS message has not been sent to the UE during th~~message, which indicates that the UE is being handed over, sent by the S-eNB, wherein the message which indicates that the UE is being handed over is a direct transfer failure message or a direct transfer response message which contains a cause value~~h~~and~~over of the UE in the evolved network~~the NAS message that fails to be sent.

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| **对偶主权项** | 专利度:16特征度:11 |  |  |
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A method for Non-access Stratum (NAS) message processing during handover in an evolved network, comprising: sending, by an Evolved Packet Core (EPC), a direct-transfer message to an Source-eNodeB (S-eNB), wherein the direct-transfer message contains an NAS message to be sent by the EPC to a User Equipment (UE); and receiving, by the EPC, a message, which indicates that the UE is being handed over, sent by the S-eNB, wherein the message which indicates that the UE is being handed over is a direct transfer failure message or a direct transfer response message which contains a cause value and the NAS message that fails to be sent.

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| **被引用** | 11 | **自引用** | 5 | **公司数** | 1 | **国家数** | 2 | **影响力** | 2.88 |

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| **同族数** | 19 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for negotiating security capability when terminal moves**

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| **公开号** | [US8656169](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8656169&sv=711fc3dab60fd24730b93fe171f5643c) | **公开日** | 2014/02/18 |
| **申请号** | 12/633,948 | **申请日** | 2009/12/09 |
| **授权日** | 2014/02/18 | **优先日** | 2007/08/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Chengdong |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for negotiating a security capability when a terminal moves is provided. When a user equipment (UE) moves from a second/third generation (2G/3G) network to a long term evolution (LTE) network, the method includes the following steps. A mobility management entity (MME) acquires a non-access signaling (NAS) security algorithm supported by the UE, and an authentication vector-related key or a root key derived according to the authentication vector-related key, selects an NAS security algorithm, derives an NAS protection key according to the authentication vector-related key or the root key, and sends a message carrying the selected NAS security algorithm to the UE. The UE derives an NAS protection key according to an authentication vector-related key thereof. A system for negotiating a security capability when a terminal moves, a UE, and an MME are further provided. |

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| **主权项** | 专利度:20特征度:27 |  |  |
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A method of security capabilities negotiation, comprising: sending, when a user equipment (UE) in an idle state moves from a non-long term evolution (non-LTE) network to a long term evolution (LTE) network, a tracking area update (TAU) request message from the UE to a mobility management entity (MME) of the LTE network, the TAU request message including security capabilities supported by the UE; obtaining, by the MME, an authentication vector-related key from the non-LTE network; selecting, by the MME, a non-access stratum (NAS) security algorithm to use in communications between the LTE network and the UE, according to the security capabilities supported by the UE; deriving, by the MME, a NAS protection key to use in the communications between the LTE network and the UE, according to the authentication vector-related key by using a key derivation method; sending, by the MME, the selected NAS security algorithm to the UE; and deriving, by the UE, a NAS protection key to use in the communications between the LTE network and the UE, according to an authentication vector-related key thereof by using a same key derivation method as the MME.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A method~~for negotiating a~~ofsecurity capabilit~~y when a terminal moves, wherein when a user equipment (UE) moves from a second/third generation (2G/3G) network to a long term evolution (LTE) network, the method comprises: receiving, by~~ies negotiation, comprising: sending, when a user equipment (UE) in an idle state moves from a non-long term evolution (non-LTE) network to a long term evolution (LTE) network, a tracking area update (TAU) request message from the UE toa mobility management entity (MME)~~, a tracking area updat~~of the LTE network, the~~(~~TAU~~)~~request message~~sent from the UE, and acquiring a non-access signaling (NAS) security algorithm supported by the UE, and an authentication vector-related key or a root key derived according to the authentication vector-related key~~including security capabilities supported by the UE; obtaining, by the MME, an authentication vector-related key from the non-LTE network; selecting, by the MME, a~~n~~non-access stratum (NAS)security algorithmto use in communications between the LTE network and the UE,according to the~~NAS~~security~~algorithm~~capabilitiessupported by the UE~~,~~;deriving, by the MME,a~~n~~NAS protection key~~according to the authentication vector-related key or the root key, and sending a message carrying~~to use in the communications between the LTE network and the UE, according to the authentication vector-related key by using a key derivation method; sending, by the MME,the selected NAS security algorithm to the UE; and deriving, by the UE, a~~n~~NAS protection keyto use in the communications between the LTE network and the UE,according to an authentication vector-related key thereofby using a same key derivation method as the MME.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.7 |

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| **同族数** | 20 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for name binding for multiple packet data network access**

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| **公开号** | [US8654716](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8654716&sv=50da0fd12d53374beebecb16add8c3bc) | **公开日** | 2014/02/18 |
| **申请号** | 12/618,143 | **申请日** | 2009/11/13 |
| **授权日** | 2014/02/18 | **优先日** | 2008/11/14 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wong; Marcus |
| **国际 主分类** | H04W 4/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A system and method for name binding for multiple packet data network access is provided. A method for communications device operation includes attaching to a first packet data network through an access network, thereby creating an access point name, triggering a connection to a second packet data network through the access network, and receiving an acknowledgement to the trigger. The triggering occurs over the access point name, and the acknowledgement comprises an address for the communications device. The address is allocated by a gateway for the second packet data network, and the address is allocated based on a binding generated from an identifier of the communications device, an identifier of the access point name, and a parameter. |

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| **主权项** | 专利度:22特征度:11 |  |  |
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A method for communications device operation, the method comprising: attaching, by the communications device, to a first packet data network through an access network, thereby creating an access point name; triggering a connection to a second packet data network through the access network, wherein the triggering occurs over the access point name; and receiving an acknowledgement to the trigger, wherein the acknowledgement comprises an address for the communications device, wherein the address is allocated by a gateway for the second packet data network, and wherein a value of the address is allocated based on a value of a binding generated from an identifier of the communications device, an identifier of the access point name, and a parameter.

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| **对偶主权项** | 专利度:22特征度:13 |  |  |
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A method for communications device operation, the method comprising: attaching, by the communications device,to a first packet data network through an access network, thereby creating an access point name; triggering a connection to a second packet data network through the access network, wherein the triggering occurs over the access point name; and receiving an acknowledgement to the trigger, wherein the acknowledgement comprises an address for the communications device, wherein the address is allocated by a gateway for the second packet data network, and whereina value ofthe address is allocated based on avalue of abinding generated from an identifier of the communications device, an identifier of the access point name, and a parameter.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.9 |

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| **同族数** | 3 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and network device for creating and deleting resources**

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| **公开号** | [US8638750](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8638750&sv=fce6335381ef56324808a4379586120a) | **公开日** | 2014/01/28 |
| **申请号** | 12/509,677 | **申请日** | 2009/07/27 |
| **授权日** | 2014/01/28 | **优先日** | 2007/06/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu | Wang; Shanshan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| Embodiments of the present invention provide a method for creating resources, a method for deleting resources, and a network device. The method for creating resources includes: notifying, by a first network element, a second network element at network side of a process type for creating resources for a UE; and performing, by the second network element, a process for creating resources for the UE according to the process type. With the embodiments of the present invention, a problem in the prior art that the network element at network side (i.e., the second network element at network side) cannot differentiate different access requests (i.e., initial access request and access request caused by handover between access systems) and thus corresponding resources cannot be created with respect to different access requests may be overcome. |

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| **主权项** | 专利度:18特征度:22 |  |  |
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A mobility management network device comprising: a receiver; and a transmitter configured to communicatively connect with the receiver, wherein, during a handover from a non-3rd Generation Partnership Project (non-3GPP) access system to a 3GPP access system, the receiver is configured to receive, from a user equipment (UE), an access request message for access the 3GPP access system; and the transmitter is configured to send a resource request message to a packet data network gateway (PDN GW) to create resources for the UE to be used in the 3GPP access system, wherein the access request message includes first handover indication information indicating that the access is a handover access; wherein, in response to the first handover indication information being included in the access request message, the resource request message is configured to include second handover indication information, which indicates that the resource request message is caused by a handover access; and wherein the second handover indication information is configured to be carried by an indication flag of the resource request message, the indication flag including one of a handover indication flag, a create type flag which is set to be handover create, and cause flag which is set to be handover cause.

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| **对偶主权项** | 专利度:18特征度:8 |  |  |
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A m~~ethod for restoring resources~~obility management network device comprising: a receiver; and a transmitter configured to communicatively connect with the receiver, wherein,duringahandover~~between heterogeneous networks, comprising:obtaining, by a gateway at network side, Policy and Charging Control (PCC) rules to be used by a User Equipment (UE) in a destination~~from a non-3rd Generation Partnership Project (non-3GPP) access system to a 3GPP access system, the receiver is configured to receive, from a user equipment (UE), an access request message for access the 3GPP access system; and the transmitter is configured to send a resource request message to a packet data network gateway (PDN GW) to create resources for the UE to be used in the 3GPPaccess system,wherein the~~UE performs handover between a Third Generation Partnership Project (3GPP) network and a Non-3GPP network; andinitiating, by the gateway at network side, a bearer setup process at network side in the destination access system according to the PCC rules~~access request message includes first handover indication information indicating that the access is a handover access; wherein, in response to the first handover indication information being included in the access request message, the resource request message is configured to include second handover indication information, which indicates that the resource request message is caused by a handover access; and wherein the second handover indication information is configured to be carried by an indication flag of the resource request message, the indication flag including one of a handover indication flag, a create type flag which is set to be handover create, and cause flag which is set to be handover cause.

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| **被引用** | 9 | **自引用** | 1 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.30 |

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| **同族数** | 13 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Wireless communication system, base station apparatus and mobile station apparatus**

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| **公开号** | [US8626217](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8626217&sv=df31e5d75207ebcc7105693aa883f3fc) | **公开日** | 2014/01/07 |
| **申请号** | 12/673,036 | **申请日** | 2008/09/24 |
| **授权日** | 2014/01/07 | **优先日** | 2007/09/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Akimoto; Yosuke | Aiba; Tatsushi | Yamada; Shohei | Katsuragawa; Hiroshi |
| **国际 主分类** | H04W 72/08 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| To optimize transmission periods corresponding to kinds of feedback information, and minimize a reduction in system throughput caused by disagreement of the transmission period with the optimal period, by setting transmission frequencies individually with flexibility corresponding to the kinds of feedback information for a mobile station apparatus to transmit to a base station apparatus, in a wireless communication system in which a mobile station apparatus B measures reception quality of a signal received from a base station apparatus A, and transmits feedback information generated based on the reception quality to the base station apparatus A, the base station apparatus A allocates resources of transmission timing corresponding to the kinds of feedback information, and the mobile station apparatus B transmits a plurality of kinds of feedback information to the base station apparatus using the allocated resources. |

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| **主权项** | 专利度:17特征度:9 |  |  |
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A wireless communication system comprising: a base station apparatus; and a mobile station apparatus; wherein the base station apparatus is configured to: assign, to the mobile station apparatus, one physical uplink control channel resource for transmissions of three types of feedback information and three periodicities corresponding to the three types of feedback information, wherein each periodicity corresponding to each type of feedback information, and transmit, to the mobile station apparatus, a transmission parameter of each periodicity corresponding to each type of the feedback information and information of the assigned physical uplink control channel resource; and wherein the mobile station apparatus is configured to transmit, to the base station apparatus, each type of feedback information according to the corresponding each periodicity using the physical uplink control channel resource.

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| **对偶主权项** | 专利度:15特征度:5 |  |  |
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A wireless communication system~~in which a mobile station apparatus measures reception quality of a signal received from a base station apparatus, and transmits feedback information generated based on the reception quality to the base st~~comprising: a base station apparatus; and a mobile station apparatus; wherein the base station apparatus is configured to: assign, to the mobile station apparatus, one physical uplink control channel resource for transmissions of three types of feedback information and three periodicities corresponding to the three types of feedback information, wherein each periodicity corresponding to each type of feedback information,a~~pparatus, wherein the bas~~nd transmit, to the mobile station apparatus,a~~llocates resources of transmission timing~~transmission parameter of each periodicitycorresponding to~~a kind~~each typeof the feedback information~~, and the mobile station apparatus transmits a plurality of kinds of feedback information to the base station apparatus using the allocated~~and information of the assigned physical uplink control channel resource; and wherein the mobile station apparatus is configured to transmit, to the base station apparatus, each type of feedback information according to the corresponding each periodicity using the physical uplink control channelresource~~s~~.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 24 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Wireless transmission device and wireless transmission method**

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| **公开号** | [US8625717](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8625717&sv=03bab48d59ce647a81d8706dbc73cc0f) | **公开日** | 2014/01/07 |
| **申请号** | 12/823,853 | **申请日** | 2010/06/25 |
| **授权日** | 2014/01/07 | **优先日** | 2005/09/01 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Imamura; Kimihiko |
| **国际 主分类** | H04L 27/04 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A wireless transmission device of the present invention includes n (where n is an integer of two or more) transmission antennas and a delay imparting section for delaying transmission signals supplied to the n transmission antennas by a maximum delay time (n−1)T or less based on a delay time T dependent upon a communication signal, which indicates whether to transmit the transmission signals by way of frequency diversity or multiuser diversity. |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A transmission control method adapted to a transmission system in which slots are assigned to chunks divided in a frequency domain and in a time domain, said transmission control method comprising the steps of: imparting delays to signals being supplied to a plurality of transmission antennas; and controlling the delays in response to using either a frequency diversity for transmitting the signals or a multiuser diversity for transmitting the signals such that a maximum delay time among the plurality of transmission antennas is set selectively to either a first value smaller than 1/Fc or a second value larger than 1/Fc where Fc denotes a frequency band width of each chunk.

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| **对偶主权项** | 专利度:2特征度:17 |  |  |
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A transmission control method adapted to a transmission system in which slots are assigned to chunks divided in a frequency domain and in a time domain, said transmission control method comprisingthe steps of: imparting delays to signals being supplied to a plurality of transmission antennas;and controlling the delays in response tousing eithera frequency diversity for transmitting the signals or a multiuser diversity for transmitting the signals such that a maximum delay time among the plurality of transmission antennas is set~~to~~selectively to eithera first value smaller than 1/Fc or a second value larger than 1/Fc where F~~/~~c denotes a frequency band width of each chunk.

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| **被引用** | 16 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.9 |

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| **同族数** | 53 | **国家数** | 12 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Using DHCPv6 and AAA for mobile station prefix delegation and enhanced neighbor discovery**

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| **公开号** | [US8625609](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8625609&sv=c7f00c5720ab7dccc7ec6b9307a43b52) | **公开日** | 2014/01/07 |
| **申请号** | 11/747,101 | **申请日** | 2007/05/10 |
| **授权日** | 2014/01/07 | **优先日** | 2006/05/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Sarikaya; Behcet | Xia; Yangsong |
| **国际 主分类** | H04L 12/28 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A network component comprising a processor configured to implement a method comprising promoting transmission of a request for an address prefix to a prefix issuing party, identifying a reply comprising the address prefix from the prefix issuing party, and promoting transmission of a router advertisement comprising the address prefix to a mobile station. Also disclosed is a method comprising receiving a request for an Internet Protocol version 6 (IPv6) prefix, assigning the IPv6 prefix to a mobile station, and sending the IPv6 address to the mobile station, wherein the method is implemented at a Dynamic Host Configuration Protocol (DHCP) server or an Authentication, Authorization and Accounting (AAA) server. |

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| **主权项** | 专利度:18特征度:20 |  |  |
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A network component comprising: a storage device having sets of instructions stored thereon; and a processor coupled with the storage device, when the processor executes the sets of instructions, the following method is performed: transmitting a request for an address prefix to a prefix issuing party wherein the request is from a local mobility anchor (LMA), identifying a reply comprising the address prefix from the prefix issuing party, and promoting transmission of a router advertisement comprising the address prefix from a media access gateway (MAG) to a mobile station; wherein the LMA uses Proxy Mobile IPv6 to assign the address prefix.

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| **对偶主权项** | 专利度:20特征度:15 |  |  |
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A network component comprising:~~a processor configured to implement a method comprising:promoting transmission of a request for an address prefix to a prefix issuing party,~~a storage device having sets of instructions stored thereon; and a processor coupled with the storage device, when the processor executes the sets of instructions, the following method is performed: transmitting a request for an address prefix to a prefix issuing party wherein the request is from a local mobility anchor (LMA),identifying a reply comprising the address prefix from the prefix issuing party, andpromoting transmission of a router advertisement comprising the address prefix~~to a mobile station~~from a media access gateway (MAG) to a mobile station; wherein the LMA uses Proxy Mobile IPv6 to assign the address prefix.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Power control method and device**

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| **公开号** | [US8625569](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8625569&sv=131a26b9c11d8adfb2a90312850528df) | **公开日** | 2014/01/07 |
| **申请号** | 13/282,736 | **申请日** | 2011/10/27 |
| **授权日** | 2014/01/07 | **优先日** | 2009/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Bo | He; Chuanfeng | Ma; Xueli | Wang; Zongjie | Li; Jing | Ma; Jie |
| **国际 主分类** | H04B 7/216 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A power control method and device are used for achieving transmit power control of a User Equipment (UE) in a multi-carrier mode. The power control method includes: calculating a transmit power of a UE when the UE sends data through a plurality of carriers; and performing power compression on each carrier either step by step according to property parameters of each carrier or synchronously according to a compression ratio, when the transmit power of the UE exceeds a preset maximum transmit power. A power control device is further provided. |

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| **主权项** | 专利度:12特征度:12 |  |  |
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A power control method, comprising: calculating, by a user equipment (UE), a transmit power of the UE when the UE sends data through a plurality of carriers; and performing, by the UE, power compression on each carrier step by step according to property parameters of each carrier when the transmit power of the UE exceeds a maximum transmit power; wherein the performing the power compression on each carrier step by step according to the property parameters of each carrier comprises: performing, by the UE, the power compression on a first carrier having a largest Dedicated Physical Control Channel (DPCCH) power; and performing, by the UE, the power compression on a next carrier according to a descending order of the DPCCH powers of each carrier if the transmit power after the power compression on the first carrier does not satisfy limitation of the maximum transmit power.

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| **对偶主权项** | 专利度:18特征度:8 |  |  |
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A power control method, comprising: calculating, by a user equipment (UE), a transmit power of the UE when the UE sends data through a plurality of carriers; and performing, by the UE, power compression on each carrier step by step according to property parameters of each carrier when the transmit power of the UE exceeds a maximum transmitpower; wherein the performing the power compression on each carrier step by step according to the property parameters of each carrier comprises: performing, by the UE, the power compression on a first carrier having a largest Dedicated Physical Control Channel (DPCCH) power; and performing, by the UE, the power compression on a next carrier according to a descending order of the DPCCH powers of each carrier if the transmit power after the power compression on the first carrier does not satisfy limitation of the maximum transmitpower.

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| **被引用** | 8 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.15 |

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| **同族数** | 15 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication system, base station device, mobile station device, and mobile communication method**

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| **公开号** | [US8625540](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8625540&sv=f39312d8e6b3cd6729450ee57897e868) | **公开日** | 2014/01/07 |
| **申请号** | 12/865,812 | **申请日** | 2009/01/26 |
| **授权日** | 2014/01/07 | **优先日** | 2008/02/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Uemura; Katsunari | Tsuboi; Hidekazu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A mobile communication system includes a mobile station device and a base station device. The base station device includes a cell identification information transmission unit which transmits cell identification information of base station devices transmitting radio signals of the same synchronization channel, to the mobile station device when there are at least two base station devices transmitting radio signals of the same synchronization channel within a predetermined communication area. The mobile station device includes a measurement result transmission unit which performs a measurement process based on the cell identification information of the base station devices and transmits the measurement result acquired by the measurement process to the base station device. |

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| **主权项** | 专利度:9特征度:17 |  |  |
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A mobile communication system comprising: a mobile station device, a first base station device configured to manage a serving cell of the mobile station device, and a second base station device configured to manage a cell of a handover destination for the mobile station device, wherein the first base station device notifies the mobile station device of first cell identification information of the second base station device to cause the mobile station device to start to receive second cell identification information used to determine a cell reported by the mobile station device as the cell of the handover destination, in a case that the cell of the handover destination for the mobile station device cannot be determined due to conflict of the first cell identification information of cell managed by the second base station device, the first cell identification information representing a combination of radio signals of a synchronization channel of the second base station device and being included in a measurement report message transmitted by the mobile station device, and the mobile station device receives the second cell identification information from the second base station device notified by the first cell identification information, and transmits, to the first base station, the measurement report message including the first cell identification information, and the second cell identification information received from the second base station device.

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| **对偶主权项** | 专利度:9特征度:7 |  |  |
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~~1-13. (canceled)~~A mobile communication system comprising: a mobile station device, a first base station device configured to manage a serving cell of the mobile station device, and a second base station device configured to manage a cell of a handover destination for the mobile station device, wherein the first base station device notifies the mobile station device of first cell identification information of the second base station device to cause the mobile station device to start to receive second cell identification information used to determine a cell reported by the mobile station device as the cell of the handover destination, in a case that the cell of the handover destination for the mobile station device cannot be determined due to conflict of the first cell identification information of cell managed by the second base station device, the first cell identification information representing a combination of radio signals of a synchronization channel of the second base station device and being included in a measurement report message transmitted by the mobile station device, and the mobile station device receives the second cell identification information from the second base station device notified by the first cell identification information, and transmits, to the first base station, the measurement report message including the first cell identification information, and the second cell identification information received from the second base station device.

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| **被引用** | 32 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 20 | **国家数** | 12 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Data processing during a mobile handover operation**

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| **公开号** | [US8625530](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8625530&sv=c2b9b1e8f41a4c0cf7f77645dc805fc7) | **公开日** | 2014/01/07 |
| **申请号** | 12/771,458 | **申请日** | 2010/04/30 |
| **授权日** | 2014/01/07 | **优先日** | 2007/11/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A data processing method is provided for forwarding data in the case of handover between heterogeneous networks. The data processing method includes: when a user equipment (UE) is handed over from an originating network to a receiving network, receiving, by the originating network, a data forwarding address obtained by the receiving network; creating a data forwarding tunnel between an originating network gateway and a receiving network gateway according to the data forwarding address; and forwarding data to the receiving network through the data forwarding tunnel. A data processing device is also provided. The lossless data processing solution can overcome the problem of data loss in the case of handover between heterogeneous networks in the existing technology, reduces the time of user service interruption and enhances the user experience. |

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| **主权项** | 专利度:13特征度:22 |  |  |
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A data processing method, comprising: when a user equipment (UE) is handed over from an originating network to a receiving network, receiving, by the originating network, a data forwarding address obtained by the receiving network; creating a data forwarding tunnel between an originating network gateway and a receiving network gateway according to the data forwarding address; and forwarding data to the receiving network through the data forwarding tunnel, wherein when the receiving network is a high rate packet data (HRPD) network and the originating network is an evolved UMTS terrestrial radio access network (E-UTRAN), the method further comprises: obtaining, by an HRPD access network (HRPD AN) of the HRPD network, the data forwarding address from a gateway packet data serving node (PDSN) of the HRPD network; and the process of receiving, by the originating network, the data forwarding address obtained by the receiving network comprises receiving, by a mobility management entity (MME) of the E-UTRAN, the data forwarding address from the HRPD AN.

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| **对偶主权项** | 专利度:20特征度:16 |  |  |
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A data processing method, comprising: when a user equipment (UE) is handed over from an originating network to a receiving network, receiving, by the originating network, a data forwarding address obtained by the receiving network; creating a data forwarding tunnel between an originating network gateway and a receiving network gateway according to the data forwarding address; and forwarding data to the receiving network through the data forwarding tunnel, wherein when the receiving network is a high rate packet data (HRPD) network and the originating network is an evolved UMTS terrestrial radio access network (E-UTRAN), the method further comprises: obtaining, by an HRPD access network (HRPD AN) of the HRPD network, the data forwarding address from a gateway packet data serving node (PDSN) of the HRPD network; and the process of receiving, by the originating network, the data forwarding address obtained by the receiving network comprises receiving, by a mobility management entity (MME) of the E-UTRAN, the data forwarding address from the HRPD AN.

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| **被引用** | 13 | **自引用** | 6 | **公司数** | 2 | **国家数** | 2 | **影响力** | 4.33 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for maintaining session continuity when changes occur at the terminal during a session**

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| **公开号** | [US8625527](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8625527&sv=32ac31a894c2e1e4d28a4dfd6ccaeab3) | **公开日** | 2014/01/07 |
| **申请号** | 11/649,022 | **申请日** | 2007/01/03 |
| **授权日** | 2014/01/07 | **优先日** | 2004/12/17 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Li; Hui | Gu; Jiongjiong | Zhang; Baofeng | Huang; Shibi |
| **国际 主分类** | H04W 80/04 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method and a system for maintaining session continuity, in which the system includes a Handover Source Function (HOSF), a Handover Destination Function (HODF), a Handover Anchor Function-Control Plane (HOAF-CP) and a Handover Anchor Function-User Plane (HOAF-UP). The method includes a first user establishing a connection through the HOSF with the HOAF-CP and the HOAF-UP which correspond to a second user, so as to establish a session with the second user. The method further includes that, during session handover, the HODF that corresponds to the HOSF establishing another connection with the HOAF-CP and HOAF-UP though which the first user continues the session with the second user, so as to maintain the session continuity. When access address or access technology of the terminal changes, or even the terminal changes during a session, the method and the system can logically replace the connection before the handover with a new connection to ensure the session continuity. |

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| **主权项** | 专利度:41特征度:12 |  |  |
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A method for maintaining session continuity, comprising: triggering a Handover Anchor Function-Control Plane (HOAF-CP) on a home network side of a first user, and establishing a first connection, wherein the first connection comprises a control plane first connection between a Handover Source Function (HOSF) of the first user and the HOAF-CP and a user plane first connection between the HOSF and a Handover Anchor Function-User Plane (HOAF-UP) of a second user; establishing a control plane connection between the HOAF-CP and a terminal side of the second user, and establishing a session between the first user and the second user through the user plane first connection, the control plane first connection and the control plane connection between the HOAF-CP and a terminal side of the second user; determining that a handover condition is satisfied, and establishing a second connection, wherein the second connection comprises a control plane second connection between a Handover Destination Function (HODF) of the first user and the HOAF-CP and a user plane second connection between the HODF and the HOAF-UP; and continuing the session between the first user and the second user through the user plane second connection between the HODF and the HOAF-UP, the control plane second connection between the HODF and the HOAF-CP, and the control plane connection, which is already established between the HOAF-CP and the terminal side of the second user before the handover condition is satisfied.

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| **对偶主权项** | 专利度:63特征度:25 |  |  |
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A method for maintaining session continuity,~~wherein there exists a correlated relationship between~~comprising: triggeringa Handover~~Source~~AnchorFunction~~(HOSF) and a Handover Destination Function (HODF) of a first user, comprising:Step A: the first user establishing a session with a second user via a first connection through the HOSF,~~-Control Plane (HOAF-CP) on a home network side of a first user, and establishing a first connection, wherein the first connectioncompris~~ing~~esa control plane first connection~~with~~betweena Handover~~Anchor~~SourceFunction~~-Control Plan~~(HOSF) of the first user and the~~(~~HOAF-CP~~)~~and a user plane first connection~~with~~between the HOSF anda Handover Anchor Function-User Plane (HOAF-UP)~~;Step B: when it is detected that a handover condition is satisfied, the HODF that corresponds to the HOSF~~of a second user; establishing a control plane connection between the HOAF-CP and a terminal side of the second user, and establishing a session between the first user and the second user through the user plane first connection, the control plane first connection and the control plane connection between the HOAF-CP and a terminal side of the second user; determining that a handover condition is satisfied, andestablishing a second connection,wherein the second connectioncompris~~ing~~esa control plane second connectionbetween a Handover Destination Function (HODF) of the first user and the HOAF-CPand a user plane second connection~~, respectively with~~betweenthe HO~~AF-CP~~DFand the HOA~~D~~F-UP;~~Step C: the first user continuing~~and continuing the session between the first user and the second user throughtheuse~~ssion with the second user through the second connection~~r plane second connection between the HODF and the HOAF-UP, the control plane second connection between the HODF and the HOAF-CP, and the control plane connection, which is already established between the HOAF-CP and the terminal side of the second user before the handover condition is satisfied.

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| **被引用** | 9 | **自引用** | 1 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.55 |

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| **同族数** | 10 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handover processing method and device**

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| **公开号** | [US8620326](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8620326&sv=99ca0b2d11dca0629575c59f862e229d) | **公开日** | 2013/12/31 |
| **申请号** | 13/763,227 | **申请日** | 2013/02/08 |
| **授权日** | 2013/12/31 | **优先日** | 2010/06/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Liangliang | Liu; Jing | Peng; Yan | Lin; Bo |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Brinks Gilson & Lione |

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| **摘要** |  |
| A handover processing method includes obtaining, by a relay station, information, where the information is used for determining whether a mobility management entity (MME) of a user equipment is in a mobility management entity pool (MME pool) to which a neighboring eNB belongs; and determining, by the relay station, that an X2 interface between a serving eNB of the relay station and the neighboring eNB cannot be used for handover if the MME of the user equipment is not in the MME pool to which the neighboring eNB belongs. The foregoing solutions enable the relay station to initiate a correct handover procedure. |

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| **主权项** | 专利度:13特征度:16 |  |  |
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A handover processing method, comprising: obtaining, by a relay station, a Globally Unique (GU) Group ID indicating a mobility management entity (MME) pool to which a neighboring eNodeB (eNB) belongs; determining, based on the GU Group ID, whether a MME of a user equipment served by the relay station is in the MME pool to which the neighboring eNB belongs; and determining, by the relay station, that an X2 interface between a serving eNB of the relay station and the neighboring eNB cannot be used for handover handing over the user equipment when the MME of the user equipment is not in the MME pool to which the neighboring eNB belongs.

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| **对偶主权项** | 专利度:21特征度:18 |  |  |
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A handover processing method, comprising: obtaining, by a relay station,~~information used for determining whether a mobility management entity (MME) of a user equipment is in a mobility management entity pool (~~a Globally Unique (GU) Group ID indicating a mobility management entity (MME) pool to which a neighboring eNodeB (eNB) belongs; determining, based on the GU Group ID, whether a MME of a user equipment served by the relay station is in theMME pool~~)~~to which~~a~~theneighboring eN~~odeB (eNB)~~Bbelongs; and determining, by the relay station, that an X2 interface between a serving eNB of the relay station and the neighboring eNB cannot be used for handover~~if~~handing over the user equipment whenthe MME of the user equipment is not in the MME pool to which the neighboring eNB belongs.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Quantity of antennas designating a time-frequency resource block**

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| **公开号** | [US8620310](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8620310&sv=ad151e1f7dbb8c646a7903b9777df554) | **公开日** | 2013/12/31 |
| **申请号** | 13/302,669 | **申请日** | 2011/11/22 |
| **授权日** | 2013/12/31 | **优先日** | 2009/01/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Song; Weiwei | Yu; Yinghui |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, device and system for sending and acquiring information is provided, which relates to the field of communication, for solving the problem that user equipment (UE) cannot determine whether information transmitted in a time-frequency resource block is pilot measurement information or other information, such as communication data, that result in inaccurate detection on signal quality of a neighboring cell by the UE. Antenna configuration information of the neighboring cell is acquired, and a message is sent carrying the antenna configuration information of the neighboring cell to the UE. The embodiments of the present invention can be applied in a wireless communication network. |

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| **主权项** | 专利度:30特征度:17 |  |  |
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A method of processing antenna configuration information, comprising: acquiring, by a base station of a first cell, antenna configuration information of each of all the neighboring cells of the first cell; obtaining, by the base station of the first cell, the quantity of the antennas of each of all the neighboring cells according to the antenna configuration information; sending, by the base station of the first cell, a message carrying information of the quantity of the antennas of each of all the neighboring cells to a user equipment (UE) of the first cell, the quantity of the antennas of each of all the neighboring cells being the number of the antennas in each of all the neighboring cells to be measured by the UE; and determining, by the UE, a time-frequency resource block from a plurality of time-frequency resource blocks for each neighboring cell according to the information of the quantity of the antennas of each of all the neighboring cells, the determined time-frequency resource block being used for transmitting pilot measurement information by a base station of each neighboring cell, and the plurality of time-frequency resource blocks being capable of being used for transmitting the pilot measurement information by the base station of each neighboring cell.

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| **对偶主权项** | 专利度:20特征度:14 |  |  |
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A method~~for send~~of processing antenna configuration information, comprising: acquiring, by a base station of a~~curren~~first cell,~~the~~antenna configuration information of~~a~~each of all theneighboring cell~~; and~~s of the first cell; obtaining, by the base station of the first cell, the quantity of the antennas of each of all the neighboring cells according to the antenna configuration information;sending, by the base stationof the first cell, a message carrying~~the antenna configuration information of the neighboring cell to a user equipment (UE) of the current~~information of the quantity of the antennas of each of all the neighboring cells to a user equipment (UE) of the first cell, the quantity of the antennas of each of all the neighboring cells being the number of the antennas in each of all the neighboring cells to be measured by the UE; and determining, by the UE, a time-frequency resource block from a plurality of time-frequency resource blocks for each neighboring cell according to the information of the quantity of the antennas of each of all the neighboring cells, the determined time-frequency resource block being used for transmitting pilot measurement information by a base station of each neighboring cell, and the plurality of time-frequency resource blocks being capable of being used for transmitting the pilot measurement information by the base station of each neighboringcell.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.2 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication method, mobile communication system and access entity**

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| **公开号** | [US8619648](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8619648&sv=dfc31d70eb3b6f72a86c79361a0011b6) | **公开日** | 2013/12/31 |
| **申请号** | 13/717,179 | **申请日** | 2012/12/17 |
| **授权日** | 2013/12/31 | **优先日** | 2006/11/03 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong | Liu; Lan |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| An embodiment of the invention provides a communication system. The communication system includes a user equipment which is moving within a coverage of a first network and a second network and is configured to send a location update request to a third access entity of the second network; and the third access entity which is configured to receive the location update request from the user equipment, acquire information of a first access entity of the first network from the location update request and determine whether a predetermined condition is satisfied If the predetermined condition is not satisfied, the user equipment is paged through the first access entity, and if the predetermined condition is satisfied, the user equipment is not paged through the first access entity. As such, the situation that the UE is paged in an area where it is unlikely to appear can be avoided. |

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| **主权项** | 专利度:4特征度:21 |  |  |
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A method for mobile communication where a user equipment is moving within a coverage of a first network and a second network, wherein the user equipment is registered with both a first access entity of the first network and a second access entity of the second network, and a first association is established between the first access entity and the second access entity so that when the user equipment needs to be paged, the user equipment is paged in a first paging area administered by the first access entity and a second paging area administered by the second access entity according to the first association, and the method comprising: receiving, by a user plane equipment, a first message from a third access entity of the second network, wherein the first message is used to inform the user plane equipment to implement one step of the group consisting of: (a) prohibiting data or a paging request from being sent to the first access entity, and (b) deleting a bearer of the first access entity; wherein, the first message is sent by the third access entity if a predetermined condition is satisfied, the predetermined condition comprises one or more of the following: (i) a distance between an area where the user equipment is currently located and the first paging area administered by the first access entity exceeds a predete~~r~~imined threshold; (ii) the third access entity cannot be associated with the first access entity; and (iii) a speed of the user equipment in a current access entity system is lower than a threshold.

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| **对偶主权项** | 专利度:4特征度:11 |  |  |
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A method for mobile communication where a user equipment is moving within a coverage of a first network and a second network, wherein the user equipment is registered with both a first access entity of the first network and a second access entity of the second network, and a first association is established between the first access entity and the second access entity so that when the user equipment needs to be paged, the user equipment is paged in a first paging area administered by the first access entity and a second paging area administered by the second access entity according to the first association, and the method comprising: receiving, by a user plane equipment, a first message from a third access entity of the second network, wherein the first message is used to inform the user plane equipment to implement one step of the group consisting of: (a) prohibiting data or a paging request from being sent to the first access entity, and (b) deleting a bearer of the first access entity; wherein, the first message is sent by the third access entity if a predetermined condition is satisfied, the predetermined condition comprises one or more of the following: (i) a distance between an area where the user equipment is currently located and the first paging area administered by the first access entity exceeds a predeteimined threshold; (ii) the third access entity cannot be associated with the first access entity; and (iii) a speed of the user equipment in a current access entity system is lower than a threshold.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.9 |

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| **同族数** | 14 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for accessing and obtaining user equipment context and user equipment identity**

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| **公开号** | [US8619618](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8619618&sv=4a454479223f2e42bcd00119ee22a441) | **公开日** | 2013/12/31 |
| **申请号** | 13/648,910 | **申请日** | 2012/10/10 |
| **授权日** | 2013/12/31 | **优先日** | 2008/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and device for accessing and obtaining UE context and UE identity are provided. The method for access includes: when a UE accesses an SAE network, judging, by a network node, whether a GUMMEI carried by the UE or an MMEGI in the GUMMEI is allocated or mapped by the SAE network; if the GUMMEI or MMEGI is allocated by the SAE network, selecting, by the network node, an MME according to the GUMMEI, or according to the MMEGI and an MMEC, or according to a PLMN-id, the MMEGI and the MMEC; and if the GUMMEI or MMEGI is mapped by the SAE network, selecting, by the network node, an MME according to an MCC, an MNC and an MMEC in the GUMMEI. Therefore, the access of the UE is achieved. |

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| **主权项** | 专利度:11特征度:25 |  |  |
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A method for access, comprising: judging, by a first Mobility Management Entity (MME), whether a Global Unique Temporary Identity (GUTI) of a user equipment (UE) is allocated by a System Architecture Evolution (SAE) network or mapped from a temporary identity of a Second Generation/Third Generation (2G/3G) network; when the GUTI is allocated by the SAE network, transmitting, by the first MME, the GUTI to an old MME and receiving a UE context of the UE from the old MME, wherein the UE context of the UE is sent by the old MME according to the GUTI; or when the GUTI is mapped from the temporary identity of the 2G/3G network, reconstructing, by the first MME, an old Routing Area Identification (old RAI) and a Packet Temporary Mobile Subscriber Identity (P-TMSI) from the GUTI, transmitting the old RAI and the P-TMSI to an old Serving General Packet Radio Service (GPRS) Support Node (old SGSN), and receiving the UE context of the UE from the old SGSN, wherein the UE context of the UE is sent by the old SGSN based on the old RAI and the P-TMSI.

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| **对偶主权项** | 专利度:11特征度:15 |  |  |
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A method for access, comprising: judging, by afirstMobility Management Entity (MME), whether a Global Unique Temporary Identity (GUTI) of a user equipment (UE) is allocated by a System Architecture Evolution (SAE) network or mapped from a temporary identity of a Second Generation/Third Generation (2G/3G) network;~~if~~whenthe GUTI is allocated by the SAE network, transmitting, by thefirstMME, the GUTI to an old MME and receiving a UE context of the UE from the old MME, wherein the UE context of the UE is sent by the old MME according to the GUTI;~~and if~~or whenthe GUTI is mapped from the temporary identity of the 2G/3G network, reconstructing, by thefirstMME, an old Routing Area Identification (old RAI) and a Packet Temporary Mobile Subscriber Identity (P-TMSI) from the GUTI, transmitting the old RAI andtheP-TMSI to an old Serving General Packet Radio Service (GPRS) Support Node (old SGSN), and receiving the UE context of the UE from the old SGSN, wherein the UE context of the UE is sent by the old SGSN based on the old RAI and the P-TMSI.

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| **被引用** | 26 | **自引用** | 7 | **公司数** | 1 | **国家数** | 2 | **影响力** | 2.58 |

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| **同族数** | 31 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Measurement control method, user equipment and network-side device**

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| **公开号** | [US8615244](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8615244&sv=4aab5f8702593f618c9ee11a73166b68) | **公开日** | 2013/12/24 |
| **申请号** | 13/676,890 | **申请日** | 2012/11/14 |
| **授权日** | 2013/12/24 | **优先日** | 2007/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yu; Yinghui |
| **国际 主分类** | H04W 24/10 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A measurement control method is disclosed. A user equipment (UE) receives measurement indication information from a network and initiated by the network. The measurement indication information includes an identification of an area of a current cell where the UE is located. The UE determines whether the identified area is within a preferred area of the UE. The UE performs a measurement process if the identified area is not within a preferred area of the UE. |

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| **主权项** | 专利度:13特征度:12 |  |  |
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A measurement control method, comprising: receiving, by a user equipment (UE), measurement indication information from a network, the measurement indication information including an identification about a first area where a current cell belongs to, the current cell being a cell where the UE is currently located; determining, by the UE, whether the first area is within a preferred area of the UE, according to the identification about the first area; reading, by the UE, a broadcast message about a neighboring cell, wherein the broadcast message includes an identification about a second area where the neighboring cell belongs to; determining, by the UE, whether the second area is within the preferred area of the UE according to the identification about the second area; performing, by the UE, a measurement on a frequency layer where the neighboring cell is located, if the first area is not within the preferred area of the UE, and the second area is within the preferred area of the UE; and moving, by the UE, from the current cell to the neighboring cell upon determining, according to the measurement, that the neighboring cell satisfies a reselection condition of the UE.

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| **对偶主权项** | 专利度:28特征度:24 |  |  |
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A measurement control method, comprising: receiving, by a user equipment (UE), measurement indication information from a~~network and initiated by the~~network, the measurement indication information including an identification~~of an area of~~about a first area where a current cell belongs to, thecurrent cellbeing a cellwhere the UE iscurrentlylocated; determining, by the UE, whether the~~identified area is within a preferred area of the UE; and performing, by the UE, a measurement process if the identified area is not~~first area is within a preferred area of the UE, according to the identification about the first area; reading, by the UE, a broadcast message about a neighboring cell, wherein the broadcast message includes an identification about a second area where the neighboring cell belongs to; determining, by the UE, whether the second area is within the preferred area of the UE according to the identification about the second area; performing, by the UE, a measurement on a frequency layer where the neighboring cell is located, if the first area is not within the preferred area of the UE, and the second area iswithin~~a~~thepreferred area of theUE; and moving, by the UE, from the current cell to the neighboring cell upon determining, according to the measurement, that the neighboring cell satisfies a reselection condition of theUE.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for negotiating security during handover between different radio access technologies**

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| **公开号** | [US8611949](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8611949&sv=795d458ab6c510e02989d8109081e56b) | **公开日** | 2013/12/17 |
| **申请号** | 12/617,175 | **申请日** | 2009/11/12 |
| **授权日** | 2013/12/17 | **优先日** | 2007/05/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xu; Xiaoying | Chen; Jing |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and apparatus of security negotiation for handover between different radio access technologies are provided. The method includes: transmitting the security information of the NAS and AS selected by the target system to the UE when the UE hands over between different radio access technologies. Therefore, the UE can perform security negotiation with the target system according to the security information of the NAS and AS. Through the embodiments of the present invention, the UE may obtain the key parameter information of the NAS and AS selected by the LTE system and perform security negotiation with the LTE system when the UE hands over from a different system, such as a UTRAN, to an LTE system. |

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| **主权项** | 专利度:12特征度:11 |  |  |
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A method for security negotiation during a handover between different radio access technologies, comprising: when a user equipment (UE) hands over between the different radio access technologies, including security information of a Non Access Stratum (NAS) and security information of an Access Stratum (AS) selected by the target system in a transparent container, wherein the security information of the NAS and the security information of the AS are used for the security negotiation between the target system and the UE; and transmitting the transparent container to the UE, so that the UE can perform the security negotiation with the target system according to the security information of the NAS and the security information of the AS included in the transparent container.

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| **对偶主权项** | 专利度:18特征度:6 |  |  |
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A method for~~negotiating~~securitynegotiationduringahandover between different radio access technologies, comprising:~~transmitt~~when a user equipment (UE) hands over between the different radio access technologies, including security information of a Non Access Stratum (NAS) and security information of an Access Stratum (AS) selected by~~a~~thetarget system~~to~~ina~~User Equipment (UE) when the UE hands over between the different radio access technologies, the security information of the NAS and the security information of the AS are used to~~transparent container, wherein the security information of the NAS and the security information of the AS are used for the security negotiation between the target system and the UE; and transmitting the transparent container to the UE, so that the UE canperform~~ed~~the security negotiation with the target system~~by the UE~~according to the security information of the NAS and the security information of the AS included in the transparent container.

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| **被引用** | 15 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.65 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Systems and methods for generating sequences that are nearest to a set of sequences with minimum average cross-correlation**

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| **公开号** | [US8611440](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8611440&sv=0072f97c35ddf9e755d2c7e2e1045581) | **公开日** | 2013/12/17 |
| **申请号** | 11/928,092 | **申请日** | 2007/10/30 |
| **授权日** | 2013/12/17 | **优先日** | 2007/10/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Kowalski; John M. |
| **国际 主分类** | H04K 1/10 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for generating sequences that are nearest to a set of sequences with minimum average cross-correlation is described. Each element of a set of sequences is projected to a nearest constellation point. The set of sequences is converted into a time domain representation. An inverse discrete Fourier Transform (IDFT) is performed on the set of sequences. A cubic metric of each sequence of the set of sequences is evaluated. A sequence is removed from the set if the cubic metric exceeds a threshold. A minimum maximum cross-correlation is obtained for the set of sequences. |

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| **主权项** | 专利度:18特征度:12 |  |  |
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A method for generating sequences that are nearest to a set of sequences with minimum average cross-correlation, comprising: projecting, by a communications device, each element of the set of sequences to a nearest constellation point; converting, by the communications device, the set of sequences into a time domain representation; producing, by the communications device, a number of orthogonal cyclic shifts equal to a sequence length for each element in the set of sequences; performing, by the communications device, an inverse discrete Fourier Transform (IDFT) on the set of sequences; evaluating, by the communications device, a cubic metric of each root sequence of the set of sequences, each root sequence being identical to an original sequence; removing from the set of sequences, by the communications device, each sequence associated with each of the root sequence having the cubic metric that exceeds a threshold; and obtaining, by the communications device, a minimum, maximum cross-correlation for the set of sequences.

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| **对偶主权项** | 专利度:20特征度:9 |  |  |
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A method for generating sequences that are nearest to a set of sequences with minimum average cross-correlation, comprising:projecting, by a communications device,each element of~~a~~theset of sequences to a nearest constellation point;converting, by the communications device,the set of sequences into a time domain representation;~~performing~~producing, by the communications device, a number of orthogonal cyclic shifts equal to a sequence length for each element in the set of sequences; performing, by the communications device,an inverse discrete Fourier Transform (IDFT) on the set of sequences;evaluating, by the communications device,a cubic metric of eachrootsequence of the set of sequences~~;removing a sequence from the set if~~, each root sequence being identical to an original sequence; removing from the set of sequences, by the communications device, each sequence associated with each of the root sequence havingthe cubic metricthatexceeds a threshold; andobtaining, by the communications device,a minimum,maximum cross-correlation for the set of sequences.

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| **被引用** | 17 | **自引用** | 0 | **公司数** | 2 | **国家数** | 3 | **影响力** | 2.96 |

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| **同族数** | 1 | **国家数** | 1 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Communication terminal apparatus, communication control apparatus, communication system, and communication method**

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| **公开号** | [US8611246](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8611246&sv=38680e01c0181a26c32fa03765c4f831) | **公开日** | 2013/12/17 |
| **申请号** | 13/335,471 | **申请日** | 2011/12/22 |
| **授权日** | 2013/12/17 | **优先日** | 2005/09/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Nogami; Toshizo | Onodera; Takashi | Tsuboi; Hidekazu | Shitara; Shoichi |
| **国际 主分类** | H04Q 7/00 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| To perform scheduling for improving throughput, while suppressing control information amounts notified from communication terminal apparatuses. A communication terminal apparatus (200) that is provided with a receiving section (220) that receives a control signal from the communication control apparatus, a reception quality measuring section (250) that measures reception quality of each of the channels, a reception quality information generating section (260) which selects part of channels as selection channels from the plurality of channels, and generates reception quality information to notify the communication-destination apparatus of selection channel information for identifying selected selection channels and reception quality measurement results in the selected selection channels, and a transmitting section (290) that transmits the generated reception quality information to the communication control apparatus, wherein the receiving section (220) receives a data signal assigned to at least one channel contained in the selection channels from the communication control apparatus (100). |

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| **主权项** | 专利度:13特征度:6 |  |  |
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A terminal apparatus that performs communications with a base station using a plurality of frequency channels, the apparatus comprising: a reception quality measuring section that measures reception quality; a selection channel selecting section that selects part of frequency channels as selection channels from the plurality of frequency channels; and a reception quality information generating section which generates first information for identifying the selection channels, second information indicating reception quality of the selection channels, and third information indicating one reception quality of whole of the plurality of frequency channels; and a transmitting section that transmits each of the first, second, and third information to the base station.

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| **对偶主权项** | 专利度:17特征度:19 |  |  |
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A~~communication contro~~terminal apparatus that performs communications with a~~communication terminal apparatus using a plurality of channels, comprising: a receiving section that receives from the communication terminal apparatus reception quality information to notify selection channel information for identifying selection channels obtained by selecting part of~~base station using a plurality of frequency channels, the apparatus comprising: a reception quality measuring section that measures reception quality; a selection channel selecting section that selects part of frequency channels as selectionchannels from the plurality offrequencychannels;andareception quality~~of the selected selection channels; a scheduler section that determines a channel to assign transmission data of which destination is the communication terminal apparatus based on the reception quality~~informationgenerating section which generates first information for identifying the selection channels, second information indicating reception quality of the selection channels, and third information indicating one reception quality of whole of the plurality of frequency channels; and a transmitting section that transmits~~the transmission data of which destin~~each of the first, second, and third information~~is~~tothe~~communication terminal apparatus~~base station.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for heterogeneous addressing mapping**

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| **公开号** | [US8605736](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8605736&sv=c48e665487aeef1573681933619bf6fd) | **公开日** | 2013/12/10 |
| **申请号** | 12/761,265 | **申请日** | 2010/04/15 |
| **授权日** | 2013/12/10 | **优先日** | 2007/11/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Ying | Yu; Yijun | Yin; Yu |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for heterogeneous addressing mapping is provided according to the embodiments of the present invention. The method includes: assigning, by an Interworking Function entity (IWF), a first identification or a first address to a Diameter protocol node; mapping a received Diameter protocol message sent from the Diameter protocol node into a Mobile Application Part (MAP) protocol message, and sending the mapped MAP protocol message to an MAP protocol node using the first address assigned by the IWF as a source address or using the first identification assigned by the IWF as a source identification. The present invention also provides a system and an apparatus for heterogeneous addressing mapping. According to the embodiments of the present invention, when the Diameter node is communicating with the MAP node via the Interworking Function entity, the method for mapping the node identification for each other as well as the addressing relationship corresponding to each identification are provided. Thus, the problems that the communication with each other cannot be realized due to different identification addressing approaches are solved. |

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| **主权项** | 专利度:20特征度:21 |  |  |
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A method for heterogeneous addressing mapping, comprising: assigning, by an Interworking Function entity (IWF), for a Diameter protocol node that utilizes a domain name approach for addressing one of the group consisting of: a first identification, and a first address; mapping a received Diameter protocol message sent from the Diameter protocol node into a Mobile Application Part (MAP) protocol message; and sending the MAP protocol message to an MAP protocol node that utilizes an Integrated Service Digital Network (ISDN) by implementing one of the group consisting of: (a) using the first address assigned by the IWF as a source address; and (b) using the first identification assigned by the IWF as a source identification.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A method for heterogeneous addressing mapping, comprising: assigning, by an Interworking Function entity (IWF),~~a first identification or a first address for a Diameter protocol node;~~for a Diameter protocol node that utilizes a domain name approach for addressing one of the group consisting of: a first identification, and a first address;mapping a received Diameter protocol message sent from the Diameter protocol node into a Mobile Application Part (MAP) protocol message; and sending the~~mapped~~MAP protocol message to an MAP protocol node~~using one of~~that utilizes an Integrated Service Digital Network (ISDN) by implementing one of the group consisting of: (a) usingthe first address assigned by the IWF as a source address;and(b) usingthe first identification assigned by the IWF as a source identification.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for session modification**

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| **公开号** | [US8601533](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8601533&sv=bc56668e11d3e67da481cdc8f625d00c) | **公开日** | 2013/12/03 |
| **申请号** | 12/728,026 | **申请日** | 2010/03/19 |
| **授权日** | 2013/12/03 | **优先日** | 2007/09/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Huadong | Zhi; Chunxia | Guo; Yali |
| **国际 主分类** | G06F 17/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and system for session modification are provided. The method includes these steps: A home policy and charging rules function (h-PCRF) sends a policy and charging control (PCC) rule providing message to a first policy and charging enforcement function (PCEF) according to a received PCC rule request message, an application layer service message, or an h-PCRF self-trigger event; and the h-PCRF sends a PCC rule providing message to a second PCEF according to a PCC rule response message received from the first PCEF. With this present disclosure, session modification may be implemented when two or more PCEFs are included in the PCC architecture of a system architecture evolution (SAE) system. |

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| **主权项** | 专利度:26特征度:17 |  |  |
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A method for session modification comprising: sending, by a network entity configured with a home policy and charging rules function (the h-PCRF network entity), a first policy and charging control (PCC) rule providing message to a packet data network gateway configured with a policy and charging enforcement function (PCEF b) according to a PCC rule request message received from an access gateway configured with an additional policy and charging enforcement function (PCEF a); receiving, by the h-PCRF network entity, a PCC rule response message from the packet data network gateway; and sending, by the h-PCRF network entity, a second PCC rule providing message to the access gateway according to the PCC rule response message received from the packet data network gateway.

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| **对偶主权项** | 专利度:20特征度:20 |  |  |
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A method for session modification~~,~~comprising: sending, by anetwork entity configured with ahome policy and charging rules function~~,~~(theh-PCRFnetwork entity), a first policy and charging control~~,~~(PCC~~,~~)rule providing message to a~~first~~packet data network gateway configured with apolicy and charging enforcement function (PCEFb) according to a~~received~~PCC rule request message~~, an application layer servi~~received from an access gateway configured with an additional policy and charging enforceme~~ssage, or an h-PCRF self-trigger eve~~ntfunction (PCEF a); receiving, by the h-PCRF network entity, a PCC rule response message from the packet data network gateway; and sending, by the h-PCRFnetwork entity, a second PCC rule providing message to~~a second policy and charging enforcement function,~~the access gatewayaccording to~~a~~thePCC rule response message received from the~~first PCEF~~packet data network gateway.

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| **被引用** | 15 | **自引用** | 2 | **公司数** | 2 | **国家数** | 3 | **影响力** | 2.10 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Systems and methods for maintaining constant closed subscriber group cell reselection radius**

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| **公开号** | [US8600370](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8600370&sv=d163b8fba395eab7dedeedbd10e8ef95) | **公开日** | 2013/12/03 |
| **申请号** | 12/264,846 | **申请日** | 2008/11/04 |
| **授权日** | 2013/12/03 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Choudhury; Sayantan | Park; Kenneth James | Khoshnevis; Ahmad |
| **国际 主分类** | H04W 4/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for self-configuration of offset factors between two base stations in a wireless communications system is described. A first offset factor is sent to a first user equipment (UE) by a first base station. An offset factor is an indication of the reselection area around a home evolved nodeB (HeNB). A second offset factor is received from a second UE. The first offset factor is modified using the second offset factor. The modified first offset factor is sent to the first UE. |

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| **主权项** | 专利度:37特征度:17 |  |  |
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A method for adaptive pilot power transmission for a home evolved NodeB (HeNB) in a cell, the method comprising: establishing, by the HeNB, a re-selection area around the HeNB in accordance with an offset factor, an HeNB pilot power level of the HeNB, and a path loss; measuring, by the HeNB, a pilot power of a pilot signal received from a macro evolved NodeB (eNodeB); estimating, by the HeNB, an updated path loss in accordance with the measured pilot power; and adjusting, by the HeNB, the HeNB pilot power level in accordance with the updated path loss in order to maintain the re-selection area around the HeNB without adjusting the offset factor, wherein adjusting the HeNB pilot power level in accordance with the updated path loss in order to maintain the re-selection area around the HeNB without adjusting the offset factor comprises adjusting the HeNB pilot power level to maintain a radius of the re-selection area above or below a threshold.

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| **对偶主权项** | 专利度:40特征度:13 |  |  |
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A method for~~self-configuration of offset factors between two base stations in a wireless communications system, the method comprising: send~~adaptive pilot power transmission for a home evolved NodeB (HeNB) in a cell, the method comprising: establishing, by the HeNB, a re-selection area around the HeNBin~~g~~a~~first offset factor to a first user equipment (UE) by a first base station, wherein an offset factor is an indication of~~ccordance with an offset factor, an HeNB pilot power level of the HeNB, and a path loss; measuring, by the HeNB, a pilot power of a pilot signal received from a macro evolved NodeB (eNodeB); estimating, by the HeNB, an updated path loss in accordance with the measured pilot power; and adjusting, by the HeNB, the HeNB pilot power level in accordance with the updated path loss in order to maintainthe re-selection area around~~a home evolved nodeB (HeNB); receiv~~the HeNB without adjusting the offset factor, wherein adjusting the HeNB pilot power levelin~~g~~a~~second offset factor from a second UE; modify~~ccordance with the updated path loss in order to maintain the re-selection area around the HeNB without adjusting the~~first~~offset factorcomprises adjusting the~~second offset factor; and sending the modified first offset factor to the first UE~~HeNB pilot power level to maintain a radius of the re-selection area above or below a threshold.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.37 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus of determining a set of zero correlation zone lengths**

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| **公开号** | [US8599974](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8599974&sv=93dc23eb3a5cdb0af2221e89a342bf08) | **公开日** | 2013/12/03 |
| **申请号** | 12/605,616 | **申请日** | 2009/10/26 |
| **授权日** | 2013/12/03 | **优先日** | 2007/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Mauritz; Oskar |
| **国际 主分类** | H03D 1/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method of determining a set of Zero Correlation Zone (ZCZ) lengths, comprises: determining the length of a root sequence, and selecting such a set of ZCZ lengths that, for any cell radius, the maximum number of preambles obtained from a ZCZ length which is selected from the selected set of ZCZ lengths is closest to the maximum number of preambles determined from a ZCZ length which is selected from the set of all integers, wherein the maximum number of preambles is determined from the length of the root sequence and a ZCZ length selected. This disclosure provides a technical solution for selecting a better limited set of ZCZ lengths by which signaling overload is reduced. |

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| **主权项** | 专利度:17特征度:6 |  |  |
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A method of determining a set of Zero Correlation Zone, ZCZ, lengths of a mobile communication system, comprising: selecting~~, by an appatatus of the mobile communication system,~~a set of cyclic shift increments~~NCS(k), the set of~~comprising onecycl~~e~~icshift increment~~s~~NCS~~(k) comprising one~~=0 and K+1 non-zerocyclic shift increments NCS~~=0~~(k) values; determining~~by the apparatus,~~a set of ZCZ lengths by decreasing each non-zero cyclic shift increment of the set of cyclic shift increments~~NCS(k)~~by 1,wherein the set of cyclic shift increments is used for generating random access preambles, andnon-zero cyclic shift increments~~of~~NCS(k) inthe set of cyclic shift increments NCS(k)~~being~~aregenerated~~in accordance~~with the following formula:NCS(k)=└NZC/[Npre(0)×ak+a/(1−a)×(ak−1)]┘, k=0, 1, 2 . . .~~14;~~K;wherein └x┘ denotes the maximum integer not greater than x, [x] denotes rounding x,a=0.856, Npre(0)=64 and NZC=839.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method of determining a set of Zero Correlation Zone, ZCZ, lengths of a mobile communication system, comprising: selecting a set of cyclic shift increments comprising one cyclic shift increment NCS=0 and K+1 non-zero cyclic shift increments NCS(k) values; determining a set of ZCZ lengths by decreasing each non-zero cyclic shift increment of the set of cyclic shift increments by 1, wherein the set of cyclic shift increments is used for generating random access preambles, and non-zero cyclic shift increments NCS(k) in the set of cyclic shift increments NCS(k) are generated with the following formula:NCS(k)=└NZC/[Npre(0)×ak+a/(1−a)×(ak−1)]┘, k=0, 1, 2 . . . K; wherein └x┘ denotes the maximum integer not greater than x, [x] denotes rounding x, a=0.856, Npre(0)=64 and NZC=839.

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| **被引用** | 2 | **自引用** | 2 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.75 |

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| **同族数** | 27 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device, and system for configuring multicast broadcast single frequency network resources**

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| **公开号** | [US8599754](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8599754&sv=fd551e08b501cb0917b49570e83185e3) | **公开日** | 2013/12/03 |
| **申请号** | 13/050,147 | **申请日** | 2011/03/17 |
| **授权日** | 2013/12/03 | **优先日** | 2008/09/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Bingzhao | Lin; Bo | Lv; Boya |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| In the field of mobile communication, a method, device, and system for configuring multicast broadcast single frequency network (MBSFN) resources are provided, so as to solve the problem that configuration information of each radio network controller (RNC) in an MBSFN cannot be dynamically synchronized. With the coordination of a master RNC, a multimedia broadcast multicast service (MBMS) configuration information message is transferred through IUR interface connection, and MBMS configuration information of the master RNC and each slave RNC is synchronized. In this way, the problem that configuration information of each RNC in an MBSFN cannot be dynamically synchronized is solved, thereby satisfying the demands of soft combing and air interface combining. |

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| **主权项** | 专利度:13特征度:14 |  |  |
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A method for configuring multicast broadcast single frequency network (MBSFN) resources, wherein the MBSFN comprises at least two radio network controllers (RNCs), the method comprising: serving, by one of the at least two RNCs, as a master RNC, and serving, by other RNC or RNCs, as a slave RNC; generating, by the master RNC, a multimedia broadcast multicast service (MBMS) configuration information message; and sending, by the master RNC, the MBMS configuration information message to the slave RNC.

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| **对偶主权项** | 专利度:13特征度:15 |  |  |
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A method for configuring multicast broadcast single frequency network~~,~~(MBSFN~~,~~)resources, wherein the MBSFN comprises at least two radio network controllers~~,~~(RNCs), the method comprising: serving, by one of the at least two RNCs, as a master RNC, and serving, by other RNC or RNCs, as a slave RNC; generating, by the master RNC, a multimedia broadcast multicast service~~,~~(MBMS~~,~~)configuration information message; and sending, by the master RNC, the MBMS configuration information message to the slave RNC.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.1 |

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| **同族数** | 4 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System, method and apparatus for implementing multimedia call continuity**

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| **公开号** | [US8594013](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8594013&sv=099a2ce536363558f532b0a9c56e14a7) | **公开日** | 2013/11/26 |
| **申请号** | 12/470,769 | **申请日** | 2009/05/22 |
| **授权日** | 2013/11/26 | **优先日** | 2006/11/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Dongjun |
| **国际 主分类** | H04W 80/04 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A system, method, and apparatus for implementing multimedia call continuity solve the problem that when a domain transfer happens, part of a media flow in a multimedia session cannot be transfer between bearers of different access modes. Besides a remote UE, the system further includes a multi-mode terminal MTF UE that supports media flow transfer between multiple modes and carries media flow transfer context information in an initiated media stream transfer request, and a media transfer function (MTF) that acts as an agent to initiate and perform a media renegotiation with the remote UE, according to the media flow transfer context information carried in the request. After the media renegotiation, the MTF UE or the MTF is adapted to release the media flow that needs to be transferred before the media renegotiation. Therefore, when a domain transfer happens, the media stream can be transferred between the bearers of different access modes that the MTF UE supports. |

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| **主权项** | 专利度:17特征度:23 |  |  |
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A media transfer function (MTF) user equipment (UE), comprising: a transfer unit adapted to support transfer of media flows between multiple access networks; an initiating unit adapted to initiate a media flow transfer request to a network side, according to an indication of the transfer unit; an information adding unit adapted to add media flow transfer context information in the media flow transfer request initiated by the initiating unit, the media flow transfer context information at least comprises: identification information of one of media components to be transferred, information of a media flow component supported by the MTF UE in a transferred-in access network, and a replacement indication; and a release unit adapted to release the media flow to be transferred before a media renegotiation after knowing that the network side implements the media renegotiation, according to the media flow transfer context information added by the information adding unit.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A media transfer function (MTF) user equipment (UE), comprising:a transfer unit adapted to support~~the~~transfer of media flows between multiple access networks;an initiating unit adapted to initiate a media flow transfer request to a network side, according to an indication of the transfer unit;an information adding unit adapted to add media flow transfer context information in the media flow transfer request initiated by the initiating unit, the media flow transfer context information at least comprises: identification information of one of media components to be transferred, information of a media flow component supported by the MTF UE in a transferred-in access network, and a replacement indication; anda release unit adapted to release the media flow to be transferred before a media renegotiation after knowing that the network side implements the media renegotiation, according to the media flow transfer context information added by the information adding unit.

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.20 |

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| **同族数** | 15 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, equipment for submitting a measurement report**

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| **公开号** | [US8588702](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8588702&sv=3aeb184b42a279e025b65052a553771d) | **公开日** | 2013/11/19 |
| **申请号** | 13/101,395 | **申请日** | 2011/05/05 |
| **授权日** | 2013/11/19 | **优先日** | 2008/11/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xiao; Dengkun | He; Yuan | Han; Jing | Liu; YuHong |
| **国际 主分类** | H04B 17/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method, relevant equipment and system for determining a User Equipment (UE) or UEs affecting a neighboring cell are disclosed. The method for determining UE or UEs affecting a neighboring cell includes: receiving load information sent by a neighboring cell, where the load information indicates an interfered Physical Resource Block (PRB) of the neighboring cell; determining a UE or UEs that occupy, when scheduling is performed, the interfered PRB; determining UEs located in an Inter-Cell Interference Coordination (ICIC) measurement area corresponding to the neighboring cell; and obtaining an intersection of the UE or UEs that occupy, when scheduling is performed, the interfered PRB and the UE or UEs located in the ICIC measurement area corresponding to the neighboring cell. The technical solution under the present invention enables accurate determining of the UE or UEs that affect the neighboring cell. |

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| **主权项** | 专利度:8特征度:9 |  |  |
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A method for receiving a measurement report, comprising: receiving, by a serving cell NodeB, carrier aggregation related information sent by a neighboring cell NodeB, wherein the carrier aggregation related information including a mapping relation between a carrier indication and a carrier; obtaining, by the serving cell NodeB, the mapping relation between the carrier indication and the carrier from the carrier aggregation related information; receiving, by the serving cell NodeB, a measurement report sent by a User Equipment (UE), wherein the measurement report includes a measurement parameter and a carrier indication indicating a carrier corresponding to the measurement parameter; and determining, by the serving cell NodeB, the carrier corresponding to the measurement parameter according to the obtained mapping relation between the carrier indication and the carrier.

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| **对偶主权项** | 专利度:12特征度:18 |  |  |
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A method for~~submitt~~receiving a measurement report, comprising:~~measuring multiple carriers of a neighboring cell, and obtaining measurement parameters of~~receiving, by a serving cell NodeB, carrier aggregation related information sent by a neighboring cell NodeB, wherein the carrier aggregation related information including a mapping relation between a carrier indication and a carrier; obtaining, by the serving cell NodeB, the mapping relation betweenthe c~~o~~arr~~esponding carriers; and~~ier indication and the carrier from the carrier aggregation related information; receiving, by these~~nd~~rvingcell NodeB,a measurement report~~to~~sent byaUser~~ving cell NodeB~~Equipment (UE), wherein the measurement report~~comprises the obtained~~includes ameasurement parameter~~s~~andacarrier indication~~s~~indicatingacarrier~~s~~corresponding to the~~obtained measurement parameters~~measurement parameter; and determining, by the serving cell NodeB, the carrier corresponding to the measurement parameter according to the obtained mapping relation between the carrier indication and the carrier.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.9 |

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| **同族数** | 5 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for determining search space, and method and device for determining candidate control channel resources**

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| **公开号** | [US8588246](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8588246&sv=8d1f758ae3f5b98260a12af9aab56c48) | **公开日** | 2013/11/19 |
| **申请号** | 13/725,044 | **申请日** | 2012/12/21 |
| **授权日** | 2013/11/19 | **优先日** | 2009/08/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Li; Chaojun | Xue; Lixia | Qu; Bingyu | Guan; Lei | Yu; Zheng |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for determining a search space includes determining the number of downlink control information bits of each type of control channel currently required to be monitored by a UE. A temporary search space corresponding to the each type of control channel is determined according to a mapping relationship currently used by the UE. It is determined that an actual search space corresponding to a selected type of control channel is all or a part of CCEs of a union of temporary search spaces corresponding to all or a part of control channels with the same number of the downlink control information bits when the DCI bit number of one or more other control channels is the same as the DCI bit number of the selected type of control channel. |

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| **主权项** | 专利度:21特征度:15 |  |  |
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A method for determining a search space, the method comprising: determining a number of downlink control information bits of each type of control channel currently required to be monitored by a user equipment (UE); determining a temporary search space corresponding to each component carrier for carrying a data channel according to a mapping relationship between a component carrier for carrying a data channel and a component carrier for carrying a control channel, wherein the mapping relationship is currently used by the UE; determining a temporary search space corresponding to each type of control channel currently required to be monitored by the UE, according to a control channel corresponding to a component carrier of the UE for carrying a data channel and the temporary search space corresponding to each component carrier for carrying a data channel; and determining that an actual search space corresponding to a selected type of control channel with a first number of the downlink control information bits is all control channel elements (CCEs) of a union of temporary search spaces corresponding to all or a part of control channels with the first number of the downlink control information bits, or a part of the CCEs of the union of the temporary search spaces corresponding to all or a part of the control channels with the first number of the downlink control information bits, for control channels that are currently required to be monitored by the UE and are of a same CCE aggregation level, when there are one or more other types of control channels with the first number of the downlink control information bits; wherein the control channels that are currently required to be monitored by the UE and are of the same CCE aggregation level comprise the selected type of control channel and the one or more other types of control channels with the first number of the downlink control information bits, and the all or a part of control channels with the first number of the downlink control information bits are all or a part of control channels in a union of the one or more other types of control channels with the first number of the downlink control information bits and the selected type of control channel with the first number of the downlink control information bits.

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| **对偶主权项** | 专利度:23特征度:22 |  |  |
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A method for determining a search space, the method comprising: determining~~the~~anumber of downlink control information bits of each type of control channel currently required to be monitored by a user equipment (UE); determining a temporary search space corresponding to each~~type of control channel currently required to be monitored by the UE,~~component carrier for carrying a data channelaccording to a mapping relationship between a component carrier for carrying a data channel and a component carrier for carrying a control channel, wherein the mapping relationship is currently used by the UE;determining a temporary search space corresponding to each type of control channel currently required to be monitored by the UE, according to a control channel corresponding to a component carrier of the UE for carrying a data channel and the temporary search space corresponding to each component carrier for carrying a data channel;and determining that an actual search space corresponding to a selected type of control channel with a first number of the downlink control information bits is all control channel elements (CCEs) of a union of temporary search spaces corresponding to all or a part of control channels with the first number of the downlink control information bits, or a part of the CCEs of the union of the temporary search spaces corresponding to all or a part of the control channels with the first number of the downlink control information bits, for control channels that are currently required to be monitored by the UE and are of a same CCE aggregation level, when there are one or more other types of control channels with the first number of the downlink control information bits; wherein the control channels that are currently required to be monitored by the UE and are of the same CCE aggregation level comprise the selected type of control channel and the one or more other types of control channels with the first number of the downlink control information bits, and the all or a part of control channels with the first number of the downlink control information bits are all or a part of control channels in a union of the one or more other types of control channels with the first number of the downlink control information bits and the selected type of control channel with the first number of the downlink control information bits.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 15 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for changing session media, method for establishing a call, and equipment thereof**

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| **公开号** | [US8588211](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8588211&sv=32079e4eb50ff836bfb1b1e802073b4e) | **公开日** | 2013/11/19 |
| **申请号** | 12/424,976 | **申请日** | 2009/04/16 |
| **授权日** | 2013/11/19 | **优先日** | 2007/05/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Long; Shuiping | Luo; Yaoping |
| **国际 主分类** | H04L 12/56 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for changing ICS session media includes: receiving a media type change request including a new media type sent from a terminal equipment or a MSC, releasing a CS call leg based on an original media type between an ICCF and the terminal equipment, establishing a CS call leg based on the new media type between the ICCF and the terminal equipment, and updating a media type of a second call leg between the ICCF and a second party into the new media type; or, receiving a media type change request including a new media type sent from a second party, updating a media type of a second call leg between an ICCF and the second party into the new media type, releasing a CS call leg based on an original media type between the ICCF and a terminal equipment, and establishing a CS call leg based on the new media type between the ICCF and the terminal equipment. |

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| **主权项** | 专利度:5特征度:25 |  |  |
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A method for changing IP multimedia sub-system (IMS) centralized service (ICS) session media, comprising: receiving a media type change request comprising a new media type sent from one of a terminal equipment, a mobile switching center (MSC), and a party; releasing a first circuit-switched (CS) call leg based on an original media type between an IMS CS control function (ICCF) and the terminal equipment; establishing a second CS call leg based on the new media type between the ICCF and the terminal equipment; and updating the media type of a first call leg between the ICCF and the party into the new media type; wherein after releasing the first CS call leg, the method comprises: establishing, by the ICCF, a second call leg with a media resource function (MRF); binding, by the ICCF, the first call leg and the second call leg; receiving and transmitting, by the MRF, a real-time transport control protocol (RTCP) message with the party through the second call leg and the first call leg; and wherein the ICCF establishes a call connection between the terminal equipment and the party by binding the second CS call leg based on the new media type and the first call leg changed to the new media type.

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| **对偶主权项** | 专利度:18特征度:18 |  |  |
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A method for changing IP multimedia sub-system (IMS)centralized service (ICS) session media, comprising:receiving a media type change request comprising a new media type sent from one of a terminal equipment, a mobile switching center (MSC), and a~~second~~party;releasing afirstcircuit-switched (CS) call leg based on an original media type between an IMS CS control function (ICCF) and the terminal equipment;establishing asecondCS call leg based on the new media type between the ICCF and the terminal equipment; andupdating the media type of a~~second call leg between the ICCF and a second party in~~first call leg between the ICCF and the party into the new media type; wherein after releasing the first CS call leg, the method comprises: establishing, by the ICCF, a second call leg with a media resource function (MRF); binding, by the ICCF, the first call leg and the second call leg; receiving and transmitting, by the MRF, a real-time transport control protocol (RTCP) message with the party through the second call leg and the first call leg; and wherein the ICCF establishes a call connection between the terminal equipment and the party by binding the second CS call leg based on the new media type and the first call leg changedto the new media type.

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| **被引用** | 8 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.15 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets**

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| **公开号** | [US8565182](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8565182&sv=5b389b344507526087e54b81bea048ff) | **公开日** | 2013/10/22 |
| **申请号** | 13/720,915 | **申请日** | 2012/12/19 |
| **授权日** | 2013/10/22 | **优先日** | 2008/11/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Fan; Xiaoan | Liu; Guang | Li; Bo | Hou; Yunzhe |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| The application relates to radio communications and discloses a method and apparatus for feeding back and receiving acknowledgment (ACK) information of semi-persistent scheduling (SPS) data packets. The method includes receiving downlink data packets and an uplink data assignment indicator (UL DAI) from a base station (BS), wherein a value of the UL DAI indicates a number (N) of all scheduled downlink sub-frames which scheduled by the BS for the UE, the number N is greater than 1, and a number k (k&#x3c;N) of the downlink data packets is/are semi-persistent scheduling (SPS) data packets; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) acknowledging the N downlink data packets, k ACKs/NAKs of the k SPS data packets is/are placed from (N−k+1)th to Nth positions of the N ACKs/NAKs; and sending the feedback signal to the BS starting from the ACK/NAK at the first position. |

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| **主权项** | 专利度:30特征度:24 |  |  |
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A method for a user equipment (UE) to feed back acknowledgement information of semi-persistent scheduling (SPS) data packets, comprising: receiving downlink data packets and an uplink data assignment indicator (UL DAI) from a base station (BS), wherein a value of the UL DAI indicates a number (N) of~~physical downlink shared channel (PDSCH) data packet~~all scheduled downlink sub-frames which~~are~~scheduled by the BS for the UE, the number N is greater than 1, a number k (0#x3c;k#x3c;N) of the~~PDSCH~~downlinkdata packets is/aresemi-persistent scheduling (SPS)data packets, and wherein k and N are positive integers; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) acknowledging the N~~PDSCH~~downlinkdata packets, wherein k ACKs/NAKs of the k SPS data packets is/are placed from~~the~~(N~~−~~-k+1)th to~~the~~Nth positions of the N ACKs/NAKs; and sending the feedback signal to the BS starting from the ACK/NAK at the first position.

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| **对偶主权项** | 专利度:30特征度:21 |  |  |
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A method for a user equipment (UE) to feed back acknowledgement information of semi-persistent scheduling (SPS) data packets, comprising: receiving downlink data packets and an uplink data assignment indicator (UL DAI) from a base station (BS), wherein a value of the UL DAI indicates a number (N) of all scheduled downlink sub-frames which scheduled by the BS for the UE, the number N is greater than 1, a number k (0#x3c;k#x3c;N) of the downlink data packets is/are semi-persistent scheduling (SPS) data packets, and wherein k and N are positive integers; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) acknowledging the N downlink data packets, wherein k ACKs/NAKs of the k SPS data packets is/are placed from (N-k+1)th to Nth positions of the N ACKs/NAKs; and sending the feedback signal to the BS starting from the ACK/NAK at the first position.

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| **被引用** | 17 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.67 |

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| **同族数** | 34 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Quantity of antennas designating a time-frequency resource block**

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| **公开号** | [US8559954](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8559954&sv=781ba806d6cfc6670b7f65e2cb05b09f) | **公开日** | 2013/10/15 |
| **申请号** | 13/181,664 | **申请日** | 2011/07/13 |
| **授权日** | 2013/10/15 | **优先日** | 2009/01/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Song; Weiwei | Yu; Yinghui |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, device and system for sending and acquiring information is provided, which relates to the field of communication, for solving the problem that user equipment (UE) cannot judge whether information transmitted in a time-frequency resource block is pilot measurement information or not that result in inaccurate detection on signal quality of a neighboring cell by the UE. A technical solution according to the present invention includes: acquiring antenna configuration information of the neighboring cell; and sending a message carrying the antenna configuration information of the neighboring cell to the UE. The embodiments of the present invention can be applied in a wireless communication network. |

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| **主权项** | 专利度:46特征度:17 |  |  |
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A method of processing antenna configuration information, comprising: acquiring, by a base station of a first cell, an antenna configuration information of a neighboring cell of the first cell; obtaining, by the base station of the first cell, the quantity of the antennas of the neighboring cell according to the antenna configuration information; sending, by the base station of the first cell, a message carrying information of the quantity of the antennas of the neighboring cell to a user equipment (UE) of the first cell, the quantity of the antennas being the number of the antennas in the neighboring cell to be measured by the UE; and determining, by the UE, a time-frequency resource block from a plurality of time-frequency resource blocks according to the information of the quantity of the antennas of the neighboring cell, the determined time-frequency resource block being used for transmitting pilot measurement information by a base station of the neighboring cell, and the plurality of time-frequency resource blocks being capable of being used for transmitting the pilot measurement information by the base station of the neighboring cell.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A method~~for send~~of processing antenna configuration information, comprising: acquiring, by a base station of a~~curren~~first cell,~~the~~anantenna configuration information of a neighboring cell~~; and~~of the first cell; obtaining, by the base station of the first cell, the quantity of the antennas of the neighboring cell according to the antenna configuration information;sending, by the base stationof the first cell, a message carrying~~the antenna configuration~~informationof the quantity of the antennas of the neighboring cell to a user equipment (UE) of the first cell, the quantity of the antennas being the number of the antennas in the neighboring cell to be measured by the UE; and determining, by the UE, a time-frequency resource block from a plurality of time-frequency resource blocks according to the information of the quantity of the antennasof the neighboring cell,t~~o a user equipment (UE) of the current~~he determined time-frequency resource block being used for transmitting pilot measurement information by a base station of the neighboring cell, and the plurality of time-frequency resource blocks being capable of being used for transmitting the pilot measurement information by the base station of the neighboringcell.

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| **被引用** | 11 | **自引用** | 5 | **公司数** | 1 | **国家数** | 2 | **影响力** | 2.62 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile station apparatus, mobile communication system, and communication method**

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| **公开号** | [US8559384](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8559384&sv=d2b021531cc5866ef73d00808f36a643) | **公开日** | 2013/10/15 |
| **申请号** | 12/739,182 | **申请日** | 2009/04/14 |
| **授权日** | 2013/10/15 | **优先日** | 2008/04/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yamada; Shohei | Aiba; Tatsushi |
| **国际 主分类** | H04W 72/04 | **优先 国家** | JP |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| In a mobile communication system in which an space of a physical downlink control channel for a mobile station apparatus to search is defined based on a mobile station identity assigned from a base station apparatus, the base station apparatus places a physical downlink control channel including a first mobile station identity or a physical downlink control channel including a second mobile station identity in a search space of a physical downlink control channel corresponding to the first mobile station identity when the base station apparatus assigns a plurality of mobile station identities to the mobile station apparatus, and when a plurality of mobile station identities is assigned from the base station apparatus, the mobile station apparatus performs decoding processing of the physical downlink control channel including the first mobile station identity and the physical downlink control channel including the second mobile station identity in the search space of the physical downlink control channel corresponding to the first mobile station identity. |

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| **主权项** | 专利度:4特征度:17 |  |  |
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A mobile station apparatus which communicates with a base station apparatus, the mobile station apparatus comprising: a receiving unit configured to receive, from the base station apparatus, information on a physical downlink control channel in a search space, the search space comprising a plurality of resource elements, the search space being defined based on a first cell-radio network temporary identity; and a scheduling unit configured to consider the information as a dynamic scheduling allocation for resources which are specified by resource allocation information, by recognizing that the information includes the first cell-radio network temporary identity and the resource allocation information, the scheduling unit configured to consider the information as a persistent scheduling allocation for the resources which are specified by the resource allocation information, by recognizing that the information includes a second cell-radio network temporary identity and the resource allocation information, the scheduling unit configured to consider the information as a deactivation of the persistent scheduling allocation, by recognizing that the information includes the second cell-radio network temporary identity and a second resource allocation information, and that a field of the second resource allocation information is set to a single predetermined value, wherein the first cell-radio network temporary identity is an identifier used for the dynamic scheduling and the second cell-radio network temporary identity is an identifier used for the persistent scheduling.

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| **对偶主权项** | 专利度:10特征度:6 |  |  |
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A mobile station apparatus~~for which an space of a physical downlink control channel to search is defined based on a mobile station~~which communicates with a base station apparatus, the mobile station apparatus comprising: a receiving unit configured to receive, from the base station apparatus, information on a physical downlink control channel in a search space, the search space comprising a plurality of resource elements, the search space being defined based on a first cell-radio network temporaryidentity;a~~ssigned from a base station apparatus, wherein the mobile station apparatus performs decoding processing of a physical downlink control channel including a first mobile station identity and a physical downlink control channel including a second mobile statio~~nd a scheduling unit configured to consider the information as a dynamic scheduling allocation for resources which are specified by resource allocation information, by recognizing that the information includes the first cell-radio network temporary identity and the resource allocation information, the scheduling unit configured to consider the information as a persistent scheduling allocation for the resources which are specified by the resource allocation information, by recognizing that the information includes a second cell-radio network temporary identity and the resource allocation information, the scheduling unit configured to consider the information as a deactivation of the persistent scheduling allocation, by recognizing that the information includes the second cell-radio network temporaryidentity~~in~~anda se~~arch space of a physical downlink control channel corresponding to the first mobile station identity when a plurality of mobile statio~~cond resource allocation information, and that a field of the second resource allocation information is set to a single predetermined value, wherein the first cell-radio network temporary identity is an identifier used for the dynamic scheduling and the second cell-radio network temporary identity is an identi~~t~~fie~~s is assign~~r used f~~rom~~orthe~~base station apparatus~~persistent scheduling.

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| **被引用** | 11 | **自引用** | 1 | **公司数** | 3 | **国家数** | 2 | **影响力** | 0.96 |

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| **同族数** | 48 | **国家数** | 16 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for determining transmit power**

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| **公开号** | [US8559376](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8559376&sv=32d86b46223428ad0ab757a2ea0b7e71) | **公开日** | 2013/10/15 |
| **申请号** | 13/563,226 | **申请日** | 2012/07/31 |
| **授权日** | 2013/10/15 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wang; Weixin | Ma; Xueli | Wang; Zongjie |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for determining transmission power are disclosed. A gain factor of an E-DPDCH in a compressed mode is determined according to the number of E-DPDCHs used for initial transmission of data; and the transmission power of the E-DPDCH is determined according to the gain factor of the E-DPDCH in compressed mode. As the gain factor of E-DPDCH in compressed mode is determined according to the number of the E-DPDCHs for initial transmission of data, the gain factor of the E-DPDCH in compressed mode can be determined accurately, and thus the transmit power of the E-DPDCH can be determined accurately according to the gain factor of the E-DPDCH. Therefore, the waste of transmit power of the E-DPDCH is reduced, and thus the system capacity is improved. |

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| **主权项** | 专利度:12特征度:30 |  |  |
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A non-transitory computer readable medium, comprising: a computer program code comprising one or more instructions, which, when executed by a computer device, cause the computer device to determine an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, according to the number of E-DPDCHs for an initial transmission of data, and cause the computer device to transmit a signal using the determined E-DPDCH gain factor, wherein, when a current frame is a compressed frame, the computer program code is configured to, when executed by the computer device, cause the computer device to determine the E-DPDCH gain factor in the compressed mode as follows: β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1 ⁢ A ed , ref , 2 2 - A ed , ref , 1 2 K e , ref , 2 - K e , ref , 1 ) ⁢ ( K e , i - K e , ref , 1 ) + A ed , ref , 1 2 ) · 10 ( Δ ⁢ ⁢ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N wherein, βed,C,i denotes the E-DPDCH gain factor in the compressed mode, Le,I,i denotes the number of the E-DPDCHs for the initial transmission of data, βc,C,j denotes a Dedicated Physical Control Channel (DPCCH) gain factor used for the j:th TFC in the compressed mode, A ed , ref , 1 = β ed , ref , 1 β c , and A ed , ref , 2 = β ed , ref , 2 β c , where βc is a DPCCH gain factor in non-compressed mode, βed,ref,1 and βed,ref,2 denote the E-DPDCH gain factors of a first and a second reference E-TFCs, respectively, Le,ref,1 and Le,ref,2 denote the number of the E-DPDCHs used for the first and second reference E-TFCs, respectively, Ke,ref,1 and Ke,ref,2 denote transport block sizes of the first and second reference E-TFCs, respectively, Ke,i denotes the transport block size of the i:th E-TFC, Δharq denotes an offset of a Hybrid Automatic Repeat Request (HARQ), Npilot,C denotes the number of pilot bits p er slot on a DPCCH in the compressed mode, Npilot,N denotes the number of pilot bits per slot on the DPCCH in the non-compressed mode, and Nslots,I denotes the number of non Discontinuous Transmission (DTX) slots in a frame used for the initial transmission of data.

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| **对偶主权项** | 专利度:12特征度:13 |  |  |
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Anon-transitorycomputer readable medium, comprising: a computer program code comprising one or more instructions, which, when executed by a computer device, cause the computer device to determine an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, according to the number of E-DPDCHs for an initial transmission of data,and cause the computer device to transmit a signal using the determined E-DPDCH gain factor,wherein, when a current frame is a compressed frame, the computer program code is configured to, when executed by the computer device, cause the computer device to determine the E-DPDCH gain factor in the compressed mode as follows: β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1&

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| **被引用** | 8 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.30 |

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| **同族数** | 22 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for implementing RBT interworking, media gateway control function device, and application server**

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| **公开号** | [US8553869](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8553869&sv=40a2072b9b9416386f92a48756f4d053) | **公开日** | 2013/10/08 |
| **申请号** | 12/622,631 | **申请日** | 2009/11/20 |
| **授权日** | 2013/10/08 | **优先日** | 2007/10/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Haopeng | Liu; Jianmin | Zheng; Yichu | Sun; Yu | Wang; Haoyu | Wu; Lingyan |
| **国际 主分类** | H04M 3/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for implementing Ring Back Tone (RBT) interworking, a Media Gateway Control Function (MGCF) device, and an Application Server (AS) are provided. A Multimedia Ring Back Tone (MRBT) service is triggered when a Circuit Switched (CS) user originates a call to an MRBT subscriber in an Internet Protocol Multimedia Subsystem (IMS). The method includes: receiving a message sent by an MRBT AS, where the message carries video RBT information; and notifying a Mobile Switching Center (MSC) to put through a calling terminal if determining that a video RBT needs to be played to the calling terminal according to the message. Therefore, a video RBT can be played when a CS user originates a call to an IMS user in the case of network interworking. An IMS video RBT may be played to the calling party when the CS user originates a call to the IMS user. |

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| **主权项** | 专利度:12特征度:38 |  |  |
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In a Media Gateway Control Function (MGCF), a Video Interworking Gateway (VIG), or both, of a multimedia communication system, a method for implementing a video Ring Back Tone (RBT) interworking, the method comprising: receiving a call request, which originated from a calling terminal of a user in a Circuit Switch (CS) domain, for a session with a called party in an Internet protocol Multimedia Subsystem (IMS) domain, which is a different network from the CS domain; based on the received call request from the CS domain, triggering a Multimedia Ring Back Tone (MRBT) service by sending a Session Initiation Protocol (SIP) invite message to an MRBT Application Server (AS) in the IMS domain; in response to the SIP invite message, receiving a reply message from the MRBT AS in the IMS domain, wherein the reply message includes information about if an MRBT needs to be played to the calling terminal in the CS domain; determining, according to the information in the reply message, that a video RBT in the IMS domain needs to be played at the calling terminal of the user in the CS domain; based on the determination, notifying a Mobile Switching Center (MSC) serving the user in the CS domain to put through the calling terminal; and thereafter, establishing a communication link with the calling terminal for playing the video RBT in the IMS domain at the calling terminal of the user in the CS domain.

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| **对偶主权项** | 专利度:15特征度:10 |  |  |
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~~A~~In a Media Gateway Control Function (MGCF), a Video Interworking Gateway (VIG), or both, of a multimedia communication system, amethod for implementinga videoRing Back Tone (RBT) interworking,~~w~~the~~rein a Multimedia Ring Back Tone (MRBT) service is triggered whe~~method comprising: receiving a call request, which originated from a calling terminal of a user in a Circuit Switch~~ed~~(CS)~~user originates a call to an MRBT subscriber~~domain, for a session with a called partyin an Internet~~P~~protocol Multimedia Subsystem (IMS)~~c~~dom~~prises: receiving a message sent by an MRBT Application Server (AS); and notifying a Mobile Switching Center (MSC) to put through a calling terminal if it is determined that a video RBT needs to be played to~~ain, which is a different network from the CS domain; based on the received call request from the CS domain, triggering a Multimedia Ring Back Tone (MRBT) service by sending a Session Initiation Protocol (SIP) invite message to an MRBT Application Server (AS) in the IMS domain; in response to the SIP invite message, receiving a reply message from the MRBT AS in the IMS domain, wherein the reply message includes information about if an MRBT needs to be played to the calling terminal in the CS domain; determining, according to the information in the reply message, that a video RBT in the IMS domain needs to be played at the calling terminal of the user in the CS domain; based on the determination, notifying a Mobile Switching Center (MSC) serving the user in the CS domain to put throughthe calling terminal;a~~ccording to the message~~nd thereafter, establishing a communication link with the calling terminal for playing the video RBT in the IMS domain at the calling terminal of the user in the CS domain.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for determining search space, and method and device for determining candidate control channel resources**

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| **公开号** | [US8553713](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8553713&sv=93e2f45c2a1334b685df1a9760379cd0) | **公开日** | 2013/10/08 |
| **申请号** | 13/406,302 | **申请日** | 2012/02/27 |
| **授权日** | 2013/10/08 | **优先日** | 2009/08/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Chaojun | Xue; Lixia | Qu; Bingyu | Guan; Lei | Yu; Zheng |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and a device for determining a search space and for determining candidate control channel resources are provided in present invention. The method for determining the search space includes: determining the number of downlink control information bits of each type of control channel currently required to be monitored by a UE; determining a temporary search space corresponding to the each type of control channel according to a mapping relationship currently used by the UE; and determining that an actual search space corresponding to a selected type of control channel is all or a part of CCEs of a union of temporary search spaces corresponding to all or a part of control channels with the same number of the downlink control information bits, when the DCI bit number of one or more other control channels is the same as the DCI bit number of the selected type of control channel. |

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| **主权项** | 专利度:23特征度:16 |  |  |
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A method for determining a search space, the method comprising: determining a number of downlink control information bits of each type of control channel currently required to be monitored by a user equipment (UE); determining a temporary search space corresponding to each type of control channel currently required to be monitored by the UE, according to a mapping relationship between a component carrier for carrying a data channel and a component carrier for carrying a control channel, wherein the mapping relationship is currently used by the UE; and determining that an actual search space corresponding to a selected type of control channel is all control channel elements (CCEs) of a union of temporary search spaces corresponding to all or a part of control channels with~~a~~thesame number of the downlink control information bits, or a part of the CCEs of the union of the temporary search spaces corresponding to all or a part of the control channels with the same number of the downlink control information bits, for control channels that are currently required to be monitored by the UE and are of~~a~~thesame CCE aggregation level, when~~a~~thenumbersofthedownlink control information bits of one or more other types of control channels~~is equal to~~are the same as thenumber ofthedownlink control information bits of the selected type of control channel; wherein the one or more other types of control channels are one or more types of control channels that are currently required to be monitored by the UE and are of the same CCE aggregation level except the selected type of control channel, and the all or a part of control channels with the same number of the downlink control information bits are all or a part of control channels with~~a~~thesame number ofthedownlink control information bits of a control channel set formed by the one or more other types of control channels and the selected type of control channel.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method for determining a search space, the method comprising: determining a number of downlink control information bits of each type of control channel currently required to be monitored by a user equipment (UE); determining a temporary search space corresponding to each type of control channel currently required to be monitored by the UE, according to a mapping relationship between a component carrier for carrying a data channel and a component carrier for carrying a control channel, wherein the mapping relationship is currently used by the UE; and determining that an actual search space corresponding to a selected type of control channel is all control channel elements (CCEs) of a union of temporary search spaces corresponding to all or a part of control channels with the same number of the downlink control information bits, or a part of the CCEs of the union of the temporary search spaces corresponding to all or a part of the control channels with the same number of the downlink control information bits, for control channels that are currently required to be monitored by the UE and are of the same CCE aggregation level, when the numbers of the downlink control information bits of one or more other types of control channels are the same as the number of the downlink control information bits of the selected type of control channel; wherein the one or more other types of control channels are one or more types of control channels that are currently required to be monitored by the UE and are of the same CCE aggregation level except the selected type of control channel, and the all or a part of control channels with the same number of the downlink control information bits are all or a part of control channels with the same number of the downlink control information bits of a control channel set formed by the one or more other types of control channels and the selected type of control channel.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 15 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Radio communication system and mobile station device**

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| **公开号** | [US8553675](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8553675&sv=06a8f6a7ba2052352b969d0f995dabee) | **公开日** | 2013/10/08 |
| **申请号** | 12/817,433 | **申请日** | 2010/06/17 |
| **授权日** | 2013/10/08 | **优先日** | 2007/08/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yamada; Shohei | Kato; Yasuyuki |
| **国际 主分类** | H04J 3/06 | **优先 国家** | JP |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| A mobile station device transmits a random access preamble to a base station device and performs uplink timing alignment based on the synchronization timing deviation information included in a random access response which the base station device transmits in response to the transmitted random access preamble, wherein in an uplink synchronous status, the mobile station device does not perform uplink timing alignment based on synchronization timing deviation information included in a random access response, which is a response to a random access preamble whose preamble ID is randomly selected by the mobile station device. |

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| **主权项** | 专利度:3特征度:12 |  |  |
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A radio communication system, comprising: a base station device; and a mobile station device configured to transmit a random access preamble to the base station device and to receive a random access response transmitted from the base station device in response to the transmitted random access preamble, wherein the base station device receives the random access preamble from the mobile station device and transmits the random access response to the mobile station device in response to the received random access preamble, and wherein, in the mobile station device, when a subframe for transmitting a message scheduled by the random access response from the mobile station device overlaps with a subframe for transmitting uplink control information from the mobile station device, the mobile station device transmits the message scheduled by the random access response.

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| **对偶主权项** | 专利度:3特征度:17 |  |  |
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A radio communication system~~including~~, comprising: a base station device; anda mobile station device~~which~~configured totransmit~~s~~a random access preamble to~~a~~thebase station device andtoreceive~~s~~a random access response transmitted from the base station device in response to the transmitted random access preamble,~~and~~whereinthe base station device~~which~~receives the random access preamble from the mobile station device and transmits the random access response to the mobile station device in response to the received random access preamble,andwherein~~when transmission tim~~, in the mobile station device, when a subframe for transmitting~~of~~a message~~for~~scheduled bythe random access response~~overlaps with transmission timing o~~from the mobile station device overlaps with a subframe for transmittinguplink control information~~,~~fromthe mobile station device~~does not perform to~~, the mobile station devicetransmitsthe~~uplink control information~~message scheduled by the random access response.

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| **被引用** | 21 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.2 |

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| **同族数** | 55 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, base station, and user terminal for implementing uplink resource indication**

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| **公开号** | [US8547886](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8547886&sv=b5931230f50bc4185b786b69541ec4ad) | **公开日** | 2013/10/01 |
| **申请号** | 13/326,165 | **申请日** | 2011/12/14 |
| **授权日** | 2013/10/01 | **优先日** | 2007/08/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhao; Meng | Lv; Yongxia | Chen; Xiaobo |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method and a user terminal for implementing an uplink resource grant (ul grant) are provided. The method includes a user terminal receiving an ul grant from a base station, the ul grant including an uplink resource index; the user terminal identifying from the received uplink resource index, a corresponding group of at least one uplink subframe, by referring to a pre-defined relationship between the uplink resource index and the corresponding group, the received uplink resource index having one of a plurality of values, the pre-defined relationship correlating each value of the uplink resource index with a respective one of a plurality of groups, each group having a unique uplink subframe grouping; and sending to the base station, by the user terminal, data on each of the at least one uplink subframes in the identified group. |

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| **主权项** | 专利度:8特征度:16 |  |  |
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A method for implementing an uplink resource grant (ul grant), comprising: receiving, by a user terminal, an ul grant from a base station on one of a plurality of downlink subframes, the ul grant including one of a plurality of values for an uplink resource index; identifying, by the user terminal, the downlink subframe on which the user terminal receives the value for the uplink resource index; in accordance with a pre-defined relationship between the plurality of downlink subframes, a plurality of uplink subframe sets correlated with the plurality of downlink subframes, the plurality of values for the uplink resource index, and a plurality of groups, identifying, by the user terminal, a group of at least one uplink subframe corresponding to the received value for the uplink resource index, the identified group being one group in the uplink subframe set corresponding to the identified downlink subframe; and sending to the base station, by the user terminal, data on each of the at least one uplink subframes specified in the time domain in the identified group; wherein the pre-defined relationship correlates each of the plurality of values for the uplink resource index with a respective group in an uplink subframe set, wherein each uplink subframe set has at least one of the plurality of groups, and wherein each group has a unique uplink subframe grouping specifying the at least one uplink subframe in the time domain for use by the user terminal.

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| **对偶主权项** | 专利度:16特征度:8 |  |  |
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A method for implementing an uplink resource grant (ul grant), comprising: receiving, by a user terminal, an ul grant from a base station~~, the ul grant including an uplink resource index; identifying, by the user terminal, from the received uplink resource index, a corresponding group of at least one up~~on one of a plurality of downlink subframes, the ul grant including one of a plurality of values for an uplink resource index; identifying, by the user terminal, the downlink subframe on which the user terminal receives the value for the uplink resource index; in accordance with a pre-defined relationship between the plurality of downlink subframes, a plurality of uplink subframe sets correlated with the plurality of downlink subframes,~~by referring to a pre-defined relationship between the uplink resource index and the corresponding group, the received uplink resource index having one of a plurality of values,~~the plurality of values for the uplink resource index, and a plurality of groups, identifying, by the user terminal, a group of at least one uplink subframe corresponding to the received value for the uplink resource index, the identified group being one group in the uplink subframe set corresponding to the identified downlink subframe; and sending to the base station, by the user terminal, data on each of the at least one uplink subframes specified in the time domain in the identified group; whereinthe pre-defined relationship correlat~~ing~~eseach~~value~~ofthe plurality of values forthe uplink resource index with a respective~~one of a~~group in an uplink subframe set, wherein each uplink subframe set has at least one of theplurality of groups,and whereineach group ha~~ving~~sa unique uplink subframe grouping~~; and sending to the base station, by the user terminal, data on each of~~specifyingthe at least one uplink subframe~~s~~in the~~identified group~~time domain for use by the user terminal.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 31 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for mobility management, and user equipment**

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| **公开号** | [US8538436](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8538436&sv=2728ae228296ddb51319c918b7088cb9) | **公开日** | 2013/09/17 |
| **申请号** | 13/195,462 | **申请日** | 2011/08/01 |
| **授权日** | 2013/09/17 | **优先日** | 2009/02/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yu; Yinghui | Song; Weiwei | Zhao; Yajun | Cheng; Xingqing |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for mobility management, an apparatus and a User Equipment (UE) are disclosed. The method includes: obtaining cell set information sent by a cell set in an access network; selecting a target cell set to which a UE may hand over according to the cell set information, and sending information about selection of the target cell set to the target cell set; and receiving information about at least one target cell decided by the target cell set, and providing the information about the target cell to the UE for handover. The method for mobility management between cell sets simplifies mobility management in multi-cell communication and improves performance of the communication system. |

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| **主权项** | 专利度:22特征度:13 |  |  |
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A method for mobility management, comprising: obtaining, by a source evolved NodeB (eNB), cell set information from each of a plurality of cell sets in an access network, each cell set including at least two cells able to simultaneously communicate with a same user equipment (UE); selecting, by the source eNB, one of the plurality of cell sets as a target cell set for handover by a UE communicatively connected to the source eNB in accordance with the cell set information; sending, by the source eNB, information to a target eNB managing the target cell set, the information indicating that the target cell set is the selected cell set; receiving, by the source eNB, information about at least two target cells in the target cell set, the at least two target cells determined by the target eNB; and providing, by the source eNB, the information about the at least two target cells to the UE for handover.

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| **对偶主权项** | 专利度:20特征度:25 |  |  |
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A method for mobility management, comprising: obtaining, by a source~~cell set~~evolved NodeB (eNB), cell set information~~sent by a~~from each of a plurality ofcell setsin an access network~~; by the source cell set, selecting, for a user equipment, a target cell set to which the user equipment may hand over according to~~, each cell set including at least two cells able to simultaneously communicate with a same user equipment (UE); selecting, by the source eNB, one of the plurality of cell sets as a target cell set for handover by a UE communicatively connected to the source eNB in accordance withthe cell set information~~, and~~;sending~~information about selection of~~, by the source eNB, information to a target eNB managingthe target cell set,t~~o the target cell set; and receiving~~he information indicating that the target cell set is the selected cell set; receiving, by the source eNB,information about at least~~one~~twotarget cell~~, which is decided by the target cell set according to the information abou~~s in the target cell set, the at least two target~~s~~cel~~ection of~~ls determined bythe target~~cell set,~~eNB;andproviding, by the source eNB,the information about the at least~~one~~twotarget cellsto the~~user equipment~~UEfor handover.

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| **被引用** | 13 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.10 |

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| **同族数** | 11 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for session association**

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| **公开号** | [US8532125](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8532125&sv=9f19de23b8aa2fbe87edf013c8d77181) | **公开日** | 2013/09/10 |
| **申请号** | 13/102,625 | **申请日** | 2011/05/06 |
| **授权日** | 2013/09/10 | **优先日** | 2008/11/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yan | Xia; Xu |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A session association method, system, and apparatus are disclosed. The method includes: receiving an Internet Protocol Connectivity Access Network (IP-CAN) session setup message and a gateway control session message; and associating an IP-CAN session with a gateway control session according to a temporary identity (ID) in the IP-CAN session setup message and the temporary ID in the gateway control session message. Therefore, the gateway control session is associated with the IP-CAN session by using a temporary ID; and the gateway control session is associated with the IP-CAN session when no user ID exists in the emergency service, which ensures the normal progress of the emergency service. |

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| **主权项** | 专利度:11特征度:21 |  |  |
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In a Policy and Charging Rules Function (PCRF), a session association method, comprising the steps: receiving an Internet Protocol Connectivity Access Network (IP-CAN) session setup message and a gateway control session message; and associating an IP-CAN session with a gateway control session according to a temporary identity (ID) contained in both the IP-CAN session setup message and the gateway control session message; wherein the temporary ID is generated by a Bearer Binding and Event Reporting Function (BBERF).

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| **对偶主权项** | 专利度:11特征度:8 |  |  |
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~~A~~In a Policy and Charging Rules Function (PCRF), asession association method, comprising the steps: receiving an Internet Protocol Connectivity Access Network (IP-CAN) session setup message and a gateway control session message; and associating an IP-CAN session with a gateway control session according to a temporary identity (ID)~~in~~contained in boththe IP-CAN session setup message and the~~temporary ID in the~~gateway control session message; wherein the temporary ID is generated by a Bearer Binding and Event Reporting Function (BBERF).

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.8 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for synchronization in communication system**

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| **公开号** | [US8532084](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8532084&sv=a8b1fbcf3d144699111262c7126780ea) | **公开日** | 2013/09/10 |
| **申请号** | 13/560,887 | **申请日** | 2012/07/27 |
| **授权日** | 2013/09/10 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Popovic; Branislav | Mauritz; Oskar |
| **国际 主分类** | H04J 3/06 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method can be used for facilitating an uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system. The first transceiver receives a reference from the second transceiver and generates a set of signature sequences based on the reference. The first transceiver selects a first signature sequence from the set of signature sequences and incorporates the first signature sequence into a signal. The first transceiver transmits the signal to the second transceiver. The signal is used for a uplink synchronization between the first transceiver and the second transceiver. The set of signature sequences are generated from sequences with zero-correlation zone. |

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| **主权项** | 专利度:20特征度:11 |  |  |
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A method for facilitating an uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system, the method comprising: receiving, by the first transceiver, a reference from the second transceiver; generating, by the first transceiver, a set of signature sequences based on the reference; selecting, by the first transceiver, a first signature sequence from the set of signature sequences; incorporating, by the first transceiver, the first signature sequence into a signal; and transmitting, by the first transceiver, the signal to the second transceiver, wherein the signal is used for a uplink synchronization between the first transceiver and the second transceiver, the set of signature sequences being generated from sequences with zero-correlation zone, and the sequences with zero-correlation zone being obtained from a Zadoff-Chu sequence, the Zadoff-Chu sequence being: a ⁡ ( k ) = { W N k 2 / 2 + qk , N ⁢ ⁢ even W N k ⁡ ( k + 1 ) / 2 + qk , N ⁢ ⁢ odd , k = 0 , 1 , … ⁢ , N - 1 , where ⁢ ⁢ W N = exp ⁡ ( - j ⁢ ⁢ 2 ⁢ π ⁢ ⁢ r / N ) , where r, q and N are integers and r is relatively prime to N.

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| **对偶主权项** | 专利度:19特征度:32 |  |  |
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A method for facilitating an uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system, the method comprising: receiving, by the first transceiver, a reference from the second transceiver; generating, by the first transceiver, a set of signature sequences based on the reference; selecting, by the first transceiver, a first signature sequence from the set of signature sequences; incorporating, by the first transceiver, the first signature sequence into a signal; and transmitting, by the first transceiver, the signal to the second transceiver, wherein the signal is used for a uplink synchronization between the first transceiver and the second transceiver~~and wherein~~,the set of signature sequences~~are~~beinggenerated from sequences with zero-correlation zone, and the sequences with zero-correlation zone being obtained from a Zadoff-Chu sequence, the Zadoff-Chu sequence being: a ⁡ ( k ) = { W N k 2 / 2 + qk , N ⁢ ⁢ even W N k ⁡ ( k + 1 ) / 2 + qk , N ⁢ ⁢ odd , k = 0 , 1 , … ⁢ , N - 1 , where ⁢ ⁢ W N = exp ⁡ ( - j ⁢ ⁢ 2 ⁢ π ⁢ ⁢ r / N ) , where r, q and N are integers and r is relatively prime to N.

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.2 |

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| **同族数** | 21 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for creating IP-CAN session**

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| **公开号** | [US8527634](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8527634&sv=aa82f779270963a985368201d11dab88) | **公开日** | 2013/09/03 |
| **申请号** | 13/619,756 | **申请日** | 2012/09/14 |
| **授权日** | 2013/09/03 | **优先日** | 2007/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Hu; Huadong | Zhi; Chunxia | Deng; Tingting | Guo; Yali |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method and an apparatus for creating an Internet Protocol Connectivity Access Network (IP-CAN) session are disclosed herein. The method includes: creating, by a First Policy and Charging Enforcement Function entity, PCEFa entity, a session with a Policy and Charging Rules Function entity, PCRF entity; performing, by the PCEFa entity, mobility registration with a second Policy and Charging Enforcement Function entity, PCEFb entity; creating, by the PCEFb entity, a session with the PCRF entity; and sending, by the PCRF entity, a session information to the PCEFa entity and the PCEFb entity. mobility The apparatus includes: a PCEFa entity, a PCEFb entity, and a PCRF entity. The method and the apparatus for creating an IP-CAN session under the present disclosure accomplish the purpose of creating an IP-CAN session in the new PCC architecture. |

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| **主权项** | 专利度:14特征度:32 |  |  |
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A method for creating an Internet Protocol Connectivity Access Network (IP-CAN) session, comprising: creating by a first Policy and Charging Enforcement Function (PCEF) entity, a first session with a Policy and Charging Rules Function (PCRF) entity, wherein the creating comprising: sending by the first PCEF entity, a session creation request that carries an Access Point Name (APN), a user ID of a user, and an IP-CAN bearer information to the PCRF entity; and receiving by the first PCEF entity, a session creation response that carries an IP-CAN session information from the PCRF entity; performing by the first PCEF entity, mobility registration with a second PCEF entity to make the second PCEF entity create a second session with the PCRF entity, wherein the performing comprising: sending by the first PCEF entity, a mobility registration request or a bearer creation request that carries the APN and the user ID to a second PCEF entity, to make the second PCEF entity allocate an IP address to the user and send a Policy and Charging Control (PCC) decision request that carries the IP address to the PCRF entity for formulating, by the PCRF entity, a PCC rule according to the APN, the user ID, the allocated IP address, the IP-CAN bearer information, and a stored user subscription profile; and receiving by the first PCEF entity, session information from the PCRF entity.

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| **对偶主权项** | 专利度:15特征度:7 |  |  |
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A method for creating an Internet Protocol Connectivity Access Network (IP-CAN) session, comprising: creating~~,~~by a first Policy and Charging Enforcement Function (PCEF) entity, afirstsession with a Policy and Charging Rules Function (PCRF) entity~~;~~, wherein the creating comprising: sending by the first PCEF entity, a session creation request that carries an Access Point Name (APN), a user ID of a user, and an IP-CAN bearer information to the PCRF entity; and receiving by the first PCEF entity, a session creation response that carries an IP-CAN session information from the PCRF entity;performing~~,~~by the first PCEF entity, mobility registration with a second PCEF entity to make the second PCEF entity create asecondsession with the PCRF entity, wherein the performing comprising: sending by the first PCEF entity, a mobility registration request or a bearer creation request that carries the APN and the user ID to a second PCEF entity, to make the second PCEF entity allocate an IP address to the user and send a Policy and Charging Control (PCC) decision request that carries the IP address to the PCRF entity for formulating, by the PCRF entity, a PCC rule according to the APN, the user ID, the allocated IP address, the IP-CAN bearer information, and a stored user subscription profile; andreceiving~~,~~by the first PCEF entity, session information from the PCRF entity.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system, and device for user detachment when a handover or change occurs in heterogeneous network**

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| **公开号** | [US8521163](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8521163&sv=3e62edf3ff87187c752c7987f1407bfb) | **公开日** | 2013/08/27 |
| **申请号** | 12/479,216 | **申请日** | 2009/06/05 |
| **授权日** | 2013/08/27 | **优先日** | 2007/08/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu | Hu; Weihua | Wang; Shanshan |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for user detachment when a handover or change occurs in a heterogeneous network is provided. The method includes: a user equipment (UE) is handed over or switched from a source network to a target network; a network element on a network side determines whether to detach the UE from the source network, and if yes, the network element on the network side detaches the UE from the source network. A system and a device for user detachment when a handover or change occurs in a heterogeneous network, and another method for user detachment when a handover or change occurs in a heterogeneous network are also provided. |

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| **主权项** | 专利度:9特征度:25 |  |  |
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In a mobility management entity (MME) of a 3rd-Generation Partnership Project (3GPP) network, a method for releasing resources utilized by a User Equipment (UE) when handed over from the 3GPP network to a non-3GPP network, comprising: receiving a delete bearer request sent by a serving gateway (GW) in the 3GPP network, wherein the delete bearer request includes an indication of a handover of the UE from the 3GPP network to the non-3GPP network; in response to the delete bearer request, deleting at least one bearer resource and verifying that all bearer resources associated with the UE have been deleted; and thereafter, based on the indication, detaching the UE from the 3GPP network without sending a detach request message to the UE.

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| **对偶主权项** | 专利度:20特征度:21 |  |  |
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~~A method for user detachment when a handover or change occurs between a~~In a mobility management entity (MME) of a 3rd-Generation Partnership Project (3GPP) network, a method for releasing resources utilized by a User Equipment (UE) when handed over from the3GPP network~~and~~toa non-3GPP network, comprising:~~handing over or switching a us~~receiving a delete bearer request sent by a serving gateway (GW) in the 3GPP network, wherein the delete bearerrequ~~ipment (~~est includes an indication of a handover of theUE~~)~~from~~a source~~the 3GPPnetwork to~~a target network; anddetermining, by a network element on a network side, whether to~~the non-3GPP network; in response to the delete bearer request, deleting at least one bearer resource and verifying that all bearer resources associated with the UE have been deleted; and thereafter, based on the indication,detachingthe UE from the~~source~~3GPPnetwork~~; if yes, detaching the UE from the source network~~without sending a detach request message to the UE.

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| **被引用** | 16 | **自引用** | 8 | **公司数** | 2 | **国家数** | 2 | **影响力** | 5.12 |

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| **同族数** | 17 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of bearer deletion, device, and system**

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| **公开号** | [US8520593](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8520593&sv=a35f8109e05f78a69b6aa184a24c3499) | **公开日** | 2013/08/27 |
| **申请号** | 12/691,068 | **申请日** | 2010/01/21 |
| **授权日** | 2013/08/27 | **优先日** | 2007/07/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong | Liu; Lan | Li; Ming | Zhang; Wanqiang |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| A method of bearer deletion is provided to improve the universality of the bearer deletion process. The method includes: receiving, by the original intermediate NE, the cancellation type indication parameter sent by the HSS, and deleting the bearer between the serving gateway (S-GW) and a packet data network gateway (P-GW), if the original intermediate network element obtains an attach type according to the cancellation type indication parameter indicating an attach type and a corresponding bearer exists on the original intermediate NE. This method helps efficiently improve the universality of the bearer deletion flow. |

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| **主权项** | 专利度:6特征度:19 |  |  |
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A method of bearer deletion in a network, comprising: receiving, by a first intermediate network element (NE), a cancel location message corresponding to a user equipment (UE) from a home subscriber server (HSS), wherein the cancel location message contains a cancellation type indication parameter; if the cancellation type indication parameter indicates an attach type, and a bearer corresponding to the UE exists on the first intermediate NE, deleting, by the first intermediate NE, the bearer between the first intermediate NE and a serving gateway, and the bearer between the serving gateway and a packet data network gateway; if the cancellation type indication parameter indicates an update type, and if a serving gateway change indication is received, deleting, by the first intermediate NE, a bearer corresponding to the UE between the first intermediate NE and the serving gateway; and if the cancellation type indication parameter indicates the update type, and if the serving gateway change indication is not received, deleting, by the first intermediate NE, context information corresponding to the UE stored in the first intermediate NE.

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| **对偶主权项** | 专利度:18特征度:17 |  |  |
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A method of bearer deletionin a network, comprising: receiving, by a~~n original~~firstintermediate network element (NE), a cancel~~l~~location~~type indication parameter sent by a home subscriber server (HSS); and deleting a~~message corresponding to a user equipment (UE) from a home subscriber server (HSS), wherein the cancel location message contains a cancellation type indication parameter; if the cancellation type indication parameter indicates an attach type, and a bearer corresponding to the UE exists on the first intermediate NE, deleting, by the first intermediate NE, thebearer between the~~original~~firstintermediate NE and a serving gateway~~(S-GW)~~, and~~a~~thebearer between the~~S-GW~~serving gatewayand a packet data network gateway~~(P-GW), if the original intermediate NE obtains an attach type according to the cancellation type indication parameter indicating an attach type and the existence of a corresponding bearer on the original~~; if the cancellation type indication parameter indicates an update type, and if a serving gateway change indication is received, deleting, by the first intermediate NE, a bearer corresponding to the UE between the first intermediate NE and the serving gateway; and if the cancellation type indication parameter indicates the update type, and if the serving gateway change indication is not received, deleting, by the first intermediate NE, context information corresponding to the UE stored in the firstintermediate NE.

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| **被引用** | 22 | **自引用** | 5 | **公司数** | 3 | **国家数** | 2 | **影响力** | 3.34 |

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| **同族数** | 5 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, base station, and user terminal for implementing uplink resource indication**

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| **公开号** | [US8520573](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8520573&sv=3256b1960bd35b7e88a107005e9732b1) | **公开日** | 2013/08/27 |
| **申请号** | 13/105,573 | **申请日** | 2011/05/11 |
| **授权日** | 2013/08/27 | **优先日** | 2007/08/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhao; Meng | Lv; Yongxia | Chen; Xiaobo |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, a base station (BS), and a user terminal for implementing uplink resource indication are provided. The method includes: carrying an uplink resource index in a ul grant, in which the uplink resource index is corresponding to at least one uplink resource in terms of indication; and sending the ul grant. The BS includes an index carrying module and an instruction sending module. The user terminal includes an instruction receiving module, an instruction resolving module, and an execution module. |

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| **主权项** | 专利度:10特征度:16 |  |  |
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A method for implementing uplink resource (ul grant), comprising: receiving, by a user terminal, an ul grant from a base station, the ul grant includes an uplink resource index, wherein a corresponding relationship exists between the uplink resource index and at least one uplink subframe, the corresponding relationship is determined by an uplink-downlink subframe ratio of a configuration, and the number of uplink subframes is more than the number of downlink subframes in the uplink-downlink subframe ratio of the configuration; resolving, by the user terminal, the uplink resource index from the ul grant, wherein the corresponding relation has been established for the uplink resource index prior to the uplink resource grant being sent by the base station, and the corresponding relationship is established by the base station performing the following: combining the at least one uplink subframe into a group; and correlating, the group with the uplink resource index, so as to establish the corresponding relation between the uplink resource index and the at least one uplink subframe; wherein each uplink resource index is correlated with a group of at least one uplink subframe, and the uplink subframes in each group are not completely the same; performing, by the user terminal, the resource grant on the at least one uplink subframe according to the resolved uplink resource index.

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| **对偶主权项** | 专利度:12特征度:9 |  |  |
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A method for implementing uplink resource~~indication~~(ul grant), comprising: receiving, by a user terminal, an u~~plink resource grant indication (ul grant) carrying~~l grant from a base station, the ul grant includesan uplink resource index~~from a base station~~, wherein a corresponding relationship exists between the uplink resource index and at least one uplink subframe,~~and~~the corresponding relationship is determined by anuplink-downlink subframe ratio of a configuration, and the number of uplink subframes is more than the number of downlink subframes in the uplink-downlink subframe ratio of the configuration; resolving, by the user terminal, the uplink resource index from the ul grant~~;~~,~~performing, by the user terminal, resource grant on the obtained at least one uplink subframe~~wherein the corresponding relation has been established for the uplink resource index prior to the uplink resource grant being sent by the base station, and the corresponding relationship is established by the base station performing the following: combining the at least one uplink subframe into a group; and correlating, the group with the uplink resource index, so as to establish the corresponding relation between the uplink resource index and the at least one uplink subframe; wherein each uplink resource index is correlated with a group of at least one uplink subframe, and the uplink subframes in each group are not completely the same; performing, by the user terminal, the resource grant on the at least one uplink subframe according to the resolved uplink resource index.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 31 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for session modification**

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| **公开号** | [US8516545](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8516545&sv=7200848ea92329ff0d3f6296a48aba03) | **公开日** | 2013/08/20 |
| **申请号** | 13/293,925 | **申请日** | 2011/11/10 |
| **授权日** | 2013/08/20 | **优先日** | 2007/09/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Hu; Huadong | Zhi; Chunxia | Guo; Yali |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and system for session modification are provided. The method includes these steps: A home policy and charging rules function (h-PCRF) sends a policy and charging control (PCC) rule providing message to a policy and charging enforcement function (PCEF) b according to a received PCC rule request message, an application layer service message, or an h-PCRF self-trigger event; and the h-PCRF sends a PCC rule providing message to the PCEF a according to a PCC rule response message received from the PCEF b. With this present disclosure, session modification may be implemented when two or more PCEFs are included in the PCC architecture of a system architecture evolution (SAE) system. |

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| **主权项** | 专利度:27特征度:17 |  |  |
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A method for session modification, comprising: receiving, by a server configured with a home policy and charging rules function (the h-PCRF server), a policy and charging control (PCC) rule request message from an access gateway configured with a policy and charging enforcement function (PCEF a); sending, by the h-PCRF server, a first PCC rule providing message to a packet data network gateway configured with an additional policy and charging enforcement function (PCEF b) according to the received PCC rule request message; receiving, by the h-PCRF server, a PCC rule response message from the packet data network gateway; and sending, by the h-PCRF server, a second PCC rule providing message to the access gateway according to the PCC rule response message.

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| **对偶主权项** | 专利度:19特征度:8 |  |  |
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A method for session modification, comprising: receiving, by aserver configured with ahome policy and charging rules function (theh-PCRFserver), a policy and charging control (PCC) rule request messagefrom an access gateway configured with a policy and charging enforcement function (PCEF a); sending, by the h-PCRFserver, a first PCC rule providing message to a~~second~~packet data network gateway configured with an additionalpolicy and charging enforcement function (PCEF b) according to the received PCC rule request message; receiving, by the h-PCRFserver, a PCC rule response message from the~~PCEF b~~packet data network gateway; and sending, by the h-PCRFserver, a second PCC rule providing message to~~a first policy and charging enforcement function (PCEF a)~~the access gatewayaccording to the PCC rule response message~~received from the PCEF b~~.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for changing session media, method for establishing a call, and equipment thereof**

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| **公开号** | [US8515053](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8515053&sv=6b7da2b00a1b8b3cd36c7dbd50c2ea8c) | **公开日** | 2013/08/20 |
| **申请号** | 13/542,196 | **申请日** | 2012/07/05 |
| **授权日** | 2013/08/20 | **优先日** | 2007/05/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Long; Shuiping | Luo; Yaoping |
| **国际 主分类** | H04L 12/56 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for changing ICS session media includes: receiving a media type change request comprising a new media type sent from one of a terminal equipment, a mobile switching center (MSC), or a second party; releasing a circuit-switched (CS) call leg based on an original media type between an IMS CS control function (ICCF) and the terminal equipment; establishing a CS call leg based on the new media type between the ICCF and the terminal equipment; and updating the media type of a second call leg between the ICCF and a second party into the new media type or establishing a second call leg based on the new media type between the ICCF and the second party. |

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| **主权项** | 专利度:2特征度:35 |  |  |
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A method for changing IP multimedia sub-system (IMS) centralized service (ICS) session media, comprising: controlling a media negotiation between a terminal equipment and a second party via an established IMS circuit-switched (CS) control channel (ICCC); establishing a CS call leg based on a negotiated media type between an IMS CS control function (ICCF) and the terminal equipment; establishing a second call leg based on the negotiated media type between the ICCF and the second party; binding the CS call leg established with the terminal equipment and the second call leg established with the second party, and establishing a call connection between the terminal equipment and the second party; wherein the step of controlling the media negotiation between the terminal equipment and the second party via the established ICCC comprises: establishing, by the terminal equipment, the ICCC with the ICCF; sending, by the terminal equipment, an identity of the second party and a media type of a request to establish the call connection with the second party to the ICCF via the ICCC; sending, by the ICCF, a session invitation message comprising the media type to the second party through the identity of the second party; returning, by the second party, a media type change request comprising a new media type to the ICCF; returning, by the ICCF, the new media type to the terminal equipment via the ICCC; returning, by the terminal equipment, an acknowledgement message to the ICCF via the ICCC, wherein the acknowledgement message indicates an acceptance of the new media type; and determining, by the ICCF, whether a CS network in which the terminal equipment is located supports a service change and unrestricted digital information (UDI) fallback (SCUDIF), and if the CS network in which the terminal equipment is located does not support the SCUDIF, performing, by the ICCF, the step of releasing the CS call leg based on the media type established with the terminal equipment; if the CS network in which the terminal equipment is located supports the SCUDIF, modifying, by the ICCF, the CS call leg based on the media type into the CS call leg based on the new media type by using SCUDIF; returning, by the ICCF, an acknowledgement message of the media type change request to the second party to acknowledge that the terminal equipment accepts the new media type.

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| **对偶主权项** | 专利度:17特征度:10 |  |  |
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A method for changing IP multimedia sub-system (IMS) centralized service (ICS) session media, comprising:~~receiv~~controlling a media~~type change request compr~~negotiation between a terminal equipment and a second party via an established IMS circuit-switched (CS) control channel (ICCC); establishing a~~new media type sent from one of a terminal equipment, a mobile switching center (MSC),~~CS call leg based on a negotiated media type between an IMS CS control function (ICCF) and the terminal equipment; establishing a second call leg based on the negotiated media type between the ICCFand~~a~~thesecond party;~~releasing a first circuit-switched (CS) call leg based on an original media type between an IMS CS control function (ICCF) and the terminal equipment; establishing a first CS call leg based on the new media type between the ICCF and the terminal equipment; and updating~~binding the CS call leg established with the terminal equipment and the second call leg established with the second party, and establishing a call connection between the terminal equipment and the second party; wherein the step of controlling the media negotiation between the terminal equipment and the second party via the established ICCC comprises: establishing, by the terminal equipment, the ICCC with the ICCF; sending, by the terminal equipment, an identity of the second party and a media type of a request to establish the call connection with the second party to the ICCF via the ICCC; sending, by the ICCF, a session invitation message comprising the media type to the second party through the identity of the second party; returning, by the second party, a media type change request comprising a new media type to the ICCF; returning, by the ICCF, the new media type to the terminal equipment via the ICCC; returning, by the terminal equipment, an acknowledgement message to the ICCF via the ICCC, wherein the acknowledgement message indicates an acceptance ofthenewmedia type~~of a second call leg between the ICCF~~; and determining, by the ICCF, whether a CS network in which the terminal equipment is located supports a service change and unrestricted digital information (UDI) fallback (SCUDIF),andifthe~~second party into the new media type or establishing a second~~CS network in which the terminal equipment is located does not support the SCUDIF, performing, by the ICCF, the step of releasing the CS call leg based on the media type established with the terminal equipment; if the CS network in which the terminal equipment is located supports the SCUDIF, modifying, by the ICCF, the CS call leg based on the media type into the CScall leg based on the new media type b~~etween~~y using SCUDIF; returning, bythe ICCF,an~~d the second party~~acknowledgement message of the media type change request to the second party to acknowledge that the terminal equipment accepts the new media type.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for generating codebook, method and apparatus for data transmission**

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| **公开号** | [US8509332](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8509332&sv=640d96834e3985703cdac132fc4d6bb4) | **公开日** | 2013/08/13 |
| **申请号** | 13/330,390 | **申请日** | 2011/12/19 |
| **授权日** | 2013/08/13 | **优先日** | 2009/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Yongxing | Sun; Weijun |
| **国际 主分类** | H04K 1/10 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for generating a codebook and a method and an apparatus for data transmission are provided. The method includes: receiving a label of a codeword sent by a User Equipment (UE); selecting the codeword identified by the label from the codebook for eight-antenna; and coding data to be sent by using the codeword. The codebook for eight-antenna includes at least one rank-8 codeword for eight-antenna. The rank-8 codeword for eight-antenna is generated by multiplying an inverse matrix of a rotation matrix for eight-antenna with an eight-dimensional matrix formed by rank-4 codewords for four-antenna; or generated by extending rank-4 codewords for eight-antenna, where the rank-4 codeword for eight-antenna is generated according to codewords for four-antenna. Therefore, the codeword in the codebook for eight-antenna is applicable to scenarios including dual-polarization strong correlation, dual-polarization weak correlation, single-polarization strong correlation, and single-polarization weak correlation, etc. |

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| **主权项** | 专利度:12特征度:18 |  |  |
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A base station apparatus, comprising a storage unit configured to store a codebook for an eight-antenna configuration, the codebook for the eight-antenna configuration comprising at least one rank-8 codeword for the eight-antenna configuration, the rank-8 codeword for the eight-antenna configuration being generated by extending rank-4 codewords for the eight-antenna configuration; a receiver configured to receive a label of a codeword from a user equipment (UE); a searching unit configured to select the codeword identified by the label from the codebook for the eight-antenna configuration; a coding unit configured to code data to be sent using the codeword selected by the searching unit; and a transmitter configured to send the coded data, wherein each rank-4 codeword for the eight-antenna configuration is generated by creating a matrix by multiplying the rank-4 codeword for a four-antenna configuration with a diagonal matrix and concatenating the rank-4 codeword for the four-antenna configuration and the matrix.

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| **对偶主权项** | 专利度:28特征度:6 |  |  |
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A~~method for coding data, comprising: receiving, at the communications device,~~base station apparatus, comprising a storage unit configured to store a codebook for an eight-antenna configuration, the codebook for the eight-antenna configuration comprising at least one rank-8 codeword for the eight-antenna configuration, the rank-8 codeword for the eight-antenna configuration being generated by extending rank-4 codewords for the eight-antenna configuration; a receiver configured to receivea label of a codeword from a user equipment (UE);~~selecting, by the communications device,~~a searching unit configured to selectthe codeword identified by the label from~~a~~thecodebook for~~an~~theeight-antenna configuration~~(the eight-antenna), the codebook for the eight-antenna comprising at least one rank-8 codeword for t~~; a coding unit configured to code data to be sent using the codeword selected by the searching unit; and a transmitter configured to send the coded data, wherei~~ght-antenna, the~~n eachrank-~~8~~4codeword for the eight-antenna~~being generated by extend~~configuration is generated by creating a matrix by multiplying~~a~~therank-4 codeword for~~the eight~~a four-antenna~~;~~co~~ding data, by the communications device, using the selected codeword; and transmitting, by the communications device, the coded data to~~nfiguration with a diagonal matrix and concatenating the rank-4 codeword for the four-antenna configurationan~~o~~dthe~~r communications device~~matrix.

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| **被引用** | 6 | **自引用** | 6 | **公司数** | 1 | **国家数** | 1 | **影响力** | 1.45 |

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| **同族数** | 23 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for transferring user equipment in mobile communication system**

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| **公开号** | [US8509200](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8509200&sv=81059feb0d39284215ee76afd25360c1) | **公开日** | 2013/08/13 |
| **申请号** | 12/371,174 | **申请日** | 2009/02/13 |
| **授权日** | 2013/08/13 | **优先日** | 2006/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Qingyu | Guo; Xiaolong | Sun; Ying |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method and system for transferring user equipment (UE) in a mobile communication system are disclosed. According to the method, a source core (CN) network determines to transfer a UE that it serves and sends a transfer instruction carrying UE transfer restriction information to the UE; an access network receives a transfer request that is sent by the UE according to the restriction information carried in the transfer instruction; the access network selects a target CN entity that is different from the source CN entity for the UE; and the UE is transferred to the target CN entity. The method and system provided by the present invention are applicable to user transferring between CN entities in any communication network. The transferring is initiated by a network side entity, and a more preferable CN entity is selected for the UE to provide a better service. |

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| **主权项** | 专利度:19特征度:10 |  |  |
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A method for transferring a user equipment (UE) in a mobile communication system, comprising: determining, by a source core network (CN) element, to transfer the UE that the source CN element serves, and sending a transfer instruction carrying UE transfer restriction information to the UE; receiving, by an access network, a transfer request sent by the UE after the UE has received the transfer instruction; selecting, by the access network, a target CN element that is different from the source CN element for the UE; and transferring, by the access network, the UE to the target CN element; wherein the restriction information is information for transferring the UE to the target CN element that is different from the source CN element; and wherein the transfer request carries information for preventing the UE to be transferred to the source CN element.

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| **对偶主权项** | 专利度:25特征度:26 |  |  |
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A method for transferring a user equipment (UE) in a mobile communication system, comprising:determining, by a source core network (CN) element, to transfer~~a~~theUE that the source CN element serves, and sending a transfer instruction carrying UE transfer restriction information to the UE;receiving, by an access network, a transfer request sent by the UE~~in response to~~after the UE hasreceiv~~ing~~edthe transfer instruction;selecting, by the access network, a target CN element that is different from the source CN element for the UE; andtransferring~~the UE to the target~~, by the access network, the UE to the target CN element; wherein the restriction information is information for transferring the UE to the target CN element that is different from the source CN element; and wherein the transfer request carries information for preventing the UE to be transferred to the sourceCN element.

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| **被引用** | 13 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.30 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and entity of realizing event detection**

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| **公开号** | [US8509091](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8509091&sv=6501222ca01b1be2c72fdbe1391888fa) | **公开日** | 2013/08/13 |
| **申请号** | 12/582,511 | **申请日** | 2009/10/20 |
| **授权日** | 2013/08/13 | **优先日** | 2007/04/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Tan; Shiyong | Li; Yan | Wei; Weihua | Huang; Shibi | Zhao; Peng | Mao; Yuxin |
| **国际 主分类** | G01R 31/08 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method and a system of realizing event detection are provided, which detect a status of an Internet Protocol (IP) connectivity access network (IP-CAN) bearer corresponding to a policy and charging control (PCC) rule by binding an Event-Trigger parameter to the PCC rule, thereby realizing small-granularity detection for the specific PCC rule and reducing the load of the system. Furthermore, a status of the IP-CAN bearer or an IP flow is realized by binding the Event-Trigger parameter to an IP-CAN identifier (ID) or an IP flow ID, so as to avoid the problem about too large granularity of the binding of event detection and IP-CAN session and reduce the burden of the IP-CAN bearer detection and message exchange. |

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| **主权项** | 专利度:6特征度:20 |  |  |
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A method of realizing event detection, comprising: receiving, by a network device configured as a policy and charging enforcement function (PCEF), policy and charging control (PCC) rules and an Event-Trigger parameter bound to a designated PCC rule sent by a policy control and charging rules function (PCRF) wherein the Event-Trigger parameter is further bound to identifiers (IDs) of IP flows in the designated PCC rule; wherein a manner of binding the Event-Trigger parameter to the designated PCC rule further comprises: carrying the Event-Trigger parameter and the designated PCC rule in a newly added parameter and indicating that the Event-Trigger parameter is bound to the designated PCC rule; and the Event-Trigger parameter is one or more Event-Trigger parameters, and the designated PCC rule carried in the newly added parameter is zero or more than one PCC rule; and detecting, by the PCEF network device, a status of IP flows which are denoted by respective IDs of the corresponding IP flows in the designated PCC rule.

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| **对偶主权项** | 专利度:13特征度:14 |  |  |
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A method of realizing event detection, comprising: receiving, by anetwork device configured as apolicy and charging enforcement function (PCEF), policy and charging control (PCC) rulesand an Event-Trigger parameter bound to a designated PCC rulesent by a policy control and charging rules function (PCRF)~~,~~wherein~~an~~theEvent-Trigger parameter~~bound to a designated PCC rule is carried; and detecting, by the PCEF, a status of an Internet Protocol (IP) connectivity access network (IP-CAN) bearer or a status of IP flows corresponding to the~~is further bound to identifiers (IDs) of IP flows in the designated PCC rule; wherein a manner of binding the Event-Trigger parameter to the designated PCC rule further comprises: carrying the Event-Trigger parameter and the designated PCC rule in a newly added parameter and indicating that the Event-Trigger parameter is bound to the designatedPCC rule;a~~ssociated with an event indicated by the Event-Trigger parameter after receiving the Event-Trigger parameter~~nd the Event-Trigger parameter is one or more Event-Trigger parameters, and the designated PCC rule carried in the newly added parameter is zero or more than one PCC rule; and detecting, by the PCEF network device, a status of IP flows which are denoted by respective IDs of the corresponding IP flows in the designated PCC rule.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for voice call fallback to circuit switched domain**

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| **公开号** | [US8504043](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8504043&sv=5614d059b1b6d5a8ad9c6d2c2377435f) | **公开日** | 2013/08/06 |
| **申请号** | 13/356,201 | **申请日** | 2012/01/23 |
| **授权日** | 2013/08/06 | **优先日** | 2009/07/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Xiaobo | Liu; Hai | Xiao; Wei |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for voice call fallback to a circuit switched (CS) domain disclosed in the present invention includes: receiving a Service Request message from a calling user equipment (UE), where the Service Request message includes called number information of a voice call in a CS domain, instructing an evolved NodeB (eNB) to initiate circuit switched fallback (CSFB) handover; receiving a Handover Request message from the eNB, where the Handover Request message includes information required for CS handover, selecting a mobile switching center (MSC) and sending a packet switched (PS) to CS Handover Request message to the MSC, where the PS to CS Handover Request message carries information required for the CS handover and a called number so that the MSC calls a called UE. The corresponding apparatuses and systems are also disclosed. The technical solution of the present invention can reduce the connection delay. |

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| **主权项** | 专利度:8特征度:44 |  |  |
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A method for voice call fallback to a circuit switched (CS) domain, comprising: sending, by a mobility management entity (MME), a Location Update message including an identity of a called user equipment (UE) to a mobile switching center (MSC) to make the MSC create an association with the MME and complete a location update procedure of a CS domain; sending, by the MME, a first CS Paging Request message to the called UE through an evolved NodeB (eNB) when receiving a second CS Paging Request message from the MSC; receiving, by the MME, a Service Request message from the called UE, determining that the called UE accepts the call, and instructing the eNB to initiate circuit switched fallback (CSFB) handover; receiving, by the MME, a first Handover Request message from the eNB, wherein the first Handover Request message comprises first information required for CS handover, selecting the MSC and directly sending a packet switched (PS) to CS Handover Request message to the MSC, wherein the PS to CS Handover Request message comprises second information required for CS handover; and receiving, by the MME, a PS to CS Handover Response message returned by the MSC, wherein the PS to CS Handover Response message comprises CS resource information prepared by a target base station subsystem/radio network subsystem (BSS/RNS), and sending a Handover Command message to the called UE through the eNB, wherein the Handover Command message comprises the CS resource information prepared by the target BSS/RNS so that the called UE accesses a 2nd generation/3rd generation (2G/3G) network, wherein if the 2G/3G network supports PS handover, the first Handover Request message from the eNB further comprises information required for a PS handover, and after receiving the first Handover Request message from the eNB, the method comprises: sending, by the MME, a second Handover Request message to a serving general packet radio service (GPRS) support node (SGSN), wherein the second Handover Request message comprises the information required for the PS handover; and receiving, by the MME, a Handover Request ACK message returned by the SGSN, wherein the Handover Request ACK message comprises PS resource information prepared by the target BSS/RNS, and combining, by the MME, the Handover Request ACK message and the PS to CS Handover Response message so that the Handover Command message further comprises the PS resource information prepared by the target BSS/RNS.

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| **对偶主权项** | 专利度:11特征度:9 |  |  |
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A method for voice call fallback to a circuit switched (CS) domain, comprising: sending, by a mobility management entity (MME), a~~first CS Paging Request message to a called user equipment (~~Location Update message including an identity of a called user equipment (UE) to a mobile switching center (MSC) to make the MSC create an association with the MME and complete a location update procedure of a CS domain; sending, by the MME, a first CS Paging Request message to the calledUE~~)~~through an evolved NodeB (eNB) when receiving a second CS Paging Request message from~~a mobile switching center (~~theMSC~~)~~; receiving, by the MME, a Service Request message from the called UE, determining that the called UE accepts the call, and instructing the eNB to initiate circuit switched fallback (CSFB) handover; receiving, by the MME, a first Handover Request message from the eNB, wherein the first Handover Request message comprises first information required for CS handover, selecting the MSC anddirectlysending a packet switched (PS) to CS Handover Request message to the MSC, wherein the PS to CS Handover Request message comprises second information required for CS handover; and receiving, by the MME, a PS to CS Handover Response message returned by the MSC, wherein the PS to CS Handover Response message comprises CS resource information prepared by a target base station subsystem/radio network subsystem (BSS/RNS), and sending a Handover Command message to the called UE through the eNB, wherein the Handover Command message comprises the CS resource information prepared by the target BSS/RNS so that the called UE accesses a 2nd generation/3rd generation (2G/3G) network, wherein if the 2G/3G network supports PS handover, the first Handover Request message from the eNB further comprises information required for a PS handover, and after receiving the first Handover Request message from the eNB, the method comprises: sending, by the MME, a second Handover Request message to a serving general packet radio service (GPRS) support node (SGSN), wherein the second Handover Request message comprises the information required for the PS handover; and receiving, by the MME, a Handover Request ACK message returned by the SGSN, wherein the Handover Request ACK message comprises PS resource information prepared by the target BSS/RNS, and combining, by the MME, the Handover Request ACK message and the PS to CS Handover Response message so that the Handover Command message further comprises the PS resource information prepared by the target BSS/RNS.

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| **被引用** | 10 | **自引用** | 2 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.14 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Process method about the service connection between the wireless local area network and user terminal**

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| **公开号** | [US8503412](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8503412&sv=6e8a3aa1c1690b505bf8fd92fd6b5450) | **公开日** | 2013/08/06 |
| **申请号** | 11/869,622 | **申请日** | 2007/10/09 |
| **授权日** | 2013/08/06 | **优先日** | 2002/12/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin | Duan; Xiaoqin |
| **国际 主分类** | H04Q 7/24 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Disclosed is a method for processing the service connection between a user terminal and a Wireless Local Area Network (WLAN) applicable to a WLAN interactive network that at least comprises: a WLAN user terminal, a WLAN access unit, a service control unit and a user information storage unit. The method comprises: setting flags that represent the attached or detached status of the service connection between the user terminal and the WLAN in the WLAN user terminal and the service control unit respectively; establishing or canceling the connection between the user terminal and the network through the interaction between the WLAN user terminal and the WLAN, meanwhile modifying the corresponding flags. The method can clarify the service connection status of the current WLAN user terminal so as to implement effective interaction and control between the WLAN user terminal and the service control unit, keep the user information in the user information storage unit and service control unit consistent, avoid redundant messages, and further improve the working efficiency of the system. |

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| **主权项** | 专利度:16特征度:19 |  |  |
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A method for indicating a service connection status of a user terminal, wherein the service connection is between the user terminal and a Wireless Local Area Network (WLAN), comprising: setting, in a service control unit, a first flag representing the service connection status of the user terminal, wherein the service connection status is either a WLAN attached status or a WLAN detached status; sending, by the service control unit, a detach request to the user terminal, wherein the detach request includes at least one reason why the user terminal is to be detached from the WLAN; and recording, by the service control unit, the service connection status of the user terminal as WLAN detached, updating the first flag representing the service connection status of the user terminal accordingly; after recording the service connection status of the user terminal as WLAN detached, sending, by the service control unit, a user data updating instruction indicating the service connection status to a user information storage unit; and receiving, by the service control unit, a user data updating response returned from the user information storage unit after the user information storage unit updating a second flag set in the user information storage unit on receiving the user data updating instruction, wherein the second flag indicates the service connection status between the user terminal and the WLAN.

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| **对偶主权项** | 专利度:25特征度:16 |  |  |
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A~~process method about~~method for indicating a service connection status of a user terminal, whereinthe service connectionisbetween~~a WLAN and a~~theuser terminal~~, applicable to a WLAN interactive network at least consisting of a WLAN user terminal, a WLAN access unit,~~and a Wireless Local Area Network (WLAN), comprising: setting, in a service control unit, a first flag representing the service connection status of the user terminal, wherein the service connection status is either a WLAN attached status or a WLAN detached status; sending, by theservice control unit,a~~nd a user information storage unit, comprising: setting a flag representing either an attached status or a detached status for~~detach request to the user terminal, wherein the detach request includes at least one reason why the user terminal is to be detached from the WLAN; and recording, by the service control unit, the service connection status of the user terminal as WLAN detached, updating the first flag representingthe service connection~~between~~status ofthe user terminal a~~nd the WLAN respectively in the WLAN user terminal and~~ccordingly; after recording the service connection status of the user terminal as WLAN detached, sending, bythe service control unit~~;~~,a~~nd establishing or canceling the service connection between the user terminal and the network by means of interaction between the WLAN user terminal and the WLAN, and modifying the corresponding flags~~user data updating instruction indicating the service connection status to a user information storage unit; and receiving, by the service control unit, a user data updating response returned from the user information storage unit after the user information storage unit updating a second flag set in the user information storage unit on receiving the user data updating instruction, wherein the second flag indicates the service connection status between the user terminal and the WLAN.

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| **被引用** | 14 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.4 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for acquiring load information**

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| **公开号** | [US8494545](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8494545&sv=daae162587d7c0ad9d4ac4e71a31fc73) | **公开日** | 2013/07/23 |
| **申请号** | 13/235,891 | **申请日** | 2011/09/19 |
| **授权日** | 2013/07/23 | **优先日** | 2009/03/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xuanyu | Chen; Yanyan | Guo; Wei | LV; Boya |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP. |

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| **摘要** |  |
| The present invention discloses a method, an apparatus and a system for acquiring load information. In one method, a source access controller and a target access controller can interact through inter-Radio Access Technology (RAT) handover related messages so that a source RAT system can acquire load information of a target RAT system when an inter-RAT Packet Switched (PS) handover is performed. This enables load balancing between different RAT systems so as to guarantee communications quality of the systems. In another method of the present invention, the source access controller and the target access controller interact through a Radio Access Network (RAN) Information Management (RIM) based load information request message and an RIM based load information response message, so that the source RAT system can acquire load information of the target RAT system before an inter-RAT PS domain handover is performed. |

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| **主权项** | 专利度:4特征度:33 |  |  |
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A method for acquiring load information, comprising: before a handover from a Universal Mobile Telecommunication System Terrestrial Radio Access Network (UTRAN) to an Evolved UTRAN (E-UTRAN) is performed, sending, by a source Radio Network Controller (RNC) to which a source cell belongs, through a core network, a first DIRECT INFORMATION TRANSFER message to a target access controller to which a target cell belongs, so that a first MME DIRECT INFORMATION TRANSFER message is sent from the target access controller to a target evolved NodeB (eNB) to which the target cell belongs, wherein the target access controller comprises a Serving GPRS Support Node (SGSN) or a Mobile Switching Center (MSC); and receiving, by the source RNC, a second DIRECT INFORMATION TRANSFER message from the SGSN or the MSC, wherein the second DIRECT INFORMATION TRANSFER message is returned by the SGSN or the MSC according to an eNB DIRECT INFORMATION TRANSFER message returned by the target eNB, wherein the first MME DIRECT INFORMATION TRANSFER message and the first DIRECT INFORMATION TRANSFER message carry a first Inter-System Information Transfer Type Information Element (IE), wherein the first Inter-System Information Transfer Type IE carries a cell load reporting request of the target cell and a first RAN Information Management (RIM) Transfer IE which includes a load information IE of the source cell, wherein the eNB DIRECT INFORMATION TRANSFER message and the second DIRECT INFORMATION TRANSFER message carry a second Inter-System Information Transfer Type IE that carries a second RIM Transfer IE, wherein the second RIM Transfer IE carries a load information IE of the target cell.

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| **对偶主权项** | 专利度:20特征度:14 |  |  |
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A method for acquiring load information, comprising: before a~~n inter-~~handover from a Universal Mobile Telecommunication System TerrestrialRadio Access~~Technology (~~Network (UTRA~~T~~N)~~handover~~to an Evolved UTRAN (E-UTRAN)is performed,sending,~~through a core network, by a source access c~~by a source Radio Network Controller(RNC)to which a source cell belongs,~~a Radio Access Network (RAN) Information Management (RIM) based load information request message to a target access controller~~through a core network, a first DIRECT INFORMATION TRANSFER message to a target access controller to which a target cell belongs, so that a first MME DIRECT INFORMATION TRANSFER message is sent from the target access controller to a target evolved NodeB (eNB)to which~~a~~thetarget cell belongs~~; and receiving, by the source access controller, an RIM based load information response message returned by the target access controller acc~~, wherein the target access controller comprises a Serving GPRS Support Node (SGSN) or a Mobile Switching Center (MSC); and receiving, by the source RNC, a second DIRECT INFORMATION TRANSFER message from the SGSN or the MSC, wherein the second DIRECT INFORMATION TRANSFER message is returned by the SGSN or the MSC according to an eNB DIRECT INFORMATION TRANSFER message returned by the target eNB, wherein the first MME DIRECT INFORMATION TRANSFER message and the first DIRECT INFORMATION TRANSFER message carry a first Inter-System Information Transfer Type Information Element (IE), wherein the first Inter-System Information Transfer Type IE carries a cell load repor~~d~~ting~~to the RIM based load information request message through the core network~~request of the target cell and a first RAN Information Management (RIM) Transfer IE which includes a load information IE of the source cell,wherein the~~RIM based load information response messag~~eNB DIRECT INFORMATION TRANSFER message and the second DIRECT INFORMATION TRANSFER message carry a second Inter-System Information Transfer Type IE that carries a second RIM Transfer IE, wherein the second RIM Transfer IEcarriesaload informationIEof the target cell.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.10 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for bearer processing**

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| **公开号** | [US8493932](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8493932&sv=85152351bd21da8c01d1f195c892f6f6) | **公开日** | 2013/07/23 |
| **申请号** | 12/770,274 | **申请日** | 2010/04/29 |
| **授权日** | 2013/07/23 | **优先日** | 2007/10/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Jinyi | Liu; Lan | Hu; Huadong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A bearer processing method is disclosed. The method includes these steps: a system border node receives a Packet Data Protocol (PDP) Context Request initiated by a universal mobile telecommunication system (UMTS); the system border node adjusts a Request Bearer Resource Allocation message of a system architecture evolution (SAE) system or the PDP Context Request of the UMTS according to the received PDP Context Request to map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS. The present invention can map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS. |

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| **主权项** | 专利度:4特征度:24 |  |  |
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A method for bearer processing, comprising: receiving, by a serving General Packet Radio Service (GPRS) support node (SGSN), an Activate Secondary Packet Data Protocol (PDP) Context Request message initiated by a user equipment (UE) through a Universal Mobile Telecommunication System (UMTS) system; allocating a Procedure Transaction ID to correlate a Request Bearer Resource Allocation message with the Activate Secondary PDP context Request message; and sending, by the SGSN the Request Bearer Resource Allocation message to a serving gateway (S-GW) in a system architecture evolution (SAE) system.

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| **对偶主权项** | 专利度:19特征度:17 |  |  |
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A method for bearer processing, comprising~~,~~:receiving, by a s~~ystem border node, a~~erving General Packet Radio Service (GPRS) support node (SGSN), an Activate SecondaryPacket Data Protocol (PDP) Context Request message initiated by auser equipment (UE) through aUniversal Mobile Telecommunication System (UMTS)~~; and adjusting, by the system border node, a Request Bearer Resource Allocation message of a System Architecture Evolution (SAE) system or a~~system; allocating a Procedure Transaction ID to correlate a Request Bearer Resource Allocation message with the Activate SecondaryPDP~~C~~context Request message~~of the UMTS system according to the received PDP Context Request message, to map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS~~; and sending, by the SGSN the Request Bearer Resource Allocation message to a serving gateway (S-GW) in a system architecture evolution (SAE)system.

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| **被引用** | 9 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.20 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Apparatus for collecting charging information of a data service and charging method thereof**

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| **公开号** | [US8488597](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8488597&sv=e6bc474f8457df4106df0f92c297d08a) | **公开日** | 2013/07/16 |
| **申请号** | 11/414,476 | **申请日** | 2006/04/28 |
| **授权日** | 2013/07/16 | **优先日** | 2003/10/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Nie; Yanbo | Shan; Mingjun | Huan; Xuanyi | Wang; Li |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The present invention discloses an apparatus for collecting charging information of data service and charging method thereof. The apparatus comprises: a protocol distribution processing module, for classifying service data received from a gateway service node in the wireless network by the protocol type, and sending the classified service data to a protocol processing module of the corresponding protocol type; receiving service data from said one or more than one protocol processing module and sending the service data to the gateway service node; at least one protocol processing module, for receiving the classified service data from the protocol distribution processing module, obtaining charging information of the service data and sending the charging information to a charging system, and transparently transmitting the service data to a packet switched domain network; receiving the service data from a packet switched domain network, obtaining the charging information of the service data and sending the charging information to the charging system, and transparently transmitting the service data to the protocol distribution processing module. This invention can accurately collect the charging information of service data of various classes. |

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| **主权项** | 专利度:14特征度:37 |  |  |
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A charging method for data service in a wireless network, the method comprising: receiving, at a protocol distribution processing module within a proxy device, first service data from a mobile Station (MS) via a gateway service node, wherein the proxy device is located between a gateway service node and a packet switched domain network and the first service data comprises at least one of the following: Hyper Text Transfer Protocol (HTTP) service data, Wireless Application Protocol (WAP) service data, Transmission Control Protocol/Internet Protocol (TCP/IP) service data or Real Time Protocol/ Real Time Session Protocol (RTP/RTSP) service data; classifying the received first service data according to a protocol type of the first service data; distributing the classified first service data to one of a plurality of protocol processing modules within the proxy device according to the classified protocol type; at the one of the plurality of protocol processing modules, extracting charging information of the classified first service data, wherein the charging information comprises the protocol type of the first service data; sending the charging information to a charging system for charging; transmitting, from the one of the plurality of protocol processing modules, the respective classified first service data transparently to the packet switched domain network; wherein when a service server has collected charging information of second service data, wherein the second service data has a second protocol type, and the second service data has been charged based on one charging mode according to the collected charging information of the second service data at the service server by the charging system, the method further comprises: determining, by the charging system, if the first service data from which the charging information is extracted at the proxy device has the same protocol type as the second service data from which the charging information is extracted at the service server according to the charging information of the first service data collected by the proxy device; if the first service data has a different protocol type than the second service data, at the charging system, charging the first service data by a charging mode corresponding to the protocol type of the classified service data received at the proxy device, wherein the first service data is classified by the protocol type, wherein the charging modes of data services include a volume based charging mode and a content based charging mode; and if the first service data has the same protocol type as the second service data, the charging system does not charge for the first service data according to the charging information of the first service data collected at the proxy device.

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| **对偶主权项** | 专利度:12特征度:6 |  |  |
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A~~n apparatus applied in a wireless network for collecting charging information of a data service, comprising: a protocol distribution processing module for classifying service data received from a gateway service node in the wireless network by protocol type of service data, and sending the classified service data to a protocol processing module of corresponding protocol type; receiving service data from one or more than on~~charging method for data service in a wireless network, the method comprising: receiving, at a protocol distribution processing module within a proxy device, first service data from a mobile Station (MS) via a gateway service node, wherein the proxy device is located between a gateway service node and a packet switched domain network and the first service data comprises at least one of the following: Hyper Text Transfer Protocol (HTTP) service data, Wireless Application Protocol (WAP) service data, Transmission Control Protocol/Internet Protocol (TCP/IP) service data or Real Time~~p~~Protocol~~processing module and sending the service data to a gateway service node; and said one or more than one protocol processing module for receiving the classified service data from the protocol distribution processing module corresponding to the protocol type, obtaining charging information of the service data and sending the charging information to a charging system, and transmitting the service data transparently to a packet switched domain network; receiving the service data from a packet switched domain network, obtaining the charging information of the service data and sending the charging information to the charging system, and transmitting the service data transparently to the protocol distribution processing modul~~/ Real Time Session Protocol (RTP/RTSP) service data; classifying the received first service data according to a protocol type of the first service data; distributing the classified first service data to one of a plurality of protocol processing modules within the proxy device according to the classified protocol type; at the one of the plurality of protocol processing modules, extracting charging information of the classified first service data, wherein the charging information comprises the protocol type of the first service data; sending the charging information to a charging system for charging; transmitting, from the one of the plurality of protocol processing modules, the respective classified first service data transparently to the packet switched domain network; wherein when a service server has collected charging information of second service data, wherein the second service data has a second protocol type, and the second service data has been charged based on one charging mode according to the collected charging information of the second service data at the service server by the charging system, the method further comprises: determining, by the charging system, if the first service data from which the charging information is extracted at the proxy device has the same protocol type as the second service data from which the charging information is extracted at the service server according to the charging information of the first service data collected by the proxy device; if the first service data has a different protocol type than the second service data, at the charging system, charging the first service data by a charging mode corresponding to the protocol type of the classified service data received at the proxy device, wherein the first service data is classified by the protocol type, wherein the charging modes of data services include a volume based charging mode and a content based charging mode; and if the first service data has the same protocol type as the second service data, the charging system does not charge for the first service data according to the charging information of the first service data collected at the proxy device.

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| **被引用** | 47 | **自引用** | 1 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.14 |

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| **同族数** | 13 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Random access method, evolved node B, and terminal equipment**

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| **公开号** | [US8488560](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8488560&sv=4de64f0466ad5395a7fae35210cad765) | **公开日** | 2013/07/16 |
| **申请号** | 13/426,263 | **申请日** | 2012/03/21 |
| **授权日** | 2013/07/16 | **优先日** | 2009/04/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Chang; Junren | Li; Yajuan | Feng; Shulan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A random access method, an evolved Node B (eNB), and a terminal equipment are provided. The method includes: determining target component carriers to which a User Equipment (UE) is to be handed over, and notifying the UE of information about the target component carriers through a source eNB; and after receiving a dedicated random access preamble sent by the UE, sending a random access response message on at least one component carrier in the target component carriers. The terminal equipment includes: a handover command receiving unit, a sending unit, and a random response receiving unit. Therefore, in a random access procedure of cell handover, the eNB is capable of determining downlink component carriers that a UE monitors, thereby increasing utilization rate of downlink resources. |

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| **主权项** | 专利度:13特征度:19 |  |  |
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A random access method, comprising: receiving, by a target evolved Node B (eNB), a handover request message sent by a source eNB, wherein the handover request message comprises information of at least one target component carrier selected by the source eNB, and each of the at least one target component carrier is a carrier to which a User Equipment (UE) is to be handed over; determining, by the target eNB, whether to allow the at least one target component carrier selected by the source eNB; sending, by the target eNB, a handover request acknowledgement message to the source eNB, wherein the handover request acknowledgement message comprises information about at least one determined target component carrier for the UE, wherein: if the at least one target component carrier selected by the source eNB is allowed by the target eNB, the at least one determined target component carrier is the at least one target component carrier selected by the source eNB, and if the at least one target component carrier selected by the source eNB is not allowed by the target eNB, the at least one determined target component carrier is at least one newly configured target component carrier configured by the target eNB; sending, by the source eNB, the at least one determined target component carrier to the UE through a handover command; receiving, by the target eNB, a dedicated random access preamble sent by the UE; and sending, by the target eNB, a random access response message on a component carrier in the at least one determined target component carrier.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A random access method, comprising:~~determining~~receiving, by a target evolved Node B (eNB), a handover request message sent by a source eNB, wherein the handover request message comprises information of at least one target component carrier selected by the source eNB, and each of theat least one target component carrieris a carrierto which a User Equipment (UE) is to be handed over~~, and notifying the UE of information about the at least one target component carrier through a source evolved Node B (~~; determining, by the target eNB, whether to allow the at least one target component carrier selected by the source eNB; sending, by the target eNB, a handover request acknowledgement message to the source eNB, wherein the handover request acknowledgement message comprises information about at least one determined target component carrier for the UE, wherein: if the at least one target component carrier selected by the source eNB is allowed by the target eNB, the at least one determined target component carrier is the at least one target component carrier selected by the source eNB, and if the at least one target component carrier selected by the source eNB is not allowed by the target eNB, the at least one determined target component carrier is at least one newly configured target component carrier configured by the targeteNB~~)~~;~~and after receiving~~sending, by the source eNB, the at least one determined target component carrier to the UE through a handover command; receiving, by the target eNB,a dedicated random access preamble sent by the UE~~,~~; andsending, by the target eNB,a random access response message on a~~t least one~~component carrier in the at least onedeterminedtarget component carrier.

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| **被引用** | 25 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 2.12 |

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| **同族数** | 12 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for handover between different types of access systems**

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| **公开号** | [US8488554](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8488554&sv=881fd77b6589cfc286262db7f5fde95c) | **公开日** | 2013/07/16 |
| **申请号** | 12/429,416 | **申请日** | 2009/04/24 |
| **授权日** | 2013/07/16 | **优先日** | 2006/10/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yan; Wenjun | Liu; Lina | Hu; Weihua | Wang; Shanshan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for handover between different types of access systems in some embodiments consistent with the present invention includes: when the UE hands over between different types of access systems, the UE accesses the IASA connected with the UE in the source access system through the destination access system. Furthermore, the present invention discloses a handover system, and a UE that includes an IASA address storing module and an IASA address sending module. The handover system includes: a destination access system, and a source IASA. |

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| **主权项** | 专利度:4特征度:21 |  |  |
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A method for handover between different types of access systems, the method comprising: when a User Equipment (UE) handovers from a non-3GPP access system to a 3GPP access system, accessing, by the UE, a source Inter Access Systems Anchor (IASA) connected with the UE in the non-3GPP access system through the 3GPP access system, wherein the step of accessing the source IASA comprises: during a service activation process in the 3GPP access system, sending, by the UE, an Active Packet Data Protocol (PDP) Context Request containing an address of the source IASA to a 3GPP access gateway, wherein, the Active PDP Context Request comprises an IASA allocation identifier for indicating whether to allow the 3GPP access gateway to reallocate the address of the source IASA; and determining, by the 3GPP access gateway, whether it is necessary to reallocate the address of the source IASA; and if it is unnecessary to reallocate the address of the source IASA, creating a PDP context between the 3GPP access gateway and the source IASA.

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| **对偶主权项** | 专利度:16特征度:8 |  |  |
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A method for handover between different types of access systems,the methodcomprising:when a User Equipment (UE) handover~~between different types of~~s from a non-3GPP access system to a 3GPPaccess system~~s~~, accessing, by the UE, a~~n~~sourceInter Access Systems Anchor (IASA) connected with the UE in the~~source access system through a destination access system~~non-3GPP access system through the 3GPP access system, wherein the step of accessing the source IASA comprises: during a service activation process in the 3GPP access system, sending, by the UE, an Active Packet Data Protocol (PDP) Context Request containing an address of the source IASA to a 3GPP access gateway, wherein, the Active PDP Context Request comprises an IASA allocation identifier for indicating whether to allow the 3GPP access gateway to reallocate the address of the source IASA; and determining, by the 3GPP access gateway, whether it is necessary to reallocate the address of the source IASA; and if it is unnecessary to reallocate the address of the source IASA, creating a PDP context between the 3GPP access gateway and the source IASA.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 2 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for allocating communication resources**

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| **公开号** | [US8488531](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8488531&sv=dd6ba007dff51706ad80dd1df3730b4f) | **公开日** | 2013/07/16 |
| **申请号** | 11/955,895 | **申请日** | 2007/12/13 |
| **授权日** | 2013/07/16 | **优先日** | 2005/06/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Van De Beek; Jaap | Mauritz; Oskar | Popovic; Branishlav |
| **国际 主分类** | H04W 72/08 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd |

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| **摘要** |  |
| The present invention relates to a method for allocating communication resources in a multi-user cellular communication system, wherein communication resources are divided in time periods and frequency sub-bands, wherein part of the communication resources are used for frequency-localized communication channels, and part of the communication resources are used for frequency distributed channels. The method further comprises the steps of classifying part of the frequency sub-bands as frequency sub-bands carrying frequency-distributed channels, classifying the remaining part of the frequency sub-bands as frequency sub-bands carrying frequency-localized channels. The present invention also relates to a system, a transmitter and a communication system. |

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| **主权项** | 专利度:23特征度:16 |  |  |
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A method for allocating communication resources for a communication between a transmitter and a receiver in a multi-user cellular communication system, the communication resources being divided into time periods and frequency sub-bands, the method comprising: receiving a channel quality measurement from the receiver; allocating to the receiver a part of the communication resources designated for frequency localized channels for providing multiuser-diversity based on the channel quality measurement, if allocating the part of the communication resources designated for the frequency localized channels is selected, or allocating to the receiver a part of the communication resources designated for frequency distributed channels for providing link-diversity if allocating the part of the communication resources designated for the frequency localized channels is not selected, wherein, in a same time period, the part of the communication resources designated for the frequency localized channels coexist with and distinct from the part of the communication resources designated for the frequency distributed channels; and informing the receiver a type and a channel of the communication resources allocated to the receiver, the type being a type of the frequency localized channels or a type of the frequency distributed channels; wherein a look-up table is used by the receiver to obtain the type of the communication resources allocated to the receiver.

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| **对偶主权项** | 专利度:20特征度:5 |  |  |
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~~M~~A method for allocating communication resources foracommunication between a transmitter~~mi~~and a receiver~~,~~in a multi-user cellular communication system,~~w~~the~~rein~~communication resources~~are~~beingdivided intotime periods and frequency sub-bands,~~w~~the~~rein~~method comprising: receiving a channel quality measurement from the receiver; allocating to the receiver apart of the communication resources~~are us~~designated for frequency~~-~~localized c~~ommunication channels, and~~hannels for providing multiuser-diversity based on the channel quality measurement, if allocating the part of the communication resources designated for the frequency localized channels is selected, or allocating to the receiver apart of the communication resources~~are us~~designated for frequency distributed channels~~, the method comprises: classifying part of the frequency sub-bands as frequency sub-bands carrying~~for providing link-diversity if allocating the part of the communication resources designated for the frequency localized channels is not selected, wherein, in a same time period, the part of the communication resources designated for the frequency localized channels coexist with and distinct from the part of the communication resources designated for thefrequency~~-~~distributed channels; and~~classify~~informing the re~~maining part of the frequency sub-bands as frequency sub-bands carrying frequency-localized channels~~ceiver a type and a channel of the communication resources allocated to the receiver, the type being a type of the frequency localized channels or a type of the frequency distributed channels; wherein a look-up table is used by the receiver to obtain the type of the communication resources allocated to the receiver.

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| **被引用** | 4 | **自引用** | 3 | **公司数** | 2 | **国家数** | 1 | **影响力** | 1.68 |

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| **同族数** | 21 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for estimating channels**

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| **公开号** | [US8483619](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8483619&sv=8bc1e1e370b090e588ca33b9d40aecc5) | **公开日** | 2013/07/09 |
| **申请号** | 13/454,804 | **申请日** | 2012/04/24 |
| **授权日** | 2013/07/09 | **优先日** | 2008/11/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wan; Lei | Cheng; Xingqing | Zhou; Mingyu | Zhao; Yajun |
| **国际 主分类** | H04Q 7/20 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, an apparatus and a system for estimating channels are disclosed. A method for estimating channels includes: receiving, by a User Equipment (UE), downlink signals sent by two or more Access Points (APs), wherein no common reference signal is comprised in any data channel symbol domain except a preset symbol domain in the downlink signals; and performing, by the UE, channel estimation according to the downlink signals. The technical solution disclosed herein eliminates the interference between the reference signal and the data signal, enables the UE to estimate the channel value between the UE and the cooperative APs accurately, and improves the UE performance. |

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| **主权项** | 专利度:6特征度:17 |  |  |
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A channel estimation method, comprising: receiving, by a User Equipment (UE), a downlink signal sent by a first Access Point (AP), wherein a first common reference signal is sent by the first AP in a preset symbol domain in the downlink signal, and data signals from the first AP are excluded from being sent in a specific time-frequency lattice of the preset symbol domain designated for utilization by a second AP for sending a second common reference signal; receiving, by the UE, the second common reference signal; and performing, by the UE, channel estimation according to the first common reference signal and the second common reference signal.

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| **对偶主权项** | 专利度:13特征度:18 |  |  |
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A channel estimation method, comprising: receiving, by a User Equipment (UE),adownlink signal~~s~~sent by~~two or more~~a firstAccess Point~~s~~(AP~~s); and performing, by the UE, channel estimation according to the downlink signals, wherein no common reference signal is comprised in any data channel symbol domain except a preset symbol domain in the downlink~~), wherein a first common reference signal is sent by the first AP in a preset symbol domain in the downlink signal, and data signals from the first AP are excluded from being sent in a specific time-frequency lattice of the preset symbol domain designated for utilization by a second AP for sending a second common reference signal; receiving, by the UE, the second common reference signal; and performing, by the UE, channel estimation according to the first common reference signal and the second common referencesignal~~s~~.

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| **被引用** | 4 | **自引用** | 3 | **公司数** | 2 | **国家数** | 1 | **影响力** | 1.0 |

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| **同族数** | 15 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for implementing optimized inter-RAT handover**

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| **公开号** | [US8477725](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8477725&sv=7bbcf06809f6a42ecd97d858c282f682) | **公开日** | 2013/07/02 |
| **申请号** | 12/776,671 | **申请日** | 2010/05/10 |
| **授权日** | 2013/07/02 | **优先日** | 2007/11/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shuai; Yanglai | Liu; Hai | Zhu; Wenruo | Huang; Longgui |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method, device and system for implementing optimized inter-RAT handover are disclosed. When a user equipment or a source network prepares for a handover to a target network, a corresponding target network ID is obtained from a configured mapping between cell IDs and target IDs according to a received cell ID, target network bearers are established following identification of an access node of the target network, and the user equipment is connected to the target network after handover preparation is complete. With the present invention, when a user equipment is handed-over from a source network to a target network, service continuity can be maintained with an enhanced quality of user experience. |

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| **主权项** | 专利度:10特征度:21 |  |  |
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A method for implementing optimized handover, comprising: indicating a Packet Data Network Gateway (PDN GW), by an mobility management entity (MME) or a serving gateway (SGW), not to switch at least one of a user plane uplink data path and a user plane downlink data path from a source network to a target network when a connection between the SGW and the PDN GW is being set up, after a connection establishing process to the target network via the source network is initiated by a user equipment (UE) when handover preparation is determined in the source network; and when, the UE is connected to the target network after completion of handover preparation, indicating the PDN GW, by the MME or the SGW, to switch the at least one of the user plane uplink data path and the user plane downlink data path from the source network to the target network; wherein the indicating the PDN GW, by the MME or the SGW, not to switch the at least one of the user plane uplink data path and the user plane downlink data path from the source network to the target network comprises: sending an indication to the SGW, from the MME wherein the indication is forwarded by the SGW to the PDN GW to instruct the PDN GW not to switch the at least one of the user plane uplink data path and the user plane downlink data path from the source network to the target network; or regenerating, by the SGW, an indication, and sending the indication to the PDN GW, to indicate the PDN GW not to switch the at least one of the user plane uplink data path and the user plane downlink data path from the source network to the target network.

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| **对偶主权项** | 专利度:18特征度:9 |  |  |
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A method for implementing optimized~~inter-RAT~~handover, comprising: in~~iti~~dicating~~, by a UE, a connection establishing process to a target network via a source network when determining to prepare for a handover in the source network; initiating, by a bearer~~a Packet Data Network Gateway (PDN GW), by an mobility management entity (MME) or a serving gateway (SGW), not to switch at least one of a user plane uplink data path and a user plane downlink data path from a source network to a target network when a connection between the SGW and the PDN GW is beingsetup~~control entity, a bearer setup process to the target network; receiving, by an MME, a bearer setup request from an SGW, sending a resource reservation request, and indicating an AN of the target network not to establish an air interface connection; receiving~~, after a connection establishing process to the target network via the source network is initiated by a user equipment (UE) when handover preparation is determined in the source network; and when, the UE is connected to the target network after completion of handover preparation, indicating the PDN GW, by the~~AN~~MMEo~~f~~rthe~~targe~~SGW, to switch the at leastone~~twork, the resource reservation request and reserving resources; receiving, by the MME, a response message from the AN of the target network and sending a response message to the SGW; sending, by the bearer setup control entity, a bearer setup complete notification to the MME after completi~~of the user plane uplink data path and the user plane downlink data path from the source network to the target network; wherein the indicating the PDN GW, by the MME or the SGW, not to switch the at least one of the user plane uplink data path and the user plane downlink data path from the source network to the target network comprises: sending an indication to the SGW, from the MME wherein the indication is forwarded by the SGW to the PDN GW to instruct the PDN GW not to switch the at leastoneof~~bearer setup, indicating the MME that bearers are established; and connec~~the user plane uplink data path and the user plane downlink data path from the source network to the target network; or regenerating, by the SGW, an indication, and sending~~,~~the~~UE to the target network after completion of handover preparation~~indication to the PDN GW, to indicate the PDN GW not to switch the at least one of the user plane uplink data path and the user plane downlink data path from the source network to the target network.

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| **被引用** | 17 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.77 |

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| **同族数** | 14 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for notifying as of user state**

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| **公开号** | [US8477688](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8477688&sv=f3278178c77c414d508e461e0950603c) | **公开日** | 2013/07/02 |
| **申请号** | 12/685,405 | **申请日** | 2010/01/11 |
| **授权日** | 2013/07/02 | **优先日** | 2007/07/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Shufeng |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| Disclosed is a method for notifying the state of a user to an Application Server (AS), including: receiving, by a Serving-Call Session Control Function (S-CSCF), new service profile information of the user sent from a Home Subscriber Server (HSS) when the user's service profile changes; and sending, by the S-CSCF, registration information of the user to the AS. The disclosure also relates to a system for notifying the state of a user to an AS, the system including an HSS, an S-CSCF and the AS. The disclosure also provides a corresponding S-CSCF, a system for notifying the state of a user to an AS, and a corresponding AS. According to the invention, an AS may obtain the registration state of a user timely. |

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| **主权项** | 专利度:4特征度:18 |  |  |
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A method for notifying a state of a user to an Application Server (AS), comprising: receiving, by a Serving-Call Session Control Function (S-CSCF), new service profile information of the user sent from a Home Subscriber Server (HSS) when the user's service profile changes, comparing, by the S-CSCF, a new Initial Filter Criteria (iFC) carried in the new service profile information with an original iFC stored in the S-CSCF; and sending, by the S-CSCF, registration information of the user to an AS matching a registration message trigger criteria which is determined as being newly added in the new iFC, wherein after comparing the new iFC carried in the new service profile information with the original iFC stored in the S-CSCF, the method further comprises: generating and sending, by the S-CSCF, a cancel subscription message to an AS matching a registration message trigger criteria which is determined as being removed from the new iFC, so that the registration information of the user is sent to the AS matching the removed registration message trigger criteria.

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| **对偶主权项** | 专利度:18特征度:10 |  |  |
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A method for notifying~~the~~astate of a user to an Application Server (AS), comprising: receiving, by a Serving-Call Session Control Function (S-CSCF), new service profile information of the user sent from a Home Subscriber Server (HSS) when the user's service profile changes~~; and sending, by the S-CSCF, registration information of the user to the corresponding AS~~, comparing, by the S-CSCF, a new Initial Filter Criteria (iFC) carried in the new service profile information with an original iFC stored in the S-CSCF; and sending, by the S-CSCF, registration information of the user to an AS matching a registration message trigger criteria which is determined as being newly added in the new iFC, wherein after comparing the new iFC carried in the new service profile information with the original iFC stored in the S-CSCF, the method further comprises: generating and sending, by the S-CSCF, a cancel subscription message to an AS matching a registration message trigger criteria which is determined as being removed from the new iFC, so that the registration information of the user is sent to the AS matching the removed registration message trigger criteria.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System, apparatus and methods for broadcasting and transmitting ETWS message**

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| **公开号** | [US8472355](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8472355&sv=bba492a52f34c18e70820a0867c141c5) | **公开日** | 2013/06/25 |
| **申请号** | 12/976,759 | **申请日** | 2010/12/22 |
| **授权日** | 2013/06/25 | **优先日** | 2008/06/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Zuoyan |
| **国际 主分类** | H04M 11/04 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present invention relates to an earthquake and tsunami warning system (ETWS) technology, and in particular to a system, apparatus and methods for broadcasting and transmitting an ETWS message. The system for broadcasting and transmitting an ETWS message includes: an ETWS message publishing entity, adapted to publish an ETWS message; a cell broadcast center (CBC), adapted to: encapsulate the ETWS message published by the ETWS message publication entity into a cell broadcast service (CBS) message, and send the CBS message; a mobility management entity (MME), adapted to forward the CBS message sent by the CBC to a radio access network (RAN); and the RAN, adapted to: receive the CBS message forwarded by the MME, and send the received CBS message to a user equipment (UE). The preceding system provides a new technical solution for transmitting an ETWS message, which can guarantee the security of the ETWS message transmission by using the security mechanism of the CBS. |

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| **主权项** | 专利度:15特征度:21 |  |  |
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A method for broadcasting and transmitting an Earthquake and Tsunami Warning Service (ETWS) message, comprising: receiving, by a radio access network (RAN), a cell broadcasting service (CBS) message containing the ETWS message from a mobility management entity (MME) in a core network; sending, by the RAN, the received CBS message to at least one user equipment (UE); and sending, by the RAN, digital signature information to the UE to trigger the UE to authenticate security of the ETWS message contained in the CBS message according to the digital signature information, wherein the digital signature information being provided by the core network, wherein the digital signature information is sent to the RAN using one of: transmitting transparently the digital signature information by a government ETWS center to the MME, and sending the digital signature information by the MME to the RAN, encapsulating the digital signature information into the CBS message containing the ETWS message, and sending the CBS message to the RAN, or encapsulating the digital signature information into another CBS message which is different from the CBS message containing the ETWS message, and sending the another CBS message to the RAN.

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| **对偶主权项** | 专利度:20特征度:15 |  |  |
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A method for~~deliver~~broadcasting and transmitting an Earthquake and Tsunami Warning Service (ETWS) message, comprising: receiving,~~at~~bya radio access network (RAN), a cell broadcasting service (CBS) message containing~~an Earthquake and Tsunami Warning Service (~~the ETWS message from a mobility management entity (MME) in a core network; sending, by the RAN, the received CBS message to at least one user equipment (UE); and sending, by the RAN, digital signature information to the UE to trigger the UE to authenticate security of theETWS~~)~~message~~from a core network; and sending, by the RAN, the received~~contained in the CBS message according to the digital signature information, wherein the digital signature information being provided by the core network, wherein the digital signature information is sent to the RAN using one of: transmitting transparently the digital signature information by a government ETWS center to the MME, and sending the digital signature information by the MME to the RAN, encapsulating the digital signature information into theCBS message~~includ~~containing the ETWS message~~to at least one user equipment (UE)~~, and sending the CBS message to the RAN, or encapsulating the digital signature information into another CBS message which is different from the CBS message containing the ETWS message, and sending the another CBS message to the RAN.

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| **被引用** | 20 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.8 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for generating time-frequency patterns for reference signal in an OFDM wireless communication system**

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| **公开号** | [US8467346](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8467346&sv=d628a10c941d2001416ebd936d67f258) | **公开日** | 2013/06/18 |
| **申请号** | 12/818,633 | **申请日** | 2010/06/18 |
| **授权日** | 2013/06/18 | **优先日** | 2009/06/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xiao; Weimin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| In one embodiment, a method for a wireless communication includes generating a first time-frequency reference signal pattern at a first base station. The first time-frequency reference signal pattern includes a modified version of a mother pattern of time-frequency of a fixed size. The method further includes transmitting a first reference signal using the first time-frequency reference signal pattern. |

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| **主权项** | 专利度:35特征度:16 |  |  |
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A method for a wireless communication comprising: generating a first time-frequency reference signal pattern at a first base station, the first time-frequency reference signal pattern comprising a modified version of a mother pattern of time-frequency of a fixed size, the mother pattern comprising a plurality of resource elements, the modified version of the mother pattern comprising a prior version of the mother pattern with a punctured column formed by puncturing the prior version in time domain, a resource element in the punctured column being allocated for a broadcast channel or a synchronous channel; and transmitting a first reference signal using the first time-frequency reference signal pattern.

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| **对偶主权项** | 专利度:31特征度:5 |  |  |
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A method for a wireless communication comprising: generating a first time-frequency reference signal pattern at a first base station, the first time-frequency reference signal pattern comprising a modified version of a mother pattern of time-frequency of a fixed size, the mother pattern comprising a plurality of resource elements, the modified version of the mother pattern comprising a prior version of the mother pattern with a punctured column formed by puncturing the prior version in time domain, a resource element in the punctured column being allocated for a broadcast channel or a synchronous channel; and transmitting a first reference signal using the first time-frequency reference signal pattern.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 15 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system, and scheduling server for content delivery**

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| **公开号** | [US8443054](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8443054&sv=f0800e6be032c389b65b9b20557ec740) | **公开日** | 2013/05/14 |
| **申请号** | 13/546,592 | **申请日** | 2012/07/11 |
| **授权日** | 2013/05/14 | **优先日** | 2010/01/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Han; Runsheng |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present disclosure discloses a method, a system, and a scheduling server for content delivery, and pertains to the field of multimedia technologies. The method includes: receiving a service request for accessing content; selecting, according to service processing information of one or more devices storing the content, one device to respond to the service request, where the service processing information includes at least one of the number of services successfully processed, a percentage of services successfully processed, the number of services unsuccessfully processed, and a percentage of services unsuccessfully processed; and base upon the selection, sending the received service request to the selected device. The present disclosure may not only improve the percentage of services successfully processed, but also prevent waste of resources and reduce unnecessary service loss, therefore serving users better. |

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| **主权项** | 专利度:14特征度:17 |  |  |
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In a scheduling server, a method for content delivery, comprising: receiving a service request for accessing a content; selecting according to service processing information of one or more devices storing the content, one device among the one or more devices storing the content for responding to the service request; and sending the received service request to the selected device, wherein a delivery proportion is assigned to each of the one or more devices storing the content and service requests are forwarded to each device according to its delivery proportion, wherein selecting one device among the one or more devices storing the content for responding to the service request comprises: identifying, after a measurement period ends, abnormal device(s) among the one or more devices storing the content according to a relationship between the service processing information of the one or more devices storing the content and a preset threshold; updating the delivery proportions of the one or more devices that store the content by reducing delivery proportion(s) of the abnormal device(s); and based upon the updated delivery proportions, selecting on device among the one or more devices storing the content for responding to the service request; wherein the service processing information of a device includes at least one of the following: number of services successfully processed by the device, percentage of services successfully processed by the device, number of services unsuccessfully processed by the device, and percentage of services unsuccessfully processed by the device.

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| **对偶主权项** | 专利度:21特征度:25 |  |  |
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~~A~~In a scheduling server, amethod f~~u~~or content delivery, comprising: receiving~~, by a scheduling server, a service request for accessing content; selecting, by the scheduling server, according to~~a service request for accessing a content; selecting according to service processing information of one or more devices storing the content, one device among the one or more devices storing the content for responding to the service request; and sending the received service request to the selected device, wherein a delivery proportion is assigned to each of the one or more devices storing the content and service requests are forwarded to each device according to its delivery proportion, wherein selecting one device among the one or more devices storing the content for responding to the service request comprises: identifying, after a measurement period ends, abnormal device(s) among the one or more devices storing the content according to a relationship between theservice processing information oftheone or more devices storing the content~~, one device to~~and a preset threshold; updating the delivery proportions of the one or more devices that store the content by reducing delivery proportion(s) of the abnormal device(s); and based upon the updated delivery proportions, selecting on device among the one or more devices storing the content forrespondingto the service request~~,~~;wherein the service processing informationof a deviceincludes at least one of thefollowing:number of services successfully processedby the device,~~a~~percentage of services successfully processed~~,~~bythedevice,number of services unsuccessfully processedby the device, and~~a~~percentage of services unsuccessfully processed~~; and sending the received service request to the selected device based on the selection~~by the device.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, user equipment and server for multimedia session transfer**

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| **公开号** | [US8442039](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8442039&sv=7113874f42418761d3e0108e805febda) | **公开日** | 2013/05/14 |
| **申请号** | 12/911,199 | **申请日** | 2010/10/25 |
| **授权日** | 2013/05/14 | **优先日** | 2008/11/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Hui |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention discloses a method, User Equipment (UE), and server for multimedia session transfer, and relates to a mobile communication technology, and in particular, to a technology for transferring multimedia sessions from a Circuit Switched (CS) network to a Packet Switched (PS) network. The method includes: receiving a session transfer request sent by a UE, where the session transfer request carries a static Session Transfer Identifier (STI); executing a procedure for transferring the active CS session according to the CS session transfer request, and judging whether the UE has a held CS session; and if so, sending the dynamic STI corresponding to the held CS session to the UE so that the UE can send a CS session transfer request again according to the dynamic STI, and receiving the request for transferring the held CS session and executing a procedure for transferring the held CS session. Further, a UE and a server are provided. With the present invention, two multimedia sessions in a CS network of the UE incapable of IMS Centralized Service (ICS) can be transferred to the PS network. |

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| **主权项** | 专利度:7特征度:19 |  |  |
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A method for multimedia session transfer by a server, comprising: receiving, by the server, a session transfer request sent by a User Equipment (UE), wherein the session transfer request carries a static Session Transfer Identifier (STI); determining, by the server, that the UE requests to transfer an active Circuit Switched (CS) session according to the static STI, executing a procedure for transferring the active CS session according to the session transfer request, and judging whether the UE has a held CS session; if judged by the server that the UE has a held CS session, sending a dynamic STI allocated to the held CS session to the UE; and receiving, by the server, another session transfer request sent by the UE, wherein the other session transfer request carries the dynamic STI sent by server to the UE in response to the judging by the server, and executing a procedure for transferring the held CS session according to the other session transfer request.

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| **对偶主权项** | 专利度:7特征度:17 |  |  |
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A method for multimedia session transferby a server, comprising: receiving, by the server,a session transfer request sent by a User Equipment (UE), wherein the session transfer request carries a static Session Transfer Identifier (STI); determining, by the server,that the UE requests to transfer an active Circuit Switched (CS) session according to the static STI, executing a procedure for transferring the active CS session according to the session transfer request, and judging whether the UE has a held CS session; ifjudged by the server thatthe UE has a held CS session, sending a dynamic STI allocated to the held CS session to the UE; and receiving, by the server,another session transfer request sent by the UE,wherein the other session transfer request carries the dynamic STI~~;~~sent by server to the UE in response to the judging by the server,and executing a procedure for transferring the held CS session according to the other session transfer request.

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| **被引用** | 8 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.18 |

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| **同族数** | 15 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Dispatching method, dispatching apparatus and dispatching system**

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| **公开号** | [US8433793](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8433793&sv=e8ef2dea7daf9c838cdda24c54a7e073) | **公开日** | 2013/04/30 |
| **申请号** | 13/216,430 | **申请日** | 2011/08/24 |
| **授权日** | 2013/04/30 | **优先日** | 2008/11/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Jiang; Haijun | Zhao; Ye |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A dispatching method, a dispatching apparatus and a dispatching system are disclosed according to embodiments of the present invention. The dispatching method includes receiving a request initiated by a user terminal, where the request carries address information of the user terminal; obtaining the address information carried in the request and obtaining key information of an access server associated with the address information; searching for a corresponding node based on the key information of the access server and treating the node as a redirected serving node. A dispatching apparatus and a dispatching system are also disclosed according to embodiments of the present invention. The technical solution of the embodiments of the present invention may well solve the dispatching issue and has a more flexible application. |

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| **主权项** | 专利度:12特征度:15 |  |  |
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A dispatching method, comprising: receiving a request initiated by a user terminal, wherein the request carries address information of the user terminal; obtaining the address information carried in the request and obtaining key information of an access server associated with the address information; searching for a corresponding node based on the key information of the access server and treating the node as a redirected serving node; wherein the obtaining the key information of the access server associated with the address information comprises: requesting from a management system the key information of the access server associated with the address information, and receiving from the management system the key information of the access server associated with the address information; after receiving from the management system the key information of the access server associated with the address information, the method further comprises: storing the key information, configuring a valid period for the address information, and obtaining the key information of the access server associated with the address information from stored records if a request initiated from an address of the same user terminal is received again within the valid period; and wherein the receiving the request initiated by the user terminal comprises: receiving, by a request routing server, the request initiated by the user terminal.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A dispatching method, comprising: receiving a request initiated by a user terminal, wherein the request carries address information of the user terminal; obtaining the address information carried in the request and obtaining key information of an access server associated with the address information;~~and~~searching for a corresponding node based on the key information of the access server and treating the node as a redirected serving node; wherein the obtaining the key information of the access server associated with the address information comprises: requesting from a management system the key information of the access server associated with the address information, and receiving from the management system the key information of the access server associated with the address information; after receiving from the management system the key information of the access server associated with the address information, the method further comprises: storing the key information, configuring a valid period for the address information, and obtaining the key information of the access server associated with the address information from stored records if a request initiated from an address of the same user terminal is received again within the valid period; and wherein the receiving the request initiated by the user terminal comprises: receiving, by a request routing server, the request initiated by the user terminal.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, terminal, server and system for processing notification message**

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| **公开号** | [US8433748](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8433748&sv=66bee05f82fb6989ff267b33d8b41b2b) | **公开日** | 2013/04/30 |
| **申请号** | 12/413,286 | **申请日** | 2009/03/27 |
| **授权日** | 2013/04/30 | **优先日** | 2006/09/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Jie |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method, terminal, server and system for processing the notification message are disclosed. According to the method, the server transmits the notifying message with description information. The description information contains the parameter; the terminal parses the notifying message after receiving the notifying message. The description message may contain one or more parameter, thereby providing more messages through the notifying message to the terminal, making the terminal user getting the wanted information quickly. After the description message is added to the notifying message, the terminal can perform a variety of processes on the received notifying message. |

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| **主权项** | 专利度:11特征度:18 |  |  |
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A method for processing a notification message, comprising: receiving, by a terminal, a structure of description information from a server; receiving, by the terminal, a notification message carrying description information from the server, wherein the description information comprises a parameter; determining, by the terminal, an identifier of the parameter and a parameter value corresponding to the identifier of the parameter according to the structure of the description information; and wherein the receiving the structure of description information from the server comprises: obtaining, by the terminal, the structure of the description information via a Uniform Resource Identifier, URI or Uniform Resource Locator, URL, and storing the structure, wherein a file of an Auxiliary Data structure in an electronic service guide, ESG, comprises the structure of the description information, or a file in a server comprises the structure of the description information, and the URI or URL of the file being carried in the parameter MediaLocator or service fragment parameter in the data structure of the relevant content of ESG that is sent to the terminal; or obtaining, by the terminal, the structure of the description information directly, and storing the structure, wherein the parameter MediaLocator or service fragment parameter in the data structure of the relevant content of ESG that is sent to the terminal comprises the structure of the description information.

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| **对偶主权项** | 专利度:18特征度:17 |  |  |
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A method for processing a notification message, comprising:~~send~~receiving, by a~~server, a notification message carrying description information to a terminal, wherein the description information comprises a parameter; andparsing, by the terminal, the notification message according to the parame~~terminal, a structure of description information from a server; receiving, by the terminal, a notification message carrying description information from the server, wherein the description information comprises a parameter; determining, by the terminal, an identifier of the parameter and a parameter value corresponding to the identifier of the parameter according to the structure of the description information; and wherein the receiving the structure of description information from the server comprises: obtaining, by the terminal, the structure of the description information via a Uniform Resource Identifier, URI or Uniform Resource Locator, URL, and storing the structure, wherein a file of an Auxiliary Data structure in an electronic service guide, ESG, comprises the structure of the description information, or a file in a server comprises the structure of the description information, and the URI or URL of the file being carried in the parameter MediaLocator or service fragment parameter in the data structure of the relevant content of ESG that is sent to the terminal; or obtaining, by the terminal, the structure of the description information directly, and storing the structure, wherein the parameter MediaLocator or service fragment parameter in the data structure of the relevant content of ESG that is sent to the terminal comprises the structure of the description information.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier**

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| **公开号** | [US8428590](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8428590&sv=1810c1fe73ca8e4407620a072cd1e8de) | **公开日** | 2013/04/23 |
| **申请号** | 13/540,331 | **申请日** | 2012/07/02 |
| **授权日** | 2013/04/23 | **优先日** | 2007/07/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Guo; Xiaolong | Li; Ming |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for identifying a UE in an SAE network, and an MME are provided herein. The method includes: receiving an SAE-TMSI which is allocated to a UE that accesses an SAE network and includes at least: a pool-ID, an MME-ID, and a UE temporary identifier; using the SAE-TMSI to temporarily identify the UE in the SAE network. The apparatus includes: a receiving unit and a temporary identifying unit. The MME includes a temporary identifier allocating unit. Moreover, a method for transmitting and allocating a temporary identifier, and a method for receiving and transmitting information according to the temporary identifier are disclosed herein. |

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| **主权项** | 专利度:4特征度:17 |  |  |
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A method for identifying a user equipment (UE) in a system architecture evolved (SAE) network, comprising: receiving, by the UE, a system architecture evolved (SAE)-temporary mobile subscriber identity (SAE-TMSI) from a mobility management entity (MME) of the SAE network~~; sending, by the UE, the SAE-TMSI to an evolved radio access network (RAN) entity, enable the RAN entity to select or reselect~~, wherein the SAE-TMSI comprises: a resource pool (pool-ID) identifier, a mobility management entity identifier (MME-ID); and a UE temporary identifier; sending, by the UE, the SAE-TMSI to the MME or a new MME when the UE accesses the SAE network next time, to enable the MME or the new MME to identifythe~~MM~~UE according to~~an identifier for resource pool (pool-ID), and an identifier for the mobility management entity (MME-ID) in the SAE-TMSI; the UE is identified by the selected or reselected MME according to a~~the SAE-TMSI; and wherein the pool-ID is unique in public land mobile network (PLMN), the MME-ID is unique in a resource pool, and theUE temporary identifier i~~n the SAE-TMSI~~s unique in the MME.

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| **对偶主权项** | 专利度:7特征度:8 |  |  |
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A method for identifying a user equipment (UE) in a system architecture evolved (SAE) network, comprising: receiving, by the UE, a system architecture evolved (SAE)-temporary mobile subscriber identity (SAE-TMSI) from a mobility management entity (MME) of the SAE network, wherein the SAE-TMSI comprises: a resource pool (pool-ID) identifier, a mobility management entity identifier (MME-ID); and a UE temporary identifier; sending, by the UE, the SAE-TMSI to the MME or a new MME when the UE accesses the SAE network next time, to enable the MME or the new MME to identify the UE according to the SAE-TMSI; and wherein the pool-ID is unique in public land mobile network (PLMN), the MME-ID is unique in a resource pool, and the UE temporary identifier is unique in the MME.

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| **被引用** | 13 | **自引用** | 6 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.61 |

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| **同族数** | 36 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Cell access control method and user equipment**

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| **公开号** | [US8423069](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8423069&sv=5f797d5d938c388cdd5d5bd19b1423c6) | **公开日** | 2013/04/16 |
| **申请号** | 13/527,382 | **申请日** | 2012/06/19 |
| **授权日** | 2013/04/16 | **优先日** | 2007/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Qiu; Yong |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A cell access control method and a user terminal are provided, the method includes: obtaining, by a user equipment (UE), cell access information through a pilot channel and/or a synchronization channel; determining a current cell is a macro base station cell or an HNB cell according to the cell access information; determining, when the current cell is an HNB cell, whether the UE is allowed to access the HNB cell according to HNB information of the cell access information, if the UE is allowed to access the HNB cell, performing the access processing, if the UE is not allowed to access the HNB, abandoning the access. A UE is provided accordingly. |

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| **主权项** | 专利度:8特征度:11 |  |  |
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A cell access control method, comprising: sending, by a home eNodeB (HNB), cell access information to a user equipment (UE) through a synchronization channel; and implementing, by the HNB, an access processing of the UE, the access processing is initiated by the UE after the UE is determined to be allowed to access a HNB cell by comparing the cell access information sent through the synchronization channel with HNB information stored in UE memory, wherein the determination of the UE is allowed to access the HNB cell is performed after a cell is determined as the HNB cell according to the cell access information sent through the synchronization channel.

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| **对偶主权项** | 专利度:8特征度:10 |  |  |
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A cell access control method, comprising: sending, by a home eNodeB (HNB), cell access information to a user equipment (UE) through a synchronization channel; and implementing, by the HNB, an access processing of the UE, the access processing is initiated by the UE after the UEisdetermin~~ing a cell i~~ed to be allowed to access a HNB cell~~according to~~by comparingthe cell access information~~, and determining the UE is allowed to access the HNB by comparing~~sent through the synchronization channel with HNB information stored in UE memory, wherein the determination of the UE is allowed to access the HNB cell is performed after a cell is determined as the HNB cell according tothe cell access information sent through the synchronization channel~~with HNB information stored in UE memory~~.

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| **被引用** | 16 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.5 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Information carrying synchronization code and method for frame timing synchronization**

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| **公开号** | [US8422476](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8422476&sv=2e375bf50cc5d46f273bdcb458bf0804) | **公开日** | 2013/04/16 |
| **申请号** | 12/342,461 | **申请日** | 2008/12/23 |
| **授权日** | 2013/04/16 | **优先日** | 2006/09/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Berggren; Fredrik |
| **国际 主分类** | H04W 56/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| An improved method for conveying data and synchronization information in a telecommunication system is disclosed. The method uses a cyclically permutable code, to which a repetitive structure has been imposed, for carrying the data and synchronization information. The decoding procedure at the receiver then uses this repetitive structure of the code to reduce complexity by first evaluating, by use of hypotheses Hx, the repetitive codeword structure of received codewords and choosing a hypothesis corresponding to the repetitive codeword structure. Then the decoding procedure performs diversity combining of codeword elements of the codewords in accordance with the chosen hypothesis. The received codewords are further detected by comparing the diversity combined codeword elements to all possible codewords fulfilling the hypothesis. |

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| **主权项** | 专利度:30特征度:11 |  |  |
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A method for encoding synchronization information in a telecommunication system with a code, comprising: creating, by a base station, a code by selecting a first codeword from a plurality of codewords; and encoding, by the base station, synchronization information with the code, wherein no codeword in the plurality of codewords is a cyclic shift of another codeword, each codeword having M codeword elements and M distinct unique cyclic shifts, M being a positive integer, and in each codeword, the value of at least one codeword element is repeated in at least one other codeword element position within the same codeword to provide each codeword a repetitive structure.

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| **对偶主权项** | 专利度:18特征度:14 |  |  |
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A method for encoding~~data and~~synchronization information in a telecommunication system with a code,~~the code be~~comprising:creat~~ed by choosing codewords ({tilde over (c)}1,{tilde over (c)}2, . . . , {tilde over (c)}M) of length M, so that no~~ing, by a base station, a code by selecting a first codeword from a plurality of codewords; and encoding, by the base station, synchronization information with the code, wherein no codeword in the plurality ofcodewordsis a cyclic shift of another codeword~~and~~,each codeword ha~~s~~ving M codeword elements andM distinct unique cyclic shifts, M being a positive integer,~~wherein the method comprises:repeating,~~andin each codeword, the value of at least one codeword element~~{tilde over (c)}k of the codewor~~is repeated in at least one other codeword element position within the same codeword~~,~~t~~hereby giving all codewords in the code~~o provide each codeworda repetitive structure.

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| **被引用** | 5 | **自引用** | 5 | **公司数** | 1 | **国家数** | 1 | **影响力** | 1.46 |

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| **同族数** | 11 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for implementing speech recognition function**

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| **公开号** | [US8417521](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8417521&sv=42289092e4890d395393d83c0078610e) | **公开日** | 2013/04/09 |
| **申请号** | 12/105,620 | **申请日** | 2008/04/18 |
| **授权日** | 2013/04/09 | **优先日** | 2005/10/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chen; Cheng |
| **国际 主分类** | G10L 15/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present disclosure discloses a method, a device and a system for implementing a speech recognition function, in which a media resource control device controls a media resource processing device to recognize a speech input by a user via H.248 protocol. The method includes receiving, by the media resource processing device, an H.248 message carrying a speech recognition instruction and a related parameter sent by the media resource control device; performing speech recognition according to the speech recognition instruction and the parameter; and reporting a recognition result to the media resource control device. A corresponding device and system for implementing the speech recognition function is further provided. |

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| **主权项** | 专利度:7特征度:16 |  |  |
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A method for recognizing a speech, comprising: receiving, by a media resource processing device, an H.248 message carrying a speech recognition instruction and a related parameter sent by a media resource control device, wherein the related parameter comprises a recognition grammar parameter for the speech, the recognition grammar parameter for the speech is a recognition grammar for a common speech; performing, by the media resource processing device, speech recognition according to the speech recognition instruction and the related parameter; and reporting a recognition result to the media resource control device, the method further comprise: extracting, by the media resource processing device, a text string and performing the speech recognition after receiving the recognition grammar parameter, wherein a specific character string is embedded into the recognition grammar parameter.

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| **对偶主权项** | 专利度:20特征度:18 |  |  |
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A method for recognizing a speech, comprising:receiving, by a media resource processing device, an H.248 message carrying a speech recognition instruction and a related parameter sent by a media resource control device~~;~~, wherein the related parameter comprises a recognition grammar parameter for the speech, the recognition grammar parameter for the speech is a recognition grammar for a common speech;performing, by the media resource processing device, speech recognition according to the speech recognition instruction and the related parameter; andreporting a recognition result to the media resource control device, the method further comprise: extracting, by the media resource processing device, a text string and performing the speech recognition after receiving the recognition grammar parameter, wherein a specific character string is embedded into the recognition grammar parameter.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for providing information in a cellular wireless communication system**

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| **公开号** | [US8417246](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8417246&sv=b6e1fd8c8cd872d3787c64e32261057e) | **公开日** | 2013/04/09 |
| **申请号** | 13/453,309 | **申请日** | 2012/04/23 |
| **授权日** | 2013/04/09 | **优先日** | 2010/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Olofsson; Henrik | Legg; Peter | Johansson; Johan | Xuelong; Wang |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present disclosure relates to a method for providing information in a cellular wireless communication system including: detecting a radio link failure (RLF) for a mobile station while connected to a first cell; re-establishing the connection in a second cell; and providing information about the radio link failure (RLF) only to cells supporting the same radio access technology (RAT) as the first cell and/or a third cell, wherein the third cell is the cell to which the mobile station was connected before the first cell. Furthermore, the disclosure also relates to a method in a mobile station, a method in a base station, a computer program, a computer program product, a mobile station device and a base station device. |

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| **主权项** | 专利度:21特征度:20 |  |  |
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A method for providing information in a cellular wireless communication system, wherein each cell in said cellular wireless communication system is served by a base station and supports a radio access technology (RAT) for radio communication between a cell and one or more mobile stations connected to said cell; said cellular wireless communication system employing a procedure in which a mobile station is allowed to be handed over from a cell to another cell supporting different radio access technologies (RATs), and further employing a procedure in which a mobile station suffering from a radio link failure (RLF), when being connected to a cell, is allowed to attempt to re-connect to another cell supporting a different radio access technology (RAT), the method comprising: detecting a radio link failure (RLF) for a mobile station while connected to a first cell; re-establishing the connection in a second cell; and providing information about said radio link failure (RLF) only to cells supporting the same radio access technology (RAT) as said first cell; wherein said information comprises a radio link failure (RLF) report produced by said mobile station; wherein said radio link failure (RLF) report comprises: measurements performed on detected cells in connection with said radio link failure (RLF), a cell identity (ID) for said first cell, a cell identity (ID) for said second cell, a cell identity (ID) for a third cell and a handover failure type, wherein said third cell is the cell to which said mobile station was connected before said first cell.

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| **对偶主权项** | 专利度:25特征度:10 |  |  |
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A method for providing information in a cellular wireless communication system, wherein each cell in said cellular wireless communication system is served by a base station and supports a radio access technology (RAT) for radio communication between a cell and one or more mobile stations connected to said cell; said cellular wireless communication system employing a procedure in which a mobile station is allowed to be handed over from a cell to another cell supporting different radio access technologies (RATs), and further employing a procedure in which a mobile station suffering from a radio link failure (RLF), when being connected to a cell, is allowed to attempt to re-connect to another cell supporting a different radio access technology (RAT), the method comprising: detecting a radio link failure (RLF) for a mobile station while connected to a first cell; re-establishing the connection in a second cell; and providing information about said radio link failure (RLF) only to cells supporting the same radio access technology (RAT) as said first cell~~and a third cell~~; wherein said information comprises a radio link failure (RLF) report produced by said mobile station; wherein said radio link failure (RLF) report comprises: measurements performed on detected cells in connection with said radio link failure (RLF), a cell identity (ID) for said first cell, a cell identity (ID) for said second cell, a cell identity (ID) for a third cell and a handover failure type, wherein said third cell is the cell to which said mobile station was connected before said first cell.

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| **被引用** | 22 | **自引用** | 4 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.77 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system, and device for establishing association-control relations**

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| **公开号** | [US8416723](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8416723&sv=326c31e27b5919e26768e9660b5b9110) | **公开日** | 2013/04/09 |
| **申请号** | 12/612,513 | **申请日** | 2009/11/04 |
| **授权日** | 2013/04/09 | **优先日** | 2007/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Ye; Songhai | Ding; Chunyan |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for establishing association-control relations includes these steps: An access adapting unit acquires subscription information of the user through a mobile application part (MAP) message, an SH interface message, or a Cx interface message; and acquires information indicating that the user is an ICS user from the subscription information of the user. A system, an access adapting unit, and an IMS CS control function (ICCF) for establishing association-control relations are also provided. In embodiments of the present invention, an access adapting unit such as a local-CS access adaptation function-network (L-CAAF-n) may know whether a user is an IMS centralized service (ICS) user and acquire the ICCF address information so that association-control relations may be established between the L-CAAF-n and the ICCF. |

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| **主权项** | 专利度:12特征度:13 |  |  |
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A method for determining whether a user is an IP Multimedia Subsystem (IMS) centralized service (ICS) user, comprising: acquiring, by an access adapting unit, subscription information of the user through a mobile application part (MAP) message; acquiring information indicating that the user is an ICS user from the subscription information of the user; and wherein a field is added to the MAP\_Insert-Subscribe-Data message to identify that the user is an ICS user when the access adapting unit acquires the subscription information of the user through the MAP message.

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| **对偶主权项** | 专利度:18特征度:40 |  |  |
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A method for determining whether a user is an I~~MS~~P Multimedia Subsystem (IMS)centralized service (ICS)user, comprising: acquiring, by an access adapting unit, subscription information of the user through a mobile application part (MAP) message~~, an SH interface message, or a Cx interface message; and acquiring information indicating that the user is an ICS user from~~; acquiring information indicating that the user is an ICS user from the subscription information of the user; and wherein a field is added to the MAP\_Insert-Subscribe-Data message to identify that the user is an ICS user when the access adapting unit acquiresthe subscription information of the userthrough the MAP message.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device, and system for transferring service control signalling path**

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| **公开号** | [US8411673](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8411673&sv=8d25d3abe57a8c92274650f449ef54d8) | **公开日** | 2013/04/02 |
| **申请号** | 13/349,272 | **申请日** | 2012/01/12 |
| **授权日** | 2013/04/02 | **优先日** | 2008/06/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Jin; Hui | Long; Shuiping |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, device, and system for transferring a Service Control Signalling Path are provided. The method for transferring a Service Control Signalling Path includes: establishing a connection with an opposite end by a User Equipment (UE), where the UE uses a Circuit Switched (CS) bearer in a CS network and a Service Control Signalling Path in a first Packet Switched (PS) network; sending a transfer request via a second PS network, to instruct a network side to transfer the Service Control Signalling Path according to the transfer request. Thus, the UE can replace a current Gm reference point with a Gm reference point of a new and available PS network when the PS network where the current Gm reference point is located is unavailable, so as to ensure smooth data transmission. |

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| **主权项** | 专利度:23特征度:17 |  |  |
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A method for transferring a Service Control Signalling Path, comprising: establishing, by a User Equipment (UE), a connection with an opposite end, wherein the UE uses a Circuit Switched (CS) bearer in a CS network and the Service Control Signalling Path in a first Packet Switched (PS) network; and sending a transfer request via a second PS network to instruct a network side to transfer the Service Control Signalling Path according to the transfer request, wherein the UE retains the CS bearer in the CS network after the network side transfers the Service Control Signalling Path.

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| **对偶主权项** | 专利度:23特征度:15 |  |  |
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A method for transferring a Service Control Signalling Path, comprising: establishing, byaUser Equipment (UE), a connection with an opposite end, wherein the UE uses a Circuit Switched (CS) bearer in a CS network and the Service Control Signalling Path in a first Packet Switched (PS) network; and sending a transfer request via a second PS network to instruct a network side to transfer the Service Control Signalling Path according to the transfer request,wh~~il~~ereinthe UE~~use~~retains the CS bearer in the CS networkafter the network side transfers the Service Control Signalling Path.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Random access method, evolved node B, and terminal equipment**

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| **公开号** | [US8411642](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8411642&sv=81f9c22843e0968af83d8cee79f9de15) | **公开日** | 2013/04/02 |
| **申请号** | 13/253,709 | **申请日** | 2011/10/05 |
| **授权日** | 2013/04/02 | **优先日** | 2009/04/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chang; Junren | Li; Yajuan | Feng; Shulan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A random access method, an evolved Node B (eNB), and a terminal equipment are provided. The method includes: determining target component carriers to which a User Equipment (UE) is to be handed over, and notifying the UE of information about the target component carriers through a source eNB; and after receiving a dedicated random access preamble sent by the UE, sending a random access response message on at least one component carrier in the target component carriers. The terminal equipment includes: a handover command receiving unit, a sending unit, and a random response receiving unit. Therefore, in a random access procedure of cell handover, the eNB is capable of determining downlink component carriers that a UE monitors, thereby increasing utilization rate of downlink resources. |

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| **主权项** | 专利度:20特征度:23 |  |  |
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A random access method, comprising: determining at least one target component carrier to which a User Equipment (UE) is to be handed over, and notifying the UE of information about the at least one target component carrier through a source evolved Node B (eNB); after receiving a dedicated random access preamble sent by the UE, sending a random access response message on at least one component carrier in the at least one target component carrier; wherein determining the at least one target component carrier and notifying the UE of the information about the at least one target component carrier through the source eNB comprises: determining the at least one target component carrier according to a handover request message after receiving the handover request message sent by the source eNB, notifying the source eNB of the information about the at least one target component carrier through a handover request acknowledgement message, and sending, by the source eNB, the at least one target component carrier to the UE through a handover command; wherein determining the at least one target component carrier according to the handover request message after receiving the handover request message sent by the source eNB comprises: receiving the handover request message sent by the source eNB, wherein the handover request message comprises the UE's capability information about the at least one target component carrier being supported and information of a target component carrier selected by the source eNB, and the target component carrier selected is a carrier to which the UE is to be handed over, and determining whether to allow the at least one target component carrier selected by the source eNB; if the at least one target component carrier selected by the source eNB is allowed, the notifying the source eNB of the information about the at least one target component carrier through the handover request acknowledgement message comprises: sending the handover request acknowledgement message to the source eNB, wherein the handover request acknowledgement message comprises acknowledgement information of the target component carrier selected by the source eNB or the information about the target component carrier selected by the source eNB; and if the at least one target component carrier selected by the source eNB is not allowed, configuring the at least one target component carrier, and the notifying the source eNB of the information about the at least one target component carrier through the handover request acknowledgement message comprises: sending the handover request acknowledgement message to the source eNB, wherein the handover request acknowledgement message comprises the information about the at least one target component carrier configured.

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| **对偶主权项** | 专利度:20特征度:22 |  |  |
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A random access method, comprising: determining at least one target component carrier to which a User Equipment (UE) is to be handed over, and notifying the UE of information about the at least one target component carrier through a source evolved Node B (eNB);~~and~~after receiving a dedicated random access preamble sent by the UE, sending a random access response message onat least one component carrier in the at least one target component carrier; wherein determining the at least one target component carrier and notifying the UE of the information about the at least one target component carrier through the source eNB comprises: determining the at least one target component carrier according to a handover request message after receiving the handover request message sent by the source eNB, notifying the source eNB of the information about the at least one target component carrier through a handover request acknowledgement message, and sending, by the source eNB, the at least one target component carrier to the UE through a handover command; wherein determining the at least one target component carrier according to the handover request message after receiving the handover request message sent by the source eNB comprises: receiving the handover request message sent by the source eNB, wherein the handover request message comprises the UE's capability information about the at least one target component carrier being supported and information of a target component carrier selected by the source eNB, and the target component carrier selected is a carrier to which the UE is to be handed over, and determining whether to allow the at least one target component carrier selected by the source eNB; if the at least one target component carrier selected by the source eNB is allowed, the notifying the source eNB of the information about the at least one target component carrier through the handover request acknowledgement message comprises: sending the handover request acknowledgement message to the source eNB, wherein the handover request acknowledgement message comprises acknowledgement information of the target component carrier selected by the source eNB or the information about the target component carrier selected by the source eNB; and if the at least one target component carrier selected by the source eNB is not allowed, configuring theat least onetargetcomponent carrier~~in the at least one target component carrier~~, and the notifying the source eNB of the information about the at least one target component carrier through the handover request acknowledgement message comprises: sending the handover request acknowledgement message to the source eNB, wherein the handover request acknowledgement message comprises the information about the at least one target component carrier configured.

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| **被引用** | 25 | **自引用** | 7 | **公司数** | 1 | **国家数** | 2 | **影响力** | 2.51 |

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| **同族数** | 12 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for setting up multimedia call**

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| **公开号** | [US8411597](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8411597&sv=c6062eb4ec67fb228eb8f000d5113d05) | **公开日** | 2013/04/02 |
| **申请号** | 12/793,145 | **申请日** | 2010/06/03 |
| **授权日** | 2013/04/02 | **优先日** | 2007/12/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Hui | Long; Shuiping |
| **国际 主分类** | H04Q 11/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method includes receiving a multimedia request message; setting up a multimedia call path to a CS UE according to the multimedia request message; negotiating a media coding mode with the CS UE and negotiating the media coding mode with a peer UE according to the multimedia call path; and setting up a multimedia call between the CS UE and the peer UE after determining the coding mode of the CS UE and the peer UE. In the embodiments of the present invention, the MSC negotiates the coding mode of the CS UE and the peer UE (such as an IMS UE), and sets up a multimedia call between the CS UE and the peer UE, thus overcoming the inability of setting up a multimedia call between the CS UE and the peer UE in the prior art. |

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| **主权项** | 专利度:5特征度:26 |  |  |
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A method for setting up a multimedia call, the method comprising: receiving, by a Mobile Switching Center, a multimedia request message, setting up, by the Mobile Switching Center, a multimedia call path to a Circuit Switched (CS) User Equipment (UE) according to the multimedia request message; negotiating, by the Mobile Switching Center, a media coding mode with the CS UE and negotiating a media coding mode with a peer UE according to the multimedia call path; and setting up, by the Mobile Switching Center, a multimedia call between the CS UE and the peer UE after determining a coding mode of the CS UE and the peer UE; wherein the multimedia request message is a call mode change request message sent by the CS UE, and indicates that the CS UE requires switching from a current voice call to the multimedia call; wherein, before setting up the multimedia call path to the CS UE according to the multimedia request message, the method further comprises disconnecting, by the Mobile Switching Center, the voice call from the CS UE after receiving the media stream change request message; and sending, by the Mobile Switching Center, a multimedia request setup message to the CS UE; and wherein the method further comprises instructing, by the Mobile Switching Center, the peer UE to hold a current call, and activating, by the Mobile Switching Center, the held call through a re-Invite/Update message after determining the coding mode of the CS UE and the peer UE.

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| **对偶主权项** | 专利度:16特征度:6 |  |  |
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A method for setting up a multimedia call, the method comprising: receiving~~a multimedia request message, wherein the multimedia request message comprises a change request message; setting up~~, by a Mobile Switching Center, a multimedia request message, setting up, by the Mobile Switching Center,a multimedia call path to a Circuit Switched (CS) User Equipment (UE) according to the multimedia request message; negotiating, by the Mobile Switching Center,a media coding mode with the CS UE and negotiating a media coding mode with a peer UE according to the multimedia call path; and setting up, by the Mobile Switching Center,a multimedia call between the CS UE and the peer UE after determining a coding mode of the CS UE and the peerUE; wherein the multimedia request message is a call mode change request message sent by the CS UE, and indicates that the CS UE requires switching from a current voice call to the multimedia call; wherein, before setting up the multimedia call path to the CS UE according to the multimedia request message, the method further comprises disconnecting, by the Mobile Switching Center, the voice call from the CS UE after receiving the media stream change request message; and sending, by the Mobile Switching Center, a multimedia request setup message to the CS UE; and wherein the method further comprises instructing, by the Mobile Switching Center, the peer UE to hold a current call, and activating, by the Mobile Switching Center, the held call through a re-Invite/Update message after determining the coding mode of the CS UE and the peerUE.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.13 |

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| **同族数** | 7 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, application server and user equipment for transferring media streams of multimedia session**

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| **公开号** | [US8402154](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8402154&sv=f7601c52d045da2fcd53a18553043913) | **公开日** | 2013/03/19 |
| **申请号** | 12/704,196 | **申请日** | 2010/02/11 |
| **授权日** | 2013/03/19 | **优先日** | 2007/08/17 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Long; Shuiping | Jin; Hui |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method, Application Server (AS) and User Equipment (UE) for transferring media streams of a multimedia session are provided. A first UE sends a request for transferring media streams of a multimedia session to an AS, where the request carries the ID of a third UE and the media type of media streams requested to be transferred; and the third UE establishes media streams of the media type with a second UE under the control of the AS. |

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| **主权项** | 专利度:2特征度:22 |  |  |
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A method for transferring at least one media stream of a multimedia session, comprising: instructing, by an Application Server (AS), a first User Equipment (UE) and a second UE to establish a multimedia session; receiving, by the AS, a request for transferring at least one media stream of the multimedia session, wherein the request carries at least one media type of the at least one media stream requested to be transferred; and instructing, by the AS, the second UE and a third UE to establish at least one media stream of the media type; wherein the request is sent by the third UE and is intended to transfer at least one media stream of the media type from the first UE to the third UE; wherein instructing, by the AS, the second UE and a third UE to establish at least one media stream of the media type comprises: instructing, by the AS, the second UE and the third UE to negotiate media information according to the media type and establish the at least one media stream of the media type after successful negotiation; and wherein before establishing at least one media stream of the media type between the third UE and the second UE, the method comprises: asking, by the AS, the first UE about whether to allow the third UE to transfer the at least one media stream of the media type; receiving, by the AS, confirmation of the first UE if the first UE allows the third UE to transfer the at least one media stream of the media type; and continuing, by the AS, to instruct the third UE and the second UE to establish the at least one media stream of the media type wherein, after establishing at least one media stream of the media type between the third UE and the second UE, the method further comprises: deleting a transferred media stream of the at least one media type from the multimedia session between the first UE and the second UE; wherein after deleting the transferred media stream of the media type from the multimedia session between the first UE and the second UE, the method further comprises: requesting, by the first UE, the AS to recover the transferred media stream of the media type; performing, by the first UE and the second UE, media renegotiation according to the at least one media type under the control of the AS; and transmitting, by the first UE and the second UE, the at least one media stream of the media type after successful renegotiation.

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| **对偶主权项** | 专利度:19特征度:5 |  |  |
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A method for transferring at least one media stream of a multimedia session, comprising: instructing, by an Application Server (AS), a first User Equipment (UE) and a second UE to establish a multimedia session; receiving, by the AS, a request for transferring at least one media stream of the multimedia session, wherein the request carries at least one media type of the at least one media stream requested to be transferred; and instructing, by the AS, the second UE and a third UE to establish at least one media stream of the media type; wherein the request is sent by the third UE and is intended to transfer at least one media stream of the media type from the first UE to the third UE; wherein instructing, by the AS, the second UE and a third UE to establish at least one media stream of the media type comprises: instructing, by the AS, the second UE and the third UE to negotiate media information according to the media type and establish the at least one media stream of the media type after successful negotiation; and wherein before establishing at least one media stream of the media type between the third UE and the second UE, the method comprises: asking, by the AS, the first UE about whether to allow the third UE to transfer the at least one media stream of the media type; receiving, by the AS, confirmation of the first UE if the first UE allows the third UE to transfer the at least one media stream of the media type; and continuing, by the AS, to instruct the third UE and the second UE to establish the at least one media stream of the media type wherein, after establishing at least one media stream of the media type between the third UE and the second UE, the method further comprises: deleting a transferred media stream of the at least one media type from the multimedia session between the first UE and the second UE; wherein after deleting the transferred media stream of the media type from the multimedia session between the first UE and the second UE, the method further comprises: requesting, by the first UE, the AS to recover the transferred media stream of the media type; performing, by the first UE and the second UE, media renegotiation according to the at least one media type under the control of the AS; and transmitting, by the first UE and the second UE, the at least one media stream of the media type after successful renegotiation.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**CS domain call terminating system, method and network device**

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| **公开号** | [US8380211](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8380211&sv=f874b46d5f40b3f66bcbafe60ca3421f) | **公开日** | 2013/02/19 |
| **申请号** | 12/040,497 | **申请日** | 2008/02/29 |
| **授权日** | 2013/02/19 | **优先日** | 2005/08/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin | Zhu; Dongming | Zhang; Hai |
| **国际 主分类** | H04W 40/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A CS domain call terminating system, includes a routing-controlled determination module that determines a call which has been subject to routing control in accordance with information carried in a received call initiation message. The routing-controlled determination module sends routing-controlled information of the call to a subsequent call flow control module, and the subsequent call flow control module determines and executes a subsequent call flow of the call in accordance with the received routing-controlled information. A network entity can obtain the routing-controlled information of the call during CS domain call termination of the invention, thereby avoiding repeated routing control and an indefinite subsequent call flow in the CS domain call terminating flow. |

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| **主权项** | 专利度:13特征度:16 |  |  |
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A Circuit Switched domain call routing method, comprising: receiving, by a GMSC, routing-controlled information of a call carried in a call initiation message; indicating, by the GMSC, that the call has been subject to routing control by sending the routing-controlled information of the call to a gsmSCF; determining, by the gsmSCF, that the call has been subject to routing control in accordance with the routing-controlled information; sending, by the gsmSCF, a Continue message to the GMSC directly after the gsmSCF determines that the call has been subject to routing control; and sending, by the GMSC, to an HLR an SRI message carrying a suppress T-CSI parameter upon receipt of the Continue message; wherein the routing-controlled information is a CSRN, the method further comprising, before the step of indicating: triggering, by the GMSC, an intelligent service for the CSRN on the basis of N-CSI configured beforehand at the GMSC.

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| **对偶主权项** | 专利度:16特征度:7 |  |  |
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A Circuit Switch~~(CS)~~eddomain call~~terminating system, comprising:a routing-controlled determination module adapted to determine a call which has been subject to routing control in accordance with information carried in a received call initiation message, and to provide a subsequent call flow control modul~~routing method, comprising: receiving, by a GMSC, routing-controlled information of a call carried in a call initiation message; indicating, by the GMSC, that the call has been subject to routing control by sending the routing-controlled information of the call to a gsmSCF; determining, by the gsmSCF, that the call has been subject to routing control in accordance withtherouting-controlled information~~of the call, whereinthe subsequent call flow control module is adapted to execute a subsequent call flow of~~; sending, by the gsmSCF, a Continue message to the GMSC directly after the gsmSCF determines that the call has been subject to routing control; and sending, by the GMSC, to an HLR an SRI message carrying a suppress T-CSI parameter upon receipt of the Continue message; wherein the routing-controlled information is a CSRN, the method furtherc~~all in accordance with the received routing-controll~~omprising, before the step of indicating: triggering, by the GMSC, an intelligent service for the CSRN on the basis of N-CSI configured~~in~~befor~~mation~~ehand at the GMSC.

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| **被引用** | 3 | **自引用** | 2 | **公司数** | 2 | **国家数** | 1 | **影响力** | 0.25 |

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| **同族数** | 11 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for providing services for user**

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| **公开号** | [US8379650](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8379650&sv=cdb84a8d5cf50609eb74051ba5f32f4c) | **公开日** | 2013/02/19 |
| **申请号** | 12/837,773 | **申请日** | 2010/07/16 |
| **授权日** | 2013/02/19 | **优先日** | 2008/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Shufeng |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and a device for providing services for a user are provided. The method includes receiving, by an interrogating call session control function (I-CSCF), a failure response returned by a first serving call session control function (S-CSCF) after the I-CSCF selects the first S-CSCF for the user according to a capability set of an S-CSCF returned by a home subscriber server (HSS) and forwards a service request to the first S-CSCF; obtaining, by the I-CSCF, information of a second S-CSCF, and forwarding the service request from the user to the second S-CSCF. Therefore, when multiple identities of the user simultaneously generate unregistered services, when they generate registration requests at the time of generating unregistered services, or when they simultaneously generate registration requests, the I-CSCF forwards the service request from the user to a corresponding S-CSCF for processing, thus enabling a network to normally provide services for the user. |

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| **主权项** | 专利度:14特征度:14 |  |  |
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A method for providing services for a user, comprising: receiving, by an interrogating call session control function (I-CSCF), a failure response returned by a first serving call session control function (S-CSCF) according to a failure indication information, wherein the failure indication information is returned by a home subscriber server (HSS) after the HSS receives a request for requesting subscription data of the user sent by the first S-CSCF and determines that a stored name of the S-CSCF assigned to the user is not the same as that of the first S-CSCF, and the receiving is performed after the I-CSCF selects the first S-CSCF for the user and forwards a service request to the first S-CSCF; and obtaining, by the I-CSCF, information of a second S-CSCF, and forwarding the service request from the user to the second S-CSCF, wherein the second S-CSCF is the one assigned by the HSS for the user.

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| **对偶主权项** | 专利度:15特征度:6 |  |  |
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A method for providing services for a user, comprising: receiving, by an interrogating call session control function (I-CSCF), a failure response returned by a first serving call session control function (S-CSCF)according to a failure indication information, wherein the failure indication information is returned by a home subscriber server (HSS) after the HSS receives a request for requesting subscription data of the user sent by the first S-CSCF and determines that a stored name of the S-CSCF assigned to the user is not the same as that of the first S-CSCF, and the receiving is performedafter the I-CSCF selects the first S-CSCF for the user and forwards a service request to the first S-CSCF; and obtaining, by the I-CSCF, information of a second S-CSCF, and forwarding the service request from the user to the second S-CSCF, wherein the second S-CSCF is the one assigned by~~a home subscriber server (~~theHSS~~)~~for the user.

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 15 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for intelligent routing**

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| **公开号** | [US8374326](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8374326&sv=4af4d9df37c4226cf12f85ab19523ad5) | **公开日** | 2013/02/12 |
| **申请号** | 11/845,611 | **申请日** | 2007/08/27 |
| **授权日** | 2013/02/12 | **优先日** | 2005/03/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Youzhu |
| **国际 主分类** | H04M 3/42 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| Embodiments of the present invention provide methods and systems for intelligent routing. An intelligent routing processing module sets at least one intelligent routing trigger condition and at least one corresponding intelligent routing policy in advances and an incoming call or message is processed according to intelligent routing contact manners in the intelligent routing policy. The intelligent routing trigger condition includes relevant information of the incoming call or message and the intelligent routing policy may include more than one intelligent routing contact manner. The embodiments of the present invention may provide more intelligent routing contact manners and intelligent routing policies for communication routing technology and may make full use of subscriber presence information. |

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| **主权项** | 专利度:27特征度:20 |  |  |
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A method for intelligent routing, comprising: triggering an incoming call to an intelligent routing processing module at a designated trigger point; triggering, by the intelligent routing processing module, an intelligent routing service, acquiring relevant information of the incoming call and composing at least one intelligent routing trigger condition of the incoming call with the relevant information; wherein the relevant information of the incoming call comprises a called attribute identity, an incoming call attribute, called presence information and current time; matching the intelligent routing trigger condition of the incoming call with preset intelligent routing trigger conditions and obtaining at least one intelligent routing policy comprising more than one intelligent routing contact manner with a processing order; wherein the matching the intelligent routing trigger condition of the incoming call with preset intelligent routing trigger conditions and obtaining at least one intelligent routing policy comprises: matching the called attribute identity, the incoming call attribute, the called presence information and the current time of the incoming call with all preset intelligent trigger conditions in turn, to obtain the at least one intelligent routing policy; routing the incoming call according to the intelligent routing contact manner in the at least one intelligent routing policy.

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| **对偶主权项** | 专利度:31特征度:16 |  |  |
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A method for intelligent routing, comprising:triggering an incoming call to an intelligent routing processing module at a designated trigger point;triggering, by the intelligent routing processing module, an intelligent routing service, acquiring relevant information of the incoming call and composing at least one intelligent routing trigger condition of the incoming call with the relevant information;wherein the relevant information of the incoming call comprises a called attribute identity, an incoming call attribute, called presence information and current time;matching the intelligent routing trigger condition of the incoming call with preset intelligent routing trigger conditions and obtaining at least one intelligent routing policy comprising~~at least one intelligent routing contact manner;~~more than one intelligent routing contact manner with a processing order; wherein the matching the intelligent routing trigger condition of the incoming call with preset intelligent routing trigger conditions and obtaining at least one intelligent routing policy comprises: matching the called attribute identity, the incoming call attribute, the called presence information and the current time of the incoming call with all preset intelligent trigger conditions in turn, to obtain the at least one intelligent routing policy;routing the incoming call according to the intelligent routing contact manner in theat least oneintelligent routing policy.

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| **被引用** | 12 | **自引用** | 4 | **公司数** | 2 | **国家数** | 2 | **影响力** | 2.72 |

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| **同族数** | 13 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobility management entity information deleting method and device**

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| **公开号** | [US8369851](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8369851&sv=a256e6e70757cf8941286e5f6e301345) | **公开日** | 2013/02/05 |
| **申请号** | 13/212,728 | **申请日** | 2011/08/18 |
| **授权日** | 2013/02/05 | **优先日** | 2008/02/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhang; Yanping | Hu; Weihua | Zhou; Han | Chen; Zhongping |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A mobility management entity (MME) information deleting method includes: receiving a message sent by a first MME; and if needed, determining whether it is necessary to delete information about the first MME according to version information about the first MME. The method further includes: receiving a message sent by a target MME, in which the message carries version information about a source MME acquired by the target MME or an indication of deleting information about the source MME added by the target MME; and deleting the information about the source MME according to the message. A network device for deleting MME information is also provided. According to the present invention, a network device, such as a home subscriber server (HSS), is capable of acquiring version information about a source MME or receiving an indication of deleting information about the source MME, so as to determine whether it is necessary to delete the information about the MME. |

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| **主权项** | 专利度:15特征度:11 |  |  |
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A method for deleting information of a mobility management entity (MME), comprising: receiving, by a home subscriber server (HSS), a first message sent by a target MME, wherein the first message carries an indication of deleting the information about a source MME; and deleting, by the HSS, the information about the source MME according to the first message sent by the target MME; wherein the indication of deleting the information about the source MME is added in the first message by the target MME after the target MME receives a second message sent by the source MME, acquires version information of the source MME indicated by the second message, and determines the information which is to be deleted about the source MME according to the version information of the source MME; and wherein the version information of the source MME indicates a version of the source MME.

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| **对偶主权项** | 专利度:12特征度:15 |  |  |
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Amethod for deleting information of amobility management entity (MME)~~information deleting method~~, comprising: receiving, by a home subscriber server (HSS), a first message sent by a target MME, wherein the first message carries an indication of deletingtheinformation about a source MME; and deleting, by the HSS, the information about the source MME according to the first message sent by the targetMME; wherein the indication of deleting the information about the source MME is added in the first message by the target MME after the target MME receives a second message sent by the source MME, acquires version information of the source MME indicated by the second message, and determines the information which is to be deleted about the source MME according to the version information of the source MME; and wherein the version information of the source MME indicates a version of the sourceMME.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for bearer processing**

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| **公开号** | [US8369288](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8369288&sv=87fc7b044cf3f1c28800ec54724d75bf) | **公开日** | 2013/02/05 |
| **申请号** | 13/355,059 | **申请日** | 2012/01/20 |
| **授权日** | 2013/02/05 | **优先日** | 2007/10/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Jinyi | Liu; Lan | Hu; Huadong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A bearer processing method is disclosed. The method includes these steps: a system border node receives a Packet Data Protocol (PDP) Context Request initiated by a universal mobile telecommunication system (UMTS); the system border node adjusts a Request Bearer Resource Allocation message of a system architecture evolution (SAE) system or the PDP Context Request of the UMTS according to the received PDP Context Request to map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS. The present invention can map the Bearer Resource Allocation procedure of the SAE system and the Bearer Resource Allocation procedure of the UMTS. |

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| **主权项** | 专利度:16特征度:17 |  |  |
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A method for bearer processing when a user equipment accesses a System Architecture Evolution (SAE) system through a Universal Mobile Telecommunication System (UMTS), comprising, receiving, by a system border node, a Packet Data Protocol (PDP) Context Request message initiated by the UMTS; and initiating, by a system border node, a Bearer Resource Allocation procedure of the SAE system according to the received PDP Context Request message to map the Bearer Resource Allocation procedure of the SAE system and a Bearer Resource Allocation procedure of the UMTS system; wherein the initiating a Bearer Resource Allocation procedure of the SAE system comprises: adjusting, by the system border node, a Request Bearer Resource Allocation message of the SAE system or a PDP Context Request message of the UMTS system according to the received PDP Context Request message wherein the adjusting, by the system border node, a Request Bearer Resource Allocation message of an SAE system according to the received PDP Context Request message comprises: notifying, by the system border node, a Request Bearer Resource Allocation message to the SAE system, wherein the Request Bearer Resource Allocation message comprises the type of the PDP Context Request message.

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| **对偶主权项** | 专利度:16特征度:8 |  |  |
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A method for bearer processingwhen a user equipment accesses a System Architecture Evolution (SAE) system through a Universal Mobile Telecommunication System (UMTS), comprising, receiving, by a system border node, a Packet Data Protocol (PDP) Context Request message initiated by~~a Universal Mobile Telecommunication System (~~theUMTS~~)~~; and~~adjus~~initiating, by~~the~~asystem border node, a~~Request~~Bearer Resource Allocation~~message of a System Architecture Evolution (SAE) system or a PDP Context Request messag~~procedure of the~~UMT~~SAEsystem according to the received PDP Context Request message~~,~~to map the Bearer Resource Allocation procedure of the SAE system and~~the~~aBearer Resource Allocation procedure of the UMTS system; wherein theinitiating a Bearer Resource Allocation procedure of the SAE system comprises:adjusting, by the system border node, a Request Bearer Resource Allocation message of~~an~~theSAE systemor a PDP Context Request message of the UMTS systemaccording to the received PDP Context Request message~~comprises: notify~~wherein the adjusting, by the system border node, a~~type of the PDP Context Request message initiated by the UMTS system to the SAE system, to allow~~Request Bearer Resource Allocation message of an SAE system according to the received PDP Context Request message comprises: notifying, bythe~~SAE~~system~~to initiate~~border node,a Request Bearer Resource Allocation message~~with a same type of~~to the SAE system, whereinthe Request Bearer Resource Allocation message~~in the UMTS system~~comprises the type of the PDP Context Request message.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for sending control signaling**

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| **公开号** | [US8369278](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8369278&sv=c7efd4f41b38dc51b7150f27042705a9) | **公开日** | 2013/02/05 |
| **申请号** | 13/544,238 | **申请日** | 2012/07/09 |
| **授权日** | 2013/02/05 | **优先日** | 2007/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wang; Xianghua | Feng; Xuan |
| **国际 主分类** | H04W 72/04 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner, LLP |

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| **摘要** |  |
| A method for sending control signaling, including: a transmitter using different states of one field in the control signaling to indicate the payload size or RV; and sends the control signaling indicative of the payload size or RV in the field. It is appropriate that some states of one field indicate different payload sizes, and the remaining states of the field indicate different RVs. An apparatus for sending control signaling is disclosed. The apparatus may be integrated in a base station, and may include a control signaling generating unit and a control signaling sending unit. |

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| **主权项** | 专利度:9特征度:16 |  |  |
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A method of signaling, comprising: receiving, by a terminal, control signaling comprising a field, wherein the field includes N bits that are either 1 or 0, and a state of the field is indicated by all the N bits of the field; wherein N is a positive integer greater than 1; wherein the field is dynamically indicative of one of a payload size or a Redundancy Version (RV) through the state of the field, wherein the payload size is indicated through a first state of the field when the first state is within a first predetermined range and the RV is indicated through a second state of the field when the second state is within a 10 second predetermined range distinct from the first predetermined range; and sending, by the terminal, a packet according to the received control signaling to a base station (BS).

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| **对偶主权项** | 专利度:9特征度:26 |  |  |
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A method of signaling, comprising: receiving, by a terminal, control signaling comprising a field, wherein the field includes N bits that are either 1 or 0, and a state of the field is indicated by all the N bits of the field; wherein N is a positive integer greater than 1; wherein the field is dynamically indicative of one of a payload size or a Redundancy Version (RV) through the state of the field, wherein the payload size is indicated through a first state of the field when the first state is within a first predetermined range and the RV is indicated through a second state of the field when the second state is within a10second predetermined range distinct from the first predetermined range~~.~~; andsending, by the terminal, a packet according to the received control signaling to a base station (BS).

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 25 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of authentication in IP multimedia subsystem**

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| **公开号** | [US8364121](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8364121&sv=4202d51c16a18915497cc7395163cd89) | **公开日** | 2013/01/29 |
| **申请号** | 13/092,413 | **申请日** | 2011/04/22 |
| **授权日** | 2013/01/29 | **优先日** | 2005/07/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yan; Jun | Wang; Ying | He; Chengdong |
| **国际 主分类** | H04M 1/66 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of authentication in an IP Multimedia Subsystem (IMS) is provided. After receiving a Register message from a User Equipment (UE), a Proxy-Call Session Control Function (P-CSCF) locates a Connection Location Function (CLF) according to information contained in the Register message and a pre-configured corresponding relationship between the information contained in the Register message and the CLF. The P-CSCF obtains a query result by querying the CLF about attachment information of the UE in an access network, and sends the Register message carrying the query result to an Interrogating-Call Session Control Function (I-CSCF). The I-CSCF forwards the Register message carrying the query result to a Service-Call Session Control Function (S-CSCF). The S-CSCF authenticates the UE according to an authentication mechanism obtained from a User Profile Service Function (UPSF) or a Home Subscriber Server (HSS), and sends an authentication result to the UE. |

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| **主权项** | 专利度:26特征度:25 |  |  |
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A method of authentication in an IP Multimedia Subsystem (IMS), comprising: after receiving a Register message from a User Equipment (UE), locating, by a Proxy-Call Session Control Function (P-CSCF), a Connection Location Function (CLF) according to information contained in the Register message and a pre-configured corresponding relationship between the information contained in the Register message and the CLF; obtaining, by the P-CSCF, a query result by querying the CLF about attachment information of the UE in an access network; sending the Register message carrying the query result to an Interrogating-Call Session Control Function (I-CSCF); forwarding, by the I-CSCF, the Register message carrying the query result to a Service-Call Session Control Function (S-CSCF); authenticating, by the S-CSCF, the UE according to an authentication mechanism obtained from a User Profile Service Function (UPSF) or a Home Subscriber Server (HSS) and the query result; and sending an authentication result to the UE.

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| **对偶主权项** | 专利度:20特征度:14 |  |  |
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A method of authentication in an IP Multimedia Subsystem (IMS), comprising: after receiving a Register message from a User Equipment (UE), locating, by a Proxy-Call Session Control Function (P-CSCF), a Connection Location Function (CLF) according to information contained in the Register message and a pre-configured corresponding relationship between the information contained in the Register message and the CLF; obtaining, by the P-CSCF, a query result by querying the CLF about attachment information of the UE in an access network~~, and~~;sending the Register message carrying the query result to an Interrogating-Call Session Control Function (I-CSCF); forwarding, by the I-CSCF, the Register message carrying the query result to a Service-Call Session Control Function (S-CSCF); authenticating, by the S-CSCF, the UE according to an authentication mechanism obtained from a User Profile Service Function (UPSF) or a Home Subscriber Server (HSS)~~,~~andthe query result; andsending an authentication result to the UE.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 16 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for establishing S1 signaling connection in an evolved network**

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| **公开号** | [US8363619](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8363619&sv=85df65fd2241ea55f6e81456e8e32455) | **公开日** | 2013/01/29 |
| **申请号** | 12/466,628 | **申请日** | 2009/05/15 |
| **授权日** | 2013/01/29 | **优先日** | 2007/01/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Hongzhuo | Qiu; Yong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, apparatus and system for establishing S1 signaling connections in an evolved network are disclosed. A source evolved NodeB (eNodeB) sends a HANDOVER REQUEST message that carries original S1 signaling connection parameter information to a target eNodeB to initiate a process that a user equipment (UE) is handed over to the target eNodeB. When the UE enters the target cell, the target eNodeB allocates a new S1 signaling connection parameter and sends a HANDOVER COMPLETE message that carries the original S1 signaling connection parameter and the new S1 signaling connection parameter of the new eNodeB to an evolved packet core (EPC). The EPC receives the HANDOVER COMPLETE message that carries the new S1 signaling connection parameter and the original S1 signaling connection parameter. With the present disclosure, the inability of the target eNodeB to establish an S1 signaling connection with the EPC in the related art is effectively solved. |

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| **主权项** | 专利度:10特征度:8 |  |  |
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A method for establishing S1 signaling connections in an evolved network, comprising: receiving, by an evolved packet core (EPC), a HANDOVER COMPLETE message that carries a new S1 signaling connection parameter and an original S1 signaling connection parameter; storing, by the EPC, the new S1 signaling connection parameter in the HANDOVER COMPLETE message; and searching for, by the EPC, an original communication instance according to the original S1 signaling connection parameter after receiving the HANDOVER COMPLETE message that carries the new S1 signaling connection parameter and the original S1 signaling connection parameter.

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| **对偶主权项** | 专利度:19特征度:7 |  |  |
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A method for~~send~~establishing S1 signaling connection~~parameter information~~s in an evolved network, comprising:~~send~~receiving, by a~~source~~nevolved~~NodeB (eNodeB~~packet core (EPC), a HANDOVER~~REQUEST~~COMPLETEmessage that carries~~the~~a newS1 signaling connection parameter~~information to a target eNodeB to initiate a process during which a user equipment (UE) is handed over to the target eNodeB~~and an original S1 signaling connection parameter; storing, by the EPC, the new S1 signaling connection parameter in the HANDOVER COMPLETE message; and searching for, by the EPC, an original communication instance according to the original S1 signaling connection parameter after receiving the HANDOVER COMPLETE message that carries the new S1 signaling connection parameter and the original S1 signaling connection parameter.

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| **被引用** | 21 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.71 |

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| **同族数** | 15 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobility management entity information deleting method and device**

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| **公开号** | [US8359027](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8359027&sv=8fbb1369b7cb98befc9aa195e39d761c) | **公开日** | 2013/01/22 |
| **申请号** | 12/783,359 | **申请日** | 2010/05/19 |
| **授权日** | 2013/01/22 | **优先日** | 2008/02/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Yanping | Hu; Weihua | Zhou; Han | Chen; Zhongping |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A mobility management entity (MME) information deleting method includes: receiving a message sent by a first MME; and if needed, determining whether it is necessary to delete information about the first MME according to version information about the first MME. The method further includes: receiving a message sent by a target MME, in which the message carries version information about a source MME acquired by the target MME or an indication of deleting information about the source MME added by the target MME; and deleting the information about the source MME according to the message. A network device for deleting MME information is also provided. According to the present invention, a network device, such as a home subscriber server (HSS), is capable of acquiring version information about a source MME or receiving an indication of deleting information about the source MME, so as to determine whether it is necessary to delete the information about the MME. |

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| **主权项** | 专利度:15特征度:15 |  |  |
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A method for deleting information of a mobility management entity (MME), comprising: receiving, by a target MME, a first message sent by a source MME, and acquiring version information of the source MME indicated by the first message, wherein the version information of the source MME indicates a version of the source MME; determining, by the target MME, information which is to be deleted about the source MME according to the version information of the source MME; adding, by the target MME, an indication of deleting the information about the source MME in a second message; and sending, by the target MME, the second message to a Home Subscriber Server (HSS), so as to trigger the HSS to send a cancel location message to the source MME according to the indication of deleting in the second message.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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Amethod for deleting information of amobility management entity (MME)~~information deleting method~~, comprising:~~detect~~receiving, by a~~home subscriber server (HSS), that a terminal moves from a source MME to a~~targetMME, a first message sent by a source MME, and acquiring version information of the source MME indicated by the first message, wherein the version information of the source MME indicates a version of the sourceMME;~~and~~determining, by the~~HSS, whether it is necessary to delete information about the source MME according to locally saved version information about the source MME~~target MME, information which is to be deleted about the source MME according to the version information of the source MME; adding, by the target MME, an indication of deleting the information about the source MME in a second message; and sending, by the target MME, the second message to a Home Subscriber Server (HSS), so as to trigger the HSS to send a cancel location message to the source MME according to the indication of deleting in the second message.

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| **被引用** | 9 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.15 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets**

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| **公开号** | [US8358621](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8358621&sv=8d7539f64edb6ce10715c3e188bcf9b9) | **公开日** | 2013/01/22 |
| **申请号** | 13/094,697 | **申请日** | 2011/04/26 |
| **授权日** | 2013/01/22 | **优先日** | 2008/11/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Fan; Xiaoan | Liu; Guang | Li; Bo | Hou; Yunzhe |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method and apparatus for feeding back and receiving acknowledgment (ACK) information of semi-persistent scheduling (SPS) data packets are disclosed. The method for feeding back ACK information of SPS data packets includes receiving an uplink downlink assignment index (UL DAI) from a base station (BS), wherein the UL DAI indicates a number (N) of downlink data packets, mapping acknowledgements/negative acknowledgements (ACKs/NAKs) of k SPS data packets of the downlink data packets to positions from the (N−k+1)th ACK/NAK to the Nth ACK/NAK, and feeding back N ACKs/NAKs to the BS. |

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| **主权项** | 专利度:17特征度:24 |  |  |
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A method for a user equipment (UE) to feed back acknowledgement (ACK) information of semi-persistent scheduling (SPS) data packets, comprising: receiving an uplink data assignment indicator (UL DAI) from a base station (BS), wherein the UL DAI indicates a number (N) of downlink data packets sent by the BS, wherein the number N is greater than 1, and wherein a number k (k#x3c;N) of the downlink data packets is/are SPS data packets; forming a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) acknowledging the N downlink data packets, wherein k ACKs/NAKs of the k SPS data packets is/are placed from (N−k+1)th to Nth positions of the N ACKs/NAKs in an uplink ACK/NAK multiplexing mode; and sending the feedback signal to the BS starting from the ACK/NAK at the first position.

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| **对偶主权项** | 专利度:19特征度:19 |  |  |
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A method for~~feeding~~a user equipment (UE) to feedback acknowledgement (ACK) information of semi-persistent scheduling (SPS) data packets,~~the method~~comprising: receiving an uplink d~~ownlink~~ataassignment ind~~ex~~icator(UL DAI)~~sent by~~froma base station (BS), wherein~~a value of~~the UL DAI indicates a number (N) of downlink data packets~~; mapping an~~sent by the BS, wherein the number N is greater than 1, and wherein a number k (k

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| **被引用** | 23 | **自引用** | 5 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.81 |

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| **同族数** | 34 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, base station, and user terminal for implementing uplink resource indication**

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| **公开号** | [US8358603](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8358603&sv=933d121914cab76c89ccad551bb04777) | **公开日** | 2013/01/22 |
| **申请号** | 12/504,239 | **申请日** | 2009/07/16 |
| **授权日** | 2013/01/22 | **优先日** | 2007/08/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhao; Meng | Lv; Yongxia | Chen; Xiaobo |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method, a base station (BS), and a user terminal for implementing uplink resource indication are provided. The method includes: carrying an uplink resource index in an uplink resource grant indication (ul grant), in which the uplink resource index is corresponding to at least one uplink resource in terms of indication; and sending the ul grant. The BS includes an index carrying module and an instruction sending module. The user terminal includes an instruction receiving module, an instruction resolving module, and an execution module. |

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| **主权项** | 专利度:12特征度:15 |  |  |
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A method for sending an uplink resource indication to a user terminal, comprising: composing, by a base station, an uplink resource grant indication (ul grant) which carries an uplink resource index, wherein a corresponding relationship exists between the uplink resource index and one or more uplink subframes, the corresponding relationship is determined by an uplink-downlink subframe ratio and the number of uplink subframes is more than the number of downlink subframes in the uplink-downlink subframe ratio; and sending, by the base station, the ul grant to the user terminal; wherein the corresponding relationship between the uplink resource index and the one or more uplink subframes is established by the following: combining, by the base station, the one or more uplink subframes into a group, and correlating, by the base station, the group with the uplink resource index, so as to establish the corresponding relationship between the uplink resource index and the one or more uplink subframes; wherein each uplink resource index is correlated with a group of one or more uplink subframes, and the uplink subframes in each group are not completely the same.

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| **对偶主权项** | 专利度:15特征度:10 |  |  |
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A method for~~implem~~sen~~t~~dinganuplink resource indication~~, comprising:carrying an uplink resource index in an uplink resource grant indication (ul grant), wherein a corresponding relationship exists between the uplink resource index and at least one uplink resource; andsending the ul grant~~to a user terminal, comprising: composing, by a base station, an uplink resource grant indication (ul grant) which carries an uplink resource index, wherein a corresponding relationship exists between the uplink resource index and one or more uplink subframes, the corresponding relationship is determined by an uplink-downlink subframe ratio and the number of uplink subframes is more than the number of downlink subframes in the uplink-downlink subframe ratio; and sending, by the base station, the ul grant to the user terminal; wherein the corresponding relationship between the uplink resource index and the one or more uplink subframes is established by the following: combining, by the base station, the one or more uplink subframes into a group, and correlating, by the base station, the group with the uplink resource index, so as to establish the corresponding relationship between the uplink resource index and the one or more uplink subframes; wherein each uplink resource index is correlated with a group of one or more uplink subframes, and the uplink subframes in each group are not completely the same.

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| **被引用** | 23 | **自引用** | 8 | **公司数** | 2 | **国家数** | 2 | **影响力** | 6.66 |

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| **同族数** | 31 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for updating PCC rules**

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| **公开号** | [US8356107](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8356107&sv=2718c22b13223fe11d2d73aded581b5b) | **公开日** | 2013/01/15 |
| **申请号** | 12/908,386 | **申请日** | 2010/10/20 |
| **授权日** | 2013/01/15 | **优先日** | 2008/04/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xia; Xu | Li; Yan |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. odolph; Grant |

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| **摘要** |  |
| A method, an apparatus, and a system for updating PCC rules are disclosed herein to ensure normal process of the user service in the process of updating the PCC rules. A method for updating PCC rules includes: obtaining a response made by a PCEF after the PCEF updates the PCC rules; and keeping consistency between PCC rules stored in the PCRF and the PCC rules currently executed in the PCEF according to the obtained response. |

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| **主权项** | 专利度:6特征度:25 |  |  |
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A method implemented by a computer comprising a Policy Control and Charging Rules Function (PCRF) communicating with a Policy and Charging Enforcement Function (PCEF), comprising: receiving, by the computer, a first Credit Control Request (CCR) message for Policy and Charging Control (PCC) rules from the PCEF; in response to the first CCR message, determining, by the computer, that an old PCC rule needs to be updated, generating a new PCC rule, and sending a Credit Control Answer (CCA) messace carrying the new PCC rule to the PCEF to update a PCC rule stored on the PCEF; receiving, by the computer, from the PCEF a second CCR message having an indication indicating whether the PCC rule stored on the PCEF is updated successfully with the new PCC rule carried in the CCA message; if the PCC rule stored in the PCEF is updated successfully with the new PCC rule, updating, according to the second CCR message, the old PCC rule stored in the PCRF with the new PCC rule by deleting the old PCC rule and activating the new PCC rule; if the PCC rule stored on the PCEF is updated unsuccessfully with the new PCC rule: deleting, according to the second CCR message, the new PCC rule stored in the PCRF and activating the old PCC rule, or deleting, according to the second CCR message, the new PCC rule and the old PCC rule, creating an additional PCC rule that matches the PCEF, and sending an additional CCA message carrying the additional PCC rule to the PCEF.

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| **对偶主权项** | 专利度:20特征度:19 |  |  |
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A method~~for updating Policy and Charging Control (PCC) rules~~implemented by a computer comprising a Policy Control and Charging Rules Function (PCRF) communicating with a Policy and Charging Enforcement Function (PCEF), comprising:~~obtain~~receiving, by~~a Policy Control and Charging Rules Function (PCRF), a response made by a Policy and Charging Enforcement Function (PCEF) after~~the computer, a first Credit Control Request (CCR) message for Policy and Charging Control (PCC) rules from the PCEF; in response to the first CCR message, determining, by the computer, that an old PCC rule needs to be updated, generating a new PCC rule, and sending a Credit Control Answer (CCA) messace carrying the new PCC rule to the PCEF to update a PCC rule stored on the PCEF; receiving, by the computer, from the PCEF a second CCR message having an indication indicating whether the PCC rule stored on the PCEF is updated successfully with the new PCC rule carried in the CCA message; if the PCC rule stored inthe PCEFisupdate~~s~~d successfully withthenewPCC rule~~s; and keeping, by the PCRF, consistency between PCC rules~~, updating, according to the second CCR message, the old PCC rule stored in the PCRF with the new PCC rule by deleting the old PCC rule and activating the new PCC rule; if the PCC rulestored~~i~~on the PC~~R~~EF~~and the~~is updated unsuccessfully with the new PCC rule: deleting, according to the second CCR message, the newPCC rule~~s~~storedin the PC~~EF according to the obtained response~~RF and activating the old PCC rule, or deleting, according to the second CCR message, the new PCC rule and the old PCC rule, creating an additional PCC rule that matches the PCEF, and sending an additional CCA message carrying the additional PCC rule to the PCEF.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Control method, system and function entity for reporting bearer event of signaling IP flow**

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| **公开号** | [US8355325](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8355325&sv=ed5ca8a30a8938d7bba02876f0b2d779) | **公开日** | 2013/01/15 |
| **申请号** | 12/052,487 | **申请日** | 2008/03/20 |
| **授权日** | 2013/01/15 | **优先日** | 2007/03/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Shibi | Zhao; Peng | Mao; Yuxin | Tan; Shiyong | Wei; Weihua | Li; Yan |
| **国际 主分类** | G01R 31/06 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A control method, system and function entity for reporting a bearer event of a signaling IP flow are provided. A 5-tuple is generated for a signaling IP flow and a media IP flow so as to unify a mechanism for reporting a signaling path status and a mechanism for reporting a bearer event of a media IP flow, so that the mechanism for reporting a signaling path status is not limited by the parameter of Flow Usage, the PDP context with a signaling tag, thereby establishing corresponding PCC rules for signaling and the association between a signaling IP flow and a bearer. A method for reporting a signaling path status is further provided in the invention. In the method, for a default PDP context or a PDP context of a signaling IP flow, the predefined PCC rules are activated or signaling PCC rules generated in accordance with an Application Function address are installed, thereby an IP signaling path status is reported in accordance with rule names of the predefine PCC rules or the signaling PCC rules. |

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| **主权项** | 专利度:13特征度:23 |  |  |
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A method for reporting a bearer event of a signaling IP flow, comprising: sending, by an apparatus operable to provide an Application Function, a subscription request for subscribing to the bearer event of the signaling IP flow to an apparatus operable to provide a Policy Control and Charging Rules Function, wherein the subscription request carries flow identifier information of the signaling IP flow; and receiving, by the apparatus operable to provide the Application Function, a bearer event report of the signaling IP flow from the apparatus operable to provide the Policy Control and Charging Rules Function, wherein the bearer event report carries the flow identifier information of the signaling IP flow and a parameter for indicating a bearer loss or a bearer release; wherein the flow identifier information comprises a media component number and an IP flow number, and the signaling IP flow is provided with a default media component number 0.

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| **对偶主权项** | 专利度:13特征度:21 |  |  |
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A method for reporting a bearer event of a signaling IP flow, comprising:sending, by anapparatus operable to provide anApplication Function, a subscription request for subscribing to~~a~~thebearer event of~~a~~thesignaling IP flow toan apparatus operable to providea Policy Control and Charging Rules Function, wherein the subscription request carries~~a 5-tuple and/or~~flow identifier information of the signaling IP flow; andreceiving, by theapparatus operable to provide theApplication Function, a bearer event report of the signaling IP flow from theapparatus operable to provide thePolicy Control and Charging Rules Function, wherein the bearer event report carries the~~5-tuple and/or the~~flow identifier information of the signaling IP flowand a parameter for indicating a bearer loss or a bearer release; wherein the flow identifier information comprises a media component number and an IP flow number, and the signaling IP flow is provided with a default media component number 0.

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| **被引用** | 13 | **自引用** | 4 | **公司数** | 3 | **国家数** | 2 | **影响力** | 4.54 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Calling methods and systems for video phone**

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| **公开号** | [US8351906](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8351906&sv=a8e727bddd0d1191c98f7ff8fbef7816) | **公开日** | 2013/01/08 |
| **申请号** | 12/495,227 | **申请日** | 2009/06/30 |
| **授权日** | 2013/01/08 | **优先日** | 2007/03/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Jian | Chen; Guoqiao | Wang; Lei |
| **国际 主分类** | H04M 3/42 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A calling method for the video phone, includes: playing a Multimedia Ring Back Tone for a calling terminal via a first bearer of video phone established between a Multimedia Ring Back Tone server and the calling terminal; establishing a second bearer of video phone between a called terminal and the Multimedia Ring Back Tone server upon detecting that the called terminal answers the call; and performing a video phone communication between the calling terminal and the called terminal via the first bearer and the second bearer established. Another calling method for the video phone, comprises: playing a Multimedia Ring Back Tone for the calling terminal by the Multimedia Ring Back Tone server via a third bearer of video phone established with the calling terminal; establishing a fourth bearer of video phone between the calling terminal and the called terminal, and performing the video phone communication between the calling terminal and the called terminal via the fourth bearer. The present invention also provides the corresponding systems, thereby realizing the Multimedia Ring Back Tone service of video phone. |

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| **主权项** | 专利度:5特征度:21 |  |  |
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A method for a video phone call, comprising: establishing a first bearer of video phone using H.245 protocol between a calling terminal and a Multimedia Ring Back Tone (MRBT) server; the calling terminal receiving a first H.245 instruction from a Mobile Switching Center (MSC) server corresponding to the calling terminal, wherein the first H.245 instruction is used to indicate the calling terminal to ignore timing the video phone call; the calling terminal receiving a video MRBT via the MRBT server; after the called terminal sending a connect message to a MSC server corresponding to the called terminal, the calling terminal receiving a second H.245 instruction from the MSC server corresponding to the calling terminal, wherein the second H.245 instruction is used to indicate the calling terminal to start timing the video phone call; the calling terminal starting timing of the video phone call according to the second H.245 instruction; performing a video phone communication between the calling terminal and the called terminal via the first bearer and a second bearer of video phone; wherein the second bearer is set up between the called terminal and the MRBT server using H.245 protocol.

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| **对偶主权项** | 专利度:22特征度:12 |  |  |
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A~~calling~~method for~~the~~avideo phonecall, comprising: establishing a first bearer of video phoneusing H.245 protocolbetween a calling terminal and a Multimedia Ring Back Tone(MRBT)server;~~playing a Multimedia Ring Back Tone~~the calling terminal receiving a first H.245 instruction from a Mobile Switching Center (MSC) server correspondingto the calling terminal~~via~~, whereinthe first~~bearer; establishing a second bearer of video phone between a called terminal and the Multimedia Ring Back Tone server upon detecting th~~H.245 instruction is used to indicate the calling terminal to ignore timing the video phone call; the calling terminal receiving a video MRBT via the MRBT server; after the called terminal sending a connect message to a MSC server corresponding to the called terminal, the calling terminal receiving a second H.245 instruction from the MSC server corresponding to the calling terminal, wherein the second H.245 instruction is used to indicatethe call~~ed~~ingterminal~~answers th~~to start timing the video phone call; the calling terminal starting timing of the video phone call~~;~~a~~nd~~ccording to the second H.245 instruction;performing a video phone communication between the calling terminal and the called terminal via the first bearer and~~the second bearer~~a second bearer of video phone; wherein the second bearer is set up between the called terminal and the MRBT server using H.245 protocol.

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| **被引用** | 9 | **自引用** | 1 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.1 |

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| **同族数** | 16 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device, and system for transferring service control signalling path**

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| **公开号** | [US8351424](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8351424&sv=e8ccbbfe66e1522571882ba9ed77cf05) | **公开日** | 2013/01/08 |
| **申请号** | 12/902,436 | **申请日** | 2010/10/12 |
| **授权日** | 2013/01/08 | **优先日** | 2008/06/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jin; Hui | Long; Shuiping |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, device, and system for transferring a Service Control Signalling Path are provided. The method for transferring a Service Control Signalling Path includes: establishing a connection with an opposite end by a User Equipment (UE), where the UE uses a Circuit Switched (CS) bearer in a CS network and a Service Control Signalling Path in a first Packet Switched (PS) network; sending a transfer request via a second PS network, to instruct a network side to transfer the Service Control Signalling Path according to the transfer request. Thus, the UE can replace a current Gm reference point with a Gm reference point of a new and available PS network when the PS network where the current Gm reference point is located is unavailable, so as to ensure smooth data transmission. |

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| **主权项** | 专利度:9特征度:23 |  |  |
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A method for transferring a Service Control Signalling Path, comprising: establishing, by User Equipment (UE), a connection with an opposite end, wherein the UE uses a Circuit Switched (CS) bearer in a CS network and a Service Control Signalling Path in a first Packet Switched (PS) network; and sending a transfer request via a second PS network to instruct a network side to transfer the Service Control Signalling Path according to the transfer request; wherein the transfer request carries Service Control Signalling Path information of the first PS network and indication information for establishing a Service Control Signalling Path; wherein the Service Control Signalling Path information of the first PS network comprises: a Session identity (Session ID) of the Service Control Signalling Path of the first PS network, and the Session ID comprises a Call-ID header field, a From tag header field and a To tag header field.

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| **对偶主权项** | 专利度:25特征度:39 |  |  |
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A method for transferring a Service Control Signalling Path, comprising:establishing, by User Equipment (UE), a connection with an opposite end, wherein the UE uses a Circuit Switched (CS) bearer in a CS network and a Service Control Signalling Path in a first Packet Switched (PS) network; and sending a transfer request via a second PS network to instruct a network side to transfer the Service Control Signalling Path according to the transfer request; wherein the transfer request carries Service Control Signalling Path information of the first PS network and indication information for establishing a Service Control Signalling Path; wherein the Service Control Signalling Path information of the first PS network comprises: a Session identity (Session ID) of the Service Control Signalling Path of the first PS network, and the Session ID comprises a Call-ID header field, a From tag header field and a To tag header field.

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| **被引用** | 8 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.16 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for realizing user identity association**

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| **公开号** | [US8346253](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8346253&sv=45bd9e92994f3bc1d9ae457a7ab96659) | **公开日** | 2013/01/01 |
| **申请号** | 12/477,318 | **申请日** | 2009/06/03 |
| **授权日** | 2013/01/01 | **优先日** | 2007/01/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Shufeng | Yan; Xuexia | Yang; Deping |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner, LLP |

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| **摘要** |  |
| The present invention discloses a method for realizing user identity association, the method comprising: setting an equivalent behavior user identifier in a Home Subscription Server (HSS); associating IMS Public User Identities (IMPUs) with the equivalent behavior through the set equivalent behavior user identifier. The present invention also discloses a system and a device realizing user identity association. According to the embodiments of the present invention, the association of the IMPUs with the set equivalent behavior is realized, which improves the user experiences. |

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| **主权项** | 专利度:5特征度:19 |  |  |
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A method for realizing user identity association, comprising: setting an equivalent behavior user identifier in a Home Subscription Server (HSS); associating IP Multimedia Subsystem (IMS) Public User Identities (IMPUs) with equivalent behavior through the equivalent behavior user identifier; receiving, by the HSS, a request message for requesting the IMPUs with the equivalent behavior from an Application Server (AS); and presenting, by the HSS, the IMPUs with the equivalent behavior to the AS according to the request message, wherein the step of receiving the request message comprises: receiving, by the HSS, the request message carrying an identity set attribute value pair (AVP) indicating an identity type of the equivalent behavior from the AS; and wherein the step of presenting comprises: presenting, by the HSS, the IMPUs with the equivalent behavior as an IMPU in the request message to the AS, according to the identity type of the equivalent behavior as indicated in the request message.

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| **对偶主权项** | 专利度:18特征度:14 |  |  |
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A method for realizing user identity association, comprising:setting an equivalent behavior user identifier in a Home Subscription Server (HSS);associating I~~MS~~P Multimedia Subsystem (IMS)Public User Identities (IMPUs) with~~the equivalent behavior through the set equivalent behavior user identifier~~equivalent behavior through the equivalent behavior user identifier; receiving, by the HSS, a request message for requesting the IMPUs with the equivalent behavior from an Application Server (AS); and presenting, by the HSS, the IMPUs with the equivalent behavior to the AS according to the request message, wherein the step of receiving the request message comprises: receiving, by the HSS, the request message carrying an identity set attribute value pair (AVP) indicating an identity type of the equivalent behavior from the AS; and wherein the step of presenting comprises: presenting, by the HSS, the IMPUs with the equivalent behavior as an IMPU in the request message to the AS, according to the identity type of the equivalent behavior as indicated in the request message.

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| **被引用** | 32 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.54 |

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| **同族数** | 22 | **国家数** | 10 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Measurement control method, user equipment and network-side device**

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| **公开号** | [US8335517](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8335517&sv=aac84734009e0593abaf7f54ca34492f) | **公开日** | 2012/12/18 |
| **申请号** | 12/604,485 | **申请日** | 2009/10/23 |
| **授权日** | 2012/12/18 | **优先日** | 2007/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yu; Yinghui |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A measurement control method, a UE, and a network-side device are provided to solve the problem in the prior art that no measurement control solution can ensure the UE to perform a measurement and obtain a measurement result in time, as well as reduce the impact of the measurement on the performance of the UE. The method includes the following steps. The UE receives measurement indication information provided by the network side; and the UE performs a measurement after determining that the UE needs to perform the measurement according to the measurement indication information, which ensures that the UE may not perform the measurement frequently but pertinently, and reduces the impact of the measurement on the performance of the UE to the utmost extent. |

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| **主权项** | 专利度:14特征度:12 |  |  |
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A measurement control method comprising: receiving, by a user equipment (UE), measurement indication information from a network initiated by the network, the measurement indication information including a priority indicator of network supported services; determining, by the UE, whether the network supported services satisfy a preset relationship with services of the UE according to the priority indicator of the network supported services; and performing, by the UE, a measurement process upon satisfaction of the preset relationship, wherein the determining includes: determining whether a priority of the UE services is higher than a priority of the network supported services according to the priority indicator of the network supported services, and determining that the preset relationship is satisfied if the priority of the UE services is higher than the priority of the network supported services.

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| **对偶主权项** | 专利度:20特征度:17 |  |  |
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A measurement control method~~,~~comprising: receiving, by a user equipment (UE), measurement indication information~~p~~fro~~vid~~m a network initiated by~~a~~thenetwork~~side; and determining, by the UE, according to the measurement indication information, that the UE needs to perform a measurement, and performing a measurement proces~~, the measurement indication information including a priority indicator of network supported services; determining, by the UE, whether the network supported services satisfy a preset relationship with services of the UE according to the priority indicator of the network supported services; and performing, by the UE, a measurement process upon satisfaction of the preset relationship, wherein the determining includes: determining whether a priority of the UE services is higher than a priority of the network supported services according to the priority indicator of the network supported services, and determining that the preset relationship is satisfied if the priority of the UE services is higher than the priority of the network supported services.

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| **被引用** | 15 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.78 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device of network resource release processing**

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| **公开号** | [US8335512](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8335512&sv=8a9e9192fe25a64c43037de90d54ef96) | **公开日** | 2012/12/18 |
| **申请号** | 13/232,771 | **申请日** | 2011/09/14 |
| **授权日** | 2012/12/18 | **优先日** | 2008/01/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of network resource release processing is provided, which includes the following steps. After user equipment (UE) using idle mode signaling reduction (ISR) mechanism registers to two 3rd Generation Partnership Project (3GPP) communication networks, when the UE changes from the 3GPP network to a non-3GPP communication network, a serving gateway (serving GW) receives a message sent from a peer endpoint network element (NE), and deletes network resources established by the two 3GPP communication networks for the UE according to the message. A mobility management NE and a serving GW are also provided. Through the method and device of network resource release processing, the resources are released when the UE using the ISR mechanism changes from the 3GPP network to the non-3GPP communication network. |

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| **主权项** | 专利度:4特征度:37 |  |  |
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A method of network resource release processing, comprising: receiving, by a serving gateway (serving GW), a message sent from a peer endpoint network element (NE), when a user equipment (UE) changes from a 3rd Generation Partnership Project (3GPP) network to a non-3GPP network, wherein the UE using IDLE MODE SIGNALING REDUCTION (ISR) mechanism registers to two 3GPP communication networks; and deleting network resources established by the two 3GPP communication networks for the UE according to the message; wherein the receiving, by the serving GW, the message sent from the peer endpoint NE comprises: receiving, by the serving GW, a delete bearer request message or a binding revocation indication message sent from a packet data network gateway (PDN GW), wherein the delete bearer request message or the binding revocation indication message includes a first indication information indicating that a communication network of the UE changes from the 3GPP communication network to the non-3GPP communication network; and wherein the deleting the network resources established by the two 3GPP communication networks for the UE comprises: sending, by the serving GW, the delete bearer request message or a delete PDP context request message to a first mobility management NE of one of the two 3GPP communication networks to notify the first mobility management NE to release the network resources established for the UE; and receiving, by the first mobility management NE, the delete bearer request message or the delete PDP context request message, releasing the resources used by the UE, and notifying a second mobility management NE of the other of the two 3GPP communication network to release the resources.

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| **对偶主权项** | 专利度:17特征度:16 |  |  |
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A method of network resource release processing, comprising: receiving, by a serving gateway (serving GW), a message sent from a peer endpoint network element (NE), when a user equipment (UE) changes from a 3rd Generation Partnership Project (3GPP) network to a non-3GPP network, wherein the UE using IDLE MODE SIGNALING REDUCTION (ISR) mechanism registers to two 3GPP communication networks; and deleting network resources established by the two 3GPP communication networks for the UE according to the message; wherein the receiving, by the serving GW, the message sent from the peer endpoint NE comprises: receiving, by the serving GW, a delete bearer request message or a binding revocation indication message sent from a packet data network gateway (PDN GW), wherein the delete bearer request message or the binding revocation indication message includes a first indication information indicating that a communication network of the UE changes from the 3GPP communication network to the non-3GPP communication network; and wherein the deleting the network resources established by the two 3GPP communication networks for the UE comprises: sending, by the serving GW, the delete bearer request message or a delete PDP context request message to a first mobility management NE of one of the two 3GPP communication networks to notify the first mobility management NE to release the network resources established for the UE; and receiving, by the first mobility management NE, the delete bearer request message or the delete PDP context request message, releasing the resources used by the UE, and notifying a second mobility management NE of the other of the two 3GPP communication network to release the resources.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 17 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Resource configuration method, device, and system**

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| **公开号** | [US8335477](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8335477&sv=bb6eae938aaf3a60ea9d0e2238a718a8) | **公开日** | 2012/12/18 |
| **申请号** | 13/097,849 | **申请日** | 2011/04/29 |
| **授权日** | 2012/12/18 | **优先日** | 2008/10/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Shukun | Dai; Dingzhang | Huang; Xin | Lv; Boya |
| **国际 主分类** | H04B 7/005 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A resource configuration method includes acquiring capability information of a base station (BS), in which the capability information of the BS includes information indicating whether the BS has channel power boost capability. Capability information of a user equipment (UE) is acquired. The capability information of the UE includes information indicating whether the UE has the channel power boost capability. The BS is notified to configure resources for performing channel estimation by using the channel power boost capability for the UE if the UE and the BS both have the channel power boost capability. |

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| **主权项** | 专利度:20特征度:15 |  |  |
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A resource configuration method comprising: acquiring capability information of a base station (BS), wherein the capability information of the BS comprises information indicating whether the BS has a channel power boost capability; acquiring capability information of a user equipment (UE), wherein the capability information of the UE comprises information indicating whether the UE has the channel power boost capability; notifying the BS to configure resources for performing channel estimation by using the channel power boost capability for the UE if the UE and the BS both have the channel power boost capability; and notifying the BS to configure resources for performing the channel estimation by using a Dedicated Physical Control Channel (DPCCH) for the UE if either the UE or the BS does not have the channel power boost capability.

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| **对偶主权项** | 专利度:13特征度:13 |  |  |
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A resource configuration method~~,~~comprising: acquiring capability information of a base station (BS), wherein the capability information of the BS comprises information indicating whether the BS has a channel power boost capability; acquiring capability information of a user equipment (UE), wherein the capability information of the UE comprises information indicating whether the UE has the channel power boost capability;~~and~~notifying the BS to configure resources for performing channel estimation by using the channel power boost capability for the UE if the UE and the BS both have the channel power boostcapability; and notifying the BS to configure resources for performing the channel estimation by using a Dedicated Physical Control Channel (DPCCH) for the UE if either the UE or the BS does not have the channel power boostcapability.

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| **同族数** | 15 | **国家数** | 6 |

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**Method and network element for obtaining IP-can session policy control information**

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| **公开号** | [US8335220](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8335220&sv=8f55c35530f147dcb8c6995c7f78cbbb) | **公开日** | 2012/12/18 |
| **申请号** | 12/652,375 | **申请日** | 2010/01/05 |
| **授权日** | 2012/12/18 | **优先日** | 2007/09/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Ying | Wang; Shanshan |
| **国际 主分类** | H04L 12/54 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for obtaining IP-CAN session policy control information is applicable to a scenario where the access gateway does not process an IP-CAN session setup message directly, and includes: receiving a request for obtaining IP-CAN session policy control information; obtaining an address of an access gateway; and sending the IP-CAN session policy control information to the access gateway according to the address of the access gateway. |

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| **主权项** | 专利度:3特征度:20 |  |  |
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A method for obtaining Internet Protocol Connectivity Access Network (IP-CAN) session policy control information, comprising: receiving, by a policy control function entity, a policy control session setup request from an access gateway, the policy control session setup request comprising a user identifier and an address of the access gateway; obtaining and recording, by the policy control function entity, the user identifier and the address of the access gateway; receiving, by the policy control function entity, a policy control request for obtaining the IP-CAN session policy control information from a Packet Data Network (PDN) Gateway (GW), the policy control request comprising the user identifier; obtaining, by the policy control function entity, the address of the access gateway according to the user identifier; and sending, by the policy control function entity, the IP-CAN session policy control information to the access gateway according to the address of the access gateway.

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| **对偶主权项** | 专利度:17特征度:15 |  |  |
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A method for obtaining Internet Protocol Connectivity Access Network (IP-CAN) session policy control information, comprising: receiving~~a request for obtaining IP-CAN session policy control information; obtaining an~~, by a policy control function entity, a policy control session setup request from an access gateway, the policy control session setup request comprising a user identifier and an address of the access gateway; obtaining and recording, by the policy control function entity, the user identifier and the address of the access gateway; receiving, by the policy control function entity, a policy control request for obtaining the IP-CAN session policy control information from a Packet Data Network (PDN) Gateway (GW), the policy control request comprising the user identifier; obtaining, by the policy control function entity, theaddress of~~an~~theaccess gateway~~; and sending~~according to the user identifier; and sending, by the policy control function entity,the IP-CAN session policy control information to the access gateway according to the address of the access gateway.

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| **被引用** | 14 | **自引用** | 2 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.46 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Streaming media network system, streaming media service realization method and streaming media service enabler**

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| **公开号** | [US8332527](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8332527&sv=2702b0480204a4ffed08dcb3de727785) | **公开日** | 2012/12/11 |
| **申请号** | 12/192,968 | **申请日** | 2008/08/15 |
| **授权日** | 2012/12/11 | **优先日** | 2006/02/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | rpx | **发明人** | Yan; Jun | Li; Jincheng | Wu; Xiangyang |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention provides an IMS-based streaming media network system comprising: a streaming media service enabler configured to provide streaming media service description information to a user terminal; an application server configured to send a media resource request after the user terminal selects a streaming media service based on the service description information provided by the streaming media service enabler and after receiving a streaming media service request sent from the user terminal, and to provide the user terminal with information on a media resource delivery processing function entity storing streaming media contents after acquiring the information on the media resource delivery processing function entity; and, a media server configured to provide the application server with the information on the media resource delivery processing function entity storing the streaming media contents, based on the media resource request sent from the application server. The present invention addresses the problem of realizing streaming media services on the basis of IMS-based network architecture. |

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| **主权项** | 专利度:12特征度:14 |  |  |
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An IMS-basedstreaming media network system, comprising:~~an application serv~~a streaming media service enabler~~,~~co~~mprising a non-transient computer readable medium configured to send a media resource request~~nfigured to provide streaming media service description information to a user terminal;an application server configured to send a media resource request after the user terminal selects a streaming media service based on the service description information provided by the streaming media service enabler and after receiving a streaming media service request sent from the user terminal,and to provide~~a~~theuser terminal with information~~regarding~~ona media resource delivery processing function entity~~which~~stor~~es~~ingstreaming media content~~; where~~s after acquiringthe information~~regarding~~onthe media resource delivery processing function entity~~is provided by a media server; and wherein the system further comprises: a media resource location function entity (MRLF) or a media resource broker entity function entity (MRBF); the MRLF or the MRBF is configured to select one media server providing the streaming media content from one or more media~~; anda media server configured to provide the application server with the information on the media resource delivery processing function entity storing the streaming media contents, based on the media resource request sent from the applicationserver~~s~~.

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| **对偶主权项** | 专利度:25特征度:5 |  |  |
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An IMS-based streaming media network system, comprising:a streaming media service enabler configured to provide streaming media service description information to a user terminal;an application server configured to send a media resource request after the user terminal selects a streaming media service based on the service description information provided by the streaming media service enabler and after receiving a streaming media service request sent from the user terminal, and to provide the user terminal with information on a media resource delivery processing function entity storing streaming media contents after acquiring the information on the media resource delivery processing function entity; anda media server configured to provide the application server with the information on the media resource delivery processing function entity storing the streaming media contents, based on the media resource request sent from the application server.

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| **被引用** | 1 | **自引用** | 0 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.1 |

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| **同族数** | 11 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Data processing method and device**

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| **公开号** | [US8331325](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8331325&sv=7134f4adb427a110379cc89bd4fa239c) | **公开日** | 2012/12/11 |
| **申请号** | 13/416,983 | **申请日** | 2012/03/09 |
| **授权日** | 2012/12/11 | **优先日** | 2007/11/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A data processing method is provided for forwarding data in the case of handover between heterogeneous networks. The data processing method includes: when a user equipment (UE) is handed over from an originating network to a target network, receiving, by the originating network, a data forwarding address obtained by the target network; creating a data forwarding tunnel between an originating network gateway and a target network gateway according to the data forwarding address; and forwarding data to the target network through the data forwarding tunnel. A data processing device is also provided. The lossless data processing solution can overcome the problem of data loss in the case of handover between heterogeneous networks in the existing technology, reduces the time of user service interruption and enhances the user experience. |

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| **主权项** | 专利度:24特征度:29 |  |  |
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In a mobility management entity (MME), a method for mitigating data loss when a mobile device is handed over between two heterogeneous networks by creating data forwarding resources between a source network and a target network, the method comprising: receiving, during a handover process of a user equipment from a source network to a target network, a message from the target network that includes a data forwarding address of a serving node thereon; selecting a serving gateway within the source network; sending, to the serving gateway, a message that includes the data forwarding address of the serving node in the target network and requests the serving gateway to create data forwarding resources between the source and target networks according to the data forwarding address of the serving node; receiving a message including data forwarding tunnel information allocated by the serving gateway; and sending, to a first node on the source network, the data forwarding tunnel information for allowing packets cached to be forwarded to the serving gateway; wherein the first node on the source network is an eNodeB for forwarding packets during the handover process; wherein the received data forwarding tunnel information allocated by the serving gateway includes a serving gateway address and a serving gateway Tunnel Endpoint Identification (TEID); and wherein the eNodeB forwards cached downlink packets to the serving gateway according to the serving gateway address and the serving gateway TEID.

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| **对偶主权项** | 专利度:30特征度:13 |  |  |
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In a mobility management entity (MME), a method for mitigating data loss when a mobile device is handed over between two heterogeneous networks by creating data forwarding resources between a source network and a target network, the method comprising: receiving, during a handover process of a user equipment from a source network to a target network, a message from the target network that includes a data forwarding address of a serving node thereon; selecting a serving gateway within the source network; sending, to the serving gateway, a message that includes the data forwarding address of the serving node in the target network and requests the serving gateway to create data forwarding resources between the source and target networks according to the data forwarding address of the serving node; receiving a message including data forwarding tunnel information allocated by the serving gateway; and sending, to a first node on the source network, the data forwarding tunnel information for allowing packets cached to be forwarded to the serving gateway; wherein the first node on the source network is an eNodeB for forwarding packets during the handover process; wherein the received data forwarding tunnel information allocated by the serving gateway includes a serving gateway address and a serving gateway Tunnel Endpoint Identification (TEID); and wherein the eNodeB forwards cached downlink packets to the serving gateway according to the serving gateway address and the serving gateway TEID.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Inter-network tunnel switching method and inter-network interconnection device**

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| **公开号** | [US8331323](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8331323&sv=2f05848a7b7e715fc136515ffc1cdaae) | **公开日** | 2012/12/11 |
| **申请号** | 12/891,464 | **申请日** | 2010/09/27 |
| **授权日** | 2012/12/11 | **优先日** | 2008/03/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhong; Xin | Liu; Jixing |
| **国际 主分类** | H04B 7/14 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| An inter-network tunnel switching method includes the following steps: a first inter-network interconnection device on a first network sets up a second tunnel between the first inter-network interconnection device and a second inter-network interconnection device on a second network and triggers the switching from a first tunnel to the second tunnel. The first and second tunnels are configured to forward signaling between a mobile station (MS) on the first network and the second network or between an MS on the second network and the first network. A first inter-network interconnection device is also provided. |

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| **主权项** | 专利度:21特征度:22 |  |  |
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An inter-network tunnel switching method, comprising: setting up, by a first inter-network interconnection device on a first network, a second tunnel between the first inter-network interconnection device and a second inter-network interconnection device on a second network and triggering switching from a first tunnel to the second tunnel, wherein the first and second tunnels are configured to forward signaling between a mobile station (MS) on the first network and the second network or between an MS on the second network and the first network; wherein the setting up, by the first inter-network interconnection device, the second tunnel between the first inter-network interconnection device and the second inter-network interconnection device and triggering the switching from the first tunnel to the second tunnel comprises: obtaining, by the first inter-network interconnection device, an ID of the first tunnel from a third inter-network interconnection device on the first network; learning, by the first inter-network interconnection device, that an MS associated with the first tunnel has been handed over to a base station (BS) managed by the first inter-network interconnection device from a BS managed by the third inter-network interconnection device; and sending, by the first inter-network interconnection device, a tunnel switch request to the second inter-network interconnection device on the second network, wherein the tunnel switch request carries indication information of the ID of the first tunnel to instruct the second inter-network interconnection device to set up the second tunnel with the first inter-network interconnection device and switch the first tunnel between the second inter-network interconnection device and the third inter-network interconnection device to the second tunnel.

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| **对偶主权项** | 专利度:19特征度:15 |  |  |
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An inter-network tunnel switching method, comprising: setting up, by a first inter-network interconnection device on a first network, a second tunnel between the first inter-network interconnection device and a second inter-network interconnection device on a second network and triggering switching from a first tunnel to the second tunnel, wherein the first and second tunnels are configured to forward signaling between a mobile station (MS) on the first network and the second network or between an MS on the second network and the first network; wherein the setting up, by the first inter-network interconnection device, the second tunnel between the first inter-network interconnection device and the second inter-network interconnection device and triggering the switching from the first tunnel to the second tunnel comprises: obtaining, by the first inter-network interconnection device, an ID of the first tunnel from a third inter-network interconnection device on the first network; learning, by the first inter-network interconnection device, that an MS associated with the first tunnel has been handed over to a base station (BS) managed by the first inter-network interconnection device from a BS managed by the third inter-network interconnection device; and sending, by the first inter-network interconnection device, a tunnel switch request to the second inter-network interconnection device on the second network, wherein the tunnel switch request carries indication information of the ID of the first tunnel to instruct the second inter-network interconnection device to set up the second tunnel with the first inter-network interconnection device and switch the first tunnel between the second inter-network interconnection device and the third inter-network interconnection device to the second tunnel.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 4 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System, method, and apparatus for providing multimedia session continuity**

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| **公开号** | [US8331318](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8331318&sv=c73713f804528108052efd4e4ff9f5f0) | **公开日** | 2012/12/11 |
| **申请号** | 12/469,424 | **申请日** | 2009/05/20 |
| **授权日** | 2012/12/11 | **优先日** | 2006/11/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A system, method, and apparatus for providing multimedia session continuity such that support is provided for a handover of a multimedia session at a multi-mode terminal between bearers of different access modes. The system includes: a remote UE; an MCC UE, adapted to initiate a handover request of the multimedia session between a combination bearer and a multimedia bearer; an MCC, adapted to generate a multimedia handover indication and send it to a DTF according to the handover context information; and the DTF, adapted to carry out a media negotiation with the remote UE based on the multimedia handover indication, and thus the multimedia session between the MCC and the DTF is handed over between different access modes. |

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| **主权项** | 专利度:18特征度:32 |  |  |
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A multi-mode terminal, comprising: an initiating unit, adapted to initiate a handover request for a multimedia session, wherein a direction of the requested handover is from a combination bearer to a multimedia bearer or from the multimedia bearer to the combination bearer, and the combination bearer is a combination of at least two access network bearer modes jointly bearing the multimedia session; an information adding unit, adapted to add handover context information in the handover request initiated by the initiating unit; a release unit, adapted to release the multimedia session to be handed over before a media negotiation after the media negotiation succeeds; a remote session information storage unit, adapted to store information sent from a network side notifying whether each combinational session between a multimedia call continuity (MCC) and a multimedia call continuity capable user equipment (MCC UE) is corresponding to one multimedia session between the MCC and a remote UE in a call establishment process when the MCC UE acts as a callee; and a number indication unit, adapted to indicate a number of the handover request initiated by the initiating unit according to the information stored by the remote session information storage unit when the initiating unit intends to initiate the handover request for handing over the combination bearer to the multimedia bearer.

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| **对偶主权项** | 专利度:22特征度:17 |  |  |
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A~~system for providing multimedia session continuity, comprisinga remote user equipment (UE); wherein the system comprise a domain transfer function (DTF) entity of a signaling anchor between a first access leg and a remote leg, wherein the first access leg is established between the DTF and a multimedia call continuity capable UE (MCC UE) through a combination bearer, the remote leg is established between the DTF and the remote UE, and the MCC UE communicates with the remote UE via the DTF; and when a handover occurs,the MCC UE is adapted to initiate a second access leg establishment request carrying~~multi-mode terminal, comprising: an initiating unit, adapted to initiate a handover request for a multimedia session, wherein a direction of the requested handover is from a combination bearer to a multimedia bearer or from the multimedia bearer to the combination bearer, and the combination bearer is a combination of at least two access network bearer modes jointly bearing the multimedia session; an information adding unit, adapted to add handover context information in the handover request initiated by the initiating unit; a release unit, adapted to release the multimedia session to behandedover~~context information; andthe DTF is adapted to receive the second access leg establishment request~~before a media negotiation after the media negotiation succeeds; a remote session information storage unit, adapted to store information sent from a network side notifying whether each combinational session between a multimedia call continuity (MCC) and a multimedia call continuity capable user equipment (MCC UE) isc~~a~~orr~~ying the handover context information, establish a second access leg between the MCC UE and the DTF, perform a media negotiation with the remote UE according to the handover context~~esponding to one multimedia session between the MCC and a remote UE in a call establishment process when the MCC UE acts as a callee; and a number indication unit, adapted to indicate a number of the handover request initiated by the initiating unit according to theinformation~~and switch~~stored bythe remote~~leg to the second access leg, wherein the MCC UE continues communicating with the remote UE~~session information storage unit when the initiating unit intends to initiate the handover request for handing over the combination bearer to the multimedia bearer.

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| **被引用** | 16 | **自引用** | 0 | **公司数** | 3 | **国家数** | 2 | **影响力** | 0.37 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for setting up a bearer**

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| **公开号** | [US8331306](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8331306&sv=3b836c6e40d3d525c98a93986114b2fb) | **公开日** | 2012/12/11 |
| **申请号** | 13/313,456 | **申请日** | 2011/12/07 |
| **授权日** | 2012/12/11 | **优先日** | 2007/10/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhou; Jinyi | Liu; Lan | Guo; Xiaolong | Li; Ming | Chen; Zhe | Yu; Qi |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner, LLP |

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| **摘要** |  |
| Method and system for setting up a bearer are disclosed. The bearer setup method includes these steps: a packet data network gateway (PGW) obtains first quality of service (QoS) information and a first bearer identifier (ID), and sets up a bearer between the PGW and a radio access network (RAN) according to the first QoS information, where the bearer is associated with the first bearer ID; the RAN sets up a radio bearer (RB) with a user equipment (UE) according to second QoS information associated with the first QoS information, where the RB is associated with a second bearer ID associated with the first bearer ID. |

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| **主权项** | 专利度:3特征度:29 |  |  |
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A method for setting up a bearer,~~the method~~comprising:~~setting up, by a serving general packet radio service support node (SGSN), a bearer between the SGSN and a packet data network gateway (PGW) through a serving gateway (SGW) according to first quality of service (QoS) information, wherein the~~obtaining, by a packet data network gateway (PGW), first quality of service (QoS) information and a first bearer identifier (ID), and setting up abearer between the~~SGSN~~PGWand~~the PGW is associated with a first bearer ID~~a radio access network (RAN) according to the first QoS information; and setting up, by the~~SGS~~RAN, aradiobearer(RB)between the~~SGS~~RAN and a~~radio access network (RAN~~user equipment (UE) according to second QoS information,wh~~ich is mapped from the first QoS information according to a mapping relationship between~~erein the RB is associated with a second bearer ID; the second QoS information is associated withthe first Qo~~s~~Sinformation;and the second~~QoS information, wherein the~~bearer ID is associated with the first bearer ID; wherein the setting up abearer between the~~SGSN~~PGWand~~the RAN is associated with a second bearer ID which is mapped from the first bearer ID according to a mapping relationship between the first bearer ID and the second~~a radio access network (RAN) according to the first QoS information comprises: setting up, by the PGW, a first bearer between the PGW and a serving gateway (SGW) according to the first QoS information, wherein the first bearer is associated with the firstbearer ID;~~wherein the~~setting up, by the SG~~SN, the~~W, a secondbearer between~~the~~a serving general packet radio service support node (SGSN)and the~~RAN comprises: sending, by the SGSN, a request message for a radio access bearer (RAB) assignment to the RAN for the RAN to set up a radio bear with a user equipment (UE), receiving, by the SGSN, a response message for the RAB assignment from the RAN~~SGW according to the first QoS information, wherein the second bearer is associated with the first bearer ID; and setting up, by the SGSN, a third bearer between the SGSN and the RAN according to the second QoS information, wherein the third bearer is associated with the second bearer ID.

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| **对偶主权项** | 专利度:20特征度:13 |  |  |
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A method for setting up a bearer, comprising: obtaining, by a packet data network gateway (PGW), first quality of service (QoS) information and a first bearer identifier (ID), and setting up a bearer between the PGW and a radio access network (RAN) according to the first QoS information; and setting up, by the RAN, a radio bearer (RB) between the RAN and a user equipment (UE) according to second QoS information, wherein the RB is associated with a second bearer ID; the second QoS information is associated with the first QoS information; and the second bearer ID is associated with the first bearer ID; wherein the setting up a bearer between the PGW and a radio access network (RAN) according to the first QoS information comprises: setting up, by the PGW, a first bearer between the PGW and a serving gateway (SGW) according to the first QoS information, wherein the first bearer is associated with the first bearer ID; setting up, by the SGW, a second bearer between a serving general packet radio service support node (SGSN) and the SGW according to the first QoS information, wherein the second bearer is associated with the first bearer ID; and setting up, by the SGSN, a third bearer between the SGSN and the RAN according to the second QoS information, wherein the third bearer is associated with the second bearer ID.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for determining resource indices**

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| **公开号** | [US8331305](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8331305&sv=4c301ef7e12160d187e3ee8132138ae2) | **公开日** | 2012/12/11 |
| **申请号** | 13/267,159 | **申请日** | 2011/10/06 |
| **授权日** | 2012/12/11 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wennstrom; Mattias | Liu; Jianghua |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The present invention relates to a method, apparatus and system for determining resource indices in a wireless communication system, which explores and implements for at least two control channel elements (CCEs) for a user equipment (UE), maps the CCEs to at least two resource indices for the UE according to a predetermined mapping rule. It can determine multiple resource indices to a UE implicitly according to some embodiments of the present invention. |

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| **主权项** | 专利度:13特征度:16 |  |  |
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A method for determining a resource index in a wireless communication system, comprising: mapping, by a user equipment (UE) having multiple logical antennas, at least two control channel elements (CCEs) for the UE to at least two demodulation reference signal (DRS) indices the UE according to a predetermined mapping rule; allocating, by the UE, one of determined demodulation reference signal (DRS) index for each logical antenna; transmitting, by the UE, the allocated demodulation reference signal (DRS) index from each logical antenna; mapping, by the UE, the at least two CCEs for the UE to at least two ACK/NACK indices for the UE according to a predetermined mapping rule; and allocating, by the UE, at least one of determined ACK/NACK indices for each logical antenna; transmitting, by the UE, the at least one allocated ACK/NACK index from each logical antenna.

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| **对偶主权项** | 专利度:23特征度:3 |  |  |
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A method for determining a resource index in a wireless communication system, comprising:mapping, by a user equipment (UE) having multiple logical antennas, at least two control channel elements (CCEs) for the UE to at least two~~resource~~demodulation reference signal (DRS)indices~~for~~the UE according to a predetermined mapping rule;allocating, by the UE, oneofdetermined demodulation reference signal~~s~~(DRS) index foreach logical antenna; transmitting, by the UE, the allocated demodulation reference signal (DRS) index from each logical antenna; mapping, by the UE, the at least two CCEs for the UE to at least two ACK/NACK indices for the UE according to a predetermined mapping rule; and allocating, by the UE, at least one of determined ACK/NACK indices for each logical antenna; transmitting, by the UE, the at least one allocated ACK/NACK index fromeach logical antenna.

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| **被引用** | 15 | **自引用** | 0 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.7 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Resource release control method, communication system and device**

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| **公开号** | [US8325682](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8325682&sv=0ef5846b244b55688ad8d0f4726c7bad) | **公开日** | 2012/12/04 |
| **申请号** | 12/779,655 | **申请日** | 2010/05/13 |
| **授权日** | 2012/12/04 | **优先日** | 2008/01/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua | Zhang; Yanping |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A resource release control method, a communication system, and a device are configured to delete a bearer context on an original-side heterogeneous-system management network element (NE) even if a target-side management NE does not support interaction with a serving gateway (S-GW) and does not support an idle mode signaling reduction (ISR) mechanism. The resource release control method includes: acquiring version information of a target-side management NE, when a user equipment (UE) activating an ISR mechanism is handed over from an original-side network to a target-side network; and deleting a bearer of an original-side heterogeneous-system management NE, if the version information indicates that the target-side management NE does not interact with an S-GW and does not support the ISR mechanism. Meanwhile, a communication system and a relevant device are also provided. |

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| **主权项** | 专利度:16特征度:25 |  |  |
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A resource release control method comprising: acquiring, by a homogeneous-system management network element (NE) of a first network, version information of a management NE of a second network when a user equipment (UE) with an idle mode signaling reduction (ISR) mechanism being activated moves from the first network to the second network; and sending, by the homogeneous-system management NE of the first network, a delete bearer message to the heterogeneous-system management NE of the first network according to preset address information of the side heterogeneous-system management NE to indicate the heterogeneous-system management NE of the first network to delete bearer thereof according to the delete bearer message, if the acquired version information indicates that the management NE of the second network does not support interaction with a serving gateway (S-GW) and does not support the ISR mechanism.

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| **对偶主权项** | 专利度:19特征度:18 |  |  |
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A resource release control method~~, wherein~~comprising: acquiring, by a homogeneous-system management network element (NE) of a first network, version information of a management NE of a second networkwhen a user equipment (UE)~~activating~~withan idle mode signaling reduction (ISR) mechanism~~is hand~~being activatedmove~~r~~sfrom~~an original-side network to a target-side network, the method comprising: acquiring version information of a target-side management network element (NE); and deleting a bearer of an original-side heterogeneous-system management NE, if~~thefirst network to the second network; and sending, by the homogeneous-system management NE of the first network, a delete bearer message to the heterogeneous-system management NE of the first network according to preset address information of the side heterogeneous-system management NE to indicate the heterogeneous-system management NE of the first network to delete bearer thereof according to the delete bearer message, if the acquiredversion information indicates that the~~target-side~~management NEof the second networkdoes notsupportinteractionwith a serving gateway (S-GW) and does not support the ISR mechanism.

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| **被引用** | 11 | **自引用** | 4 | **公司数** | 2 | **国家数** | 2 | **影响力** | 2.72 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for service identifying and routing in multimedia broadcast/multicast service system**

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| **公开号** | [US8325641](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8325641&sv=709e6bf4876480f7f856c219069ab321) | **公开日** | 2012/12/04 |
| **申请号** | 11/631,437 | **申请日** | 2005/09/30 |
| **授权日** | 2012/12/04 | **优先日** | 2004/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Yanhong | Zhang; Hai | Hu; Hao |
| **国际 主分类** | H04H 20/71 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Embodiments of the present invention disclose a method and apparatus for service identifying and routing in a multimedia broadcast and multicast service (MBMS) system. The apparatus includes a radio access network equipment (RNC) and a core network equipment (CN) communicating with each other via an Iu connection; CN includes a module for service information transmission which is used to send the identity information corresponding to the service the UE joins to RNC, and RNC includes a module for service identifying and routing which is used to identify the service according to the identity information and determine the routing of the MBMS service in the non access stratum. RNC obtains the identity information corresponding to the service the UE joins through interaction of interface information with CN, identifies the service and determines the routing of the MBMS service in the non access stratum. |

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| **主权项** | 专利度:27特征度:24 |  |  |
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A method for service identifying and routing in a multimedia broadcast and multicast service (MBMS) system, the method comprising: a radio access network (RAN) device obtaining identity information corresponding to a service that a user equipment (UE) joins, through interaction of interface information with a core network (CN); the RAN device identifying the service according to the identity information, and determining a route of the MBMS service in the non access stratum when using a Point to Point (PTP) bearer mode; wherein if there is an Iu connection of a Packet Switching (PS) domain on the UE, the RAN device obtains the identity information corresponding to the service the UE joins through a UE Linking procedure; and if there is an Iu connection of a Circuit Switching (CS) domain on the UE, the RAN device obtains the identity information corresponding to the service the UE joins through a MBMS service information requesting procedure.

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| **对偶主权项** | 专利度:31特征度:13 |  |  |
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A method for service identifying and routing in a multimedia broadcast and multicast service (MBMS) system,~~comprising the steps of:~~the method comprising:a radio access network (RAN) device obtaining identity information corresponding to a service that a user equipment (UE) joins, through interaction of interface information with a core network (CN);the RAN device identifying the service according to the identity information, anddetermining a route of the MBMS service in the non access stratumwhen using a Point to Point (PTP) bearer mode; wherein if there is an Iu connection of a Packet Switching (PS) domain on the UE, the RAN device obtains the identity information corresponding to the service the UE joins through a UE Linking procedure; and if there is an Iu connection of a Circuit Switching (CS) domain on the UE, the RAN device obtains the identity information corresponding to the service the UE joins through a MBMS service information requesting procedure.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for mapping and detecting control channel**

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| **公开号** | [US8320325](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8320325&sv=07ff9b6f76ff6abc4ca02e0470d6fd5a) | **公开日** | 2012/11/27 |
| **申请号** | 13/325,641 | **申请日** | 2011/12/14 |
| **授权日** | 2012/11/27 | **优先日** | 2009/06/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xue; Lixia | Qu; Bingyu | Guan; Lei |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method and apparatus for mapping and detecting control channel are provided. The method for mapping a control channel includes: for the same aggregation level, according to a signaling length of a control channel corresponding to a component carrier, determining a corresponding search space for at least two control channels that have the same signaling length, so as to enable the at least two control channels that have the same signaling length to use the same search space, and mapping the at least two control channels that have the same signaling length to the determined corresponding search space. Therefore, conflicts between the control channels are reduced, and the number of times of blind detection of the control channels is also reduced. |

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| **主权项** | 专利度:20特征度:7 |  |  |
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A method for mapping a control channel, comprising:~~determining, by a network equipment,~~for the same aggregation level,according to a signaling length of a control channel corresponding to a component carrier, determining a corresponding search space forat least two control channelstha~~ving an identical signaling length and at least two control channels having different signaling lengths; determining, by the network equipment, a first search space corresponding to~~t have the same signaling length, so as to enable the at least two control channels that have the same signaling length to use the same search space, and mappingthe at least two control channels~~having the identical~~that have the samesignaling length~~;~~to thedetermin~~ing, by the network equipment, in at least one time transmission unit for the same aggregation level, a second search space corresponding to the at least two control channels having signaling lengths different from that of th~~ed corresponding search space; and for the same aggregation level, according to a signaling length of a control channel corresponding to a component carrier, determining corresponding search spaces for at least twocontrol channelstha~~ving the identical signaling length; and mapping, by the network equipment,~~t have different signaling lengths respectively, so as to enablethe at least two control channelstha~~ving the identical~~t have differentsignaling lengthstousethe~~firs~~different search space~~, and~~s in at least one time transmission unit, and respectively mappingthe at least two control channels~~having~~that havedifferent signaling lengths to the~~secon~~determined correspondingsearch spaces.

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| **对偶主权项** | 专利度:18特征度:5 |  |  |
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A method for mapping a control channel, comprising: for the same aggregation level, according to a signaling length of a control channel corresponding to a component carrier, determining a corresponding search space for at least two control channels that have the same signaling length, so as to enable the at least two control channels that have the same signaling length to use the same search space, and mapping the at least two control channels that have the same signaling length to the determined corresponding search space; and for the same aggregation level, according to a signaling length of a control channel corresponding to a component carrier, determining corresponding search spaces for at least two control channels that have different signaling lengths respectively, so as to enable the at least two control channels that have different signaling lengths to use the different search spaces in at least one time transmission unit, and respectively mapping the at least two control channels that have different signaling lengths to the determined corresponding search spaces.

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| **被引用** | 9 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.2 |

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| **同族数** | 17 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for allocating time and frequency resource for resource request indicator, method for transmitting resource request indicator and device thereof**

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| **公开号** | [US8320323](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8320323&sv=e0efc9af5adf5cdfaec36a9f32d58c5a) | **公开日** | 2012/11/27 |
| **申请号** | 12/606,610 | **申请日** | 2009/10/27 |
| **授权日** | 2012/11/27 | **优先日** | 2007/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Dang; Shujun | Ma; Sha | Wang; Xianghua | Deng; Tianle | Chen; Xiaobo | Wang; Chengyu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for allocating a time and frequency resource of a resource request indicator (RRI), a method for transmitting an RRI, and a device thereof are provided, which relate to a wireless communication technique and reduce the overhead of the time and frequency resource. The method for allocating a time and frequency resource of an RRI includes: allocating codes for an RRI and other uplink control signaling; and multiplexing the RRI and other uplink control signaling in the same time and frequency resource in a code division manner. |

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| **主权项** | 专利度:26特征度:19 |  |  |
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A method for allocating a time and frequency resource for a resource request indicator (RRI), comprising: allocating codes for the RRI and other uplink control signaling, to multiplex the RRI and the other uplink control signaling in the same time and frequency resource in a code division manner, wherein in a first time slot of one transmission time interval, extended manners in time domain and frequency domain corresponding to the codes allocated for the RRI are respectively the same as extended manners in time domain and frequency domain corresponding to codes allocated for a pilot part of the other uplink control signaling, the codes allocated for the RRI being orthogonal to the codes allocated for the pilot part of the other uplink control signaling in at least one of time domain and frequency domain; and in a second time slot of the transmission time interval, extended manners in time domain and frequency domain corresponding to the codes allocated for the RRI are respectively the same as extended manners in time domain and frequency domain corresponding to codes allocated for a data part of the other uplink control signaling, the codes allocated for the RRI being orthogonal to the codes allocated for the data part of the other uplink control signaling in at least one of time domain and frequency domain.

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| **对偶主权项** | 专利度:23特征度:17 |  |  |
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A method for allocating a time and frequency resource for a resource request indicator~~,~~(RRI), comprising: allocating codes for the RRI and other uplink control signaling~~; and multiplexing the RRI and the other uplink control signaling in the same time and frequency resource in a code division manner~~, to multiplex the RRI and the other uplink control signaling in the same time and frequency resource in a code division manner, wherein in a first time slot of one transmission time interval, extended manners in time domain and frequency domain corresponding to the codes allocated for the RRI are respectively the same as extended manners in time domain and frequency domain corresponding to codes allocated for a pilot part of the other uplink control signaling, the codes allocated for the RRI being orthogonal to the codes allocated for the pilot part of the other uplink control signaling in at least one of time domain and frequency domain; and in a second time slot of the transmission time interval, extended manners in time domain and frequency domain corresponding to the codes allocated for the RRI are respectively the same as extended manners in time domain and frequency domain corresponding to codes allocated for a data part of the other uplink control signaling, the codes allocated for the RRI being orthogonal to the codes allocated for the data part of the other uplink control signaling in at least one of time domain and frequency domain.

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| **被引用** | 18 | **自引用** | 7 | **公司数** | 2 | **国家数** | 2 | **影响力** | 5.53 |

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| **同族数** | 24 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of location positioning and verification of an AP, system, and home register**

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| **公开号** | [US8311561](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8311561&sv=d99e3fde40941c3a24b0eee9b3816bf1) | **公开日** | 2012/11/13 |
| **申请号** | 12/555,632 | **申请日** | 2009/09/08 |
| **授权日** | 2012/11/13 | **优先日** | 2008/09/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Xiaolin | Yao; Zhonghui | Zhang; Ning |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method of location positioning of a Radio Access Point (AP) is provided in an embodiment of the present invention. The method includes: querying the Connectivity Session Location and Repository Function (CLF) according to the IP address of the AP to obtain the Access Line Location Identifier (ALLI) of the AP to access a network. The ALLI is configured to identify the line location of the AP. The location of the AP is determined on the basis of the ALLI. A method of location verification of an AP is provided herein in an embodiment of the present invention. The method includes: the CLF is queried according to the IP address of the AP to obtain the ALLI of the AP; the location of the AP is not changed if the obtained ALLI of the AP is the same as the stored ALLI of the AP. A home register and a system are also provided herein to accurately locate and verify the location of the AP, thus checking the validity of the AP location. |

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| **主权项** | 专利度:18特征度:15 |  |  |
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A method of location verification of an Access Point (AP) comprising: receiving a message carrying an IP address of the AP which is located in a coverage of a macro cell, and location information of the macro cell; querying, according to the IP address of the AP, a Connectivity Session Location and Repository Function (CLF) to obtain an access Line Location Identifier (ALLI) of the AP; determining whether a stored ALLI of the AP and stored location information of the macro cell exist; if the stored ALLI of the AP and the stored location information of the macro cell exist, determining that a location of the AP is not changed if the obtained ALLI of the AP is same as the stored ALLI of the AP, and the location information of the macro cell carried in the received message is same as the stored location information of the macro cell; and if the stored ALLI of the AP exists and the stored location information of the macro cell does not exist, determining whether the obtained ALLI of the AP is same as the stored ALLI of the AP; and determining that a location of the AP is changed if the obtained ALLI of the AP is different from the stored ALLI of the AP.

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| **对偶主权项** | 专利度:37特征度:9 |  |  |
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A method of location~~posi~~verification~~ing~~of an Access Point~~,~~(AP~~,~~)comprising:receiving a message carrying an IP address of the AP which is located in a coverage of a macro cell, and location information of the macro cell;querying, according to~~an~~theIP address of the AP, a Connectivity Session Location and Repository Function~~,~~(CLF)to obtain an access Line Location Identifier~~, ALLI of the AP; and determining a location of the AP based on the ALLI~~(ALLI) of the AP; determining whether a stored ALLI of the AP and stored location information of the macro cell exist; if the stored ALLI of the AP and the stored location information of the macro cell exist, determining that a location of the AP is not changed if the obtained ALLI of the AP is same as the stored ALLI of the AP, and the location information of the macro cell carried in the received message is same as the stored location information of the macro cell; and if the stored ALLI of the AP exists and the stored location information of the macro cell does not exist, determining whether the obtained ALLI of the AP is same as the stored ALLI of the AP; and determining that a location of the AP is changed if the obtained ALLI of the AP is different from the stored ALLI of the AP.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.14 |

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| **同族数** | 7 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**De-registration method, home NodeB (HNB), and home NodeB gateway (HNB GW)**

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| **公开号** | [US8311544](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8311544&sv=3705ed2cd699883cd1d52344a86befc9) | **公开日** | 2012/11/13 |
| **申请号** | 13/071,912 | **申请日** | 2011/03/25 |
| **授权日** | 2012/11/13 | **优先日** | 2008/09/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Zheng |
| **国际 主分类** | H04Q 7/20 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| The present invention relates to the field of communication technology, and a de-registration method, a Home NodeB (HNB) and a Home NodeB Gateway (HNB GW) are disclosed. In an embodiment, the present invention provides a de-registration method, comprising: initiating, by an HNB GW, release of pre-registration resources corresponding to user equipment (UE) after the HNB GW receives indication information indicating that the UE moves to another cell from a source HNB. Applying the embodiment of the present invention can release pre-registration resources in time and reduce waste of resources. |

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| **主权项** | 专利度:8特征度:11 |  |  |
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A de-registration method, comprising: receiving, by a gateway of a Home NodeB (HNB GW), indication information indicating that a user equipment (UE) has moved from a cell of the Home NodeB (HNB) to another cell; and according to the indication information, detecting, by the HNB GW, whether pre-registration resources in the HNB GW corresponding to the UE exist, and if the pre-registration resources in the HNB GW corresponding to the UE exist, releasing the pre-registration resources in the HNB GW, and sending a de-register request to the HNB to notify the HNB to release pre-registration resources in the HNB corresponding to the UE.

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| **对偶主权项** | 专利度:20特征度:4 |  |  |
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A de-registration method, comprising: receiving, by agateway of aHome NodeB~~gateway~~(HNB GW), indication information indicating thatauser equipment (UE) has moved~~to another cell from a source Home NodeB (HNB); and based on the indication information, initiating, by the HNB GW, release o~~from a cell of the Home NodeB (HNB) to another cell; and according to the indication information, detecting, by the HNB GW, whether pre-registration resources in the HNB GW corresponding to the UE exist, and if the pre-registration resources in the HNB GW corresponding to the UE exist, releasing the pre-registration resources in the HNB GW, and sending a de-register request to the HNB to notify the HNB to releasepre-registration resourcesin the HNBcorresponding to the UE.

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| **被引用** | 9 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.28 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for transmitting IP message, negotiating bandwidth saving capability and saving network bandwidth**

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| **公开号** | [US8311060](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8311060&sv=1e91ba0e178c931d8f7107633d4547cd) | **公开日** | 2012/11/13 |
| **申请号** | 12/235,876 | **申请日** | 2008/09/23 |
| **授权日** | 2012/11/13 | **优先日** | 2006/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chen; Cheng | Feng; Jiangping | Li; Peng |
| **国际 主分类** | H04J 3/24 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present disclosure discloses a method for transmitting an IP message, negotiating a bandwidth saving capability and saving network bandwidth. The method for transmitting an IP message includes: sending more than one bandwidth saving capability supported by a sender to a receiver; receiving one bandwidth saving capability selected by the receiver; obtaining a type of an IP message for transmitting data according to the bandwidth saving capability selected by the receiver; and sending the IP message to the receiver after constructing the IP message, wherein the one bandwidth saving capability is selected from the more than one bandwidth saving capability and is supported by the receiver. By applying the methods provided by the present disclosure, the bandwidth and resources of an IP bearer network in a communication system are saved. |

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| **主权项** | 专利度:18特征度:26 |  |  |
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A method for transmitting an Internet Protocol message, comprising: sending more than one bandwidth saving capability supported by a sender to a receiver; receiving one bandwidth saving capability selected by the receiver; obtaining a type of the Internet Protocols (IP) message for transmitting data according to the bandwidth saving capability selected by the receiver; and sending the IP message to the receiver after constructing the IP message; wherein the one bandwidth saving capability is selected from the more than one bandwidth saving capability and is supported by the receiver, if the receiver supports multiple bandwidth saving capabilities in the more than one bandwidth saving capability sent by the sender, the receiver selects the bandwidth saving capability saving maximum bandwidth, wherein the IP message is a multiplied IP message comprising at least one IP sub-message with a multiplex header, wherein the multiplex header of the IP sub-message comprises a source identifier (ID) for indicating information of the sender and a first indication for indicating length of the IP sub-message, and the source ID is a value obtained by dividing a source User Datagram Protocol (UDP) port number of a session which the IP sub-message belongs to by 2.

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| **对偶主权项** | 专利度:30特征度:7 |  |  |
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A method for transmitting an Internet Protocol message, comprising:sending more than one bandwidth saving capability supported by a sender to a receiver;receiving one bandwidth saving capability selected by the receiver;obtaining a type of~~an~~theInternet Protocol~~,~~s (IP~~,~~)message for transmitting data according to the bandwidth saving capability selected by the receiver; andsending the IP message to the receiver after constructing the IP message;wherein the one bandwidth saving capability is selected from the more than one bandwidth saving capability and is supported by the receiver, if the receiver supports multiple bandwidth saving capabilities in the more than one bandwidth saving capability sent by the sender, the receiver selects the bandwidth saving capability saving maximum bandwidth, wherein the IP message is a multiplied IP message comprising at least one IP sub-message with a multiplex header, wherein the multiplex header of the IP sub-message comprises a source identifier (ID) for indicating information of the sender and a first indication for indicating length of the IP sub-message, and the source ID is a value obtained by dividing a source User Datagram Protocol (UDP) port number of a session which the IP sub-message belongs to by 2.

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| **被引用** | 10 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.50 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for transmitting user equipment information in a multimedia subsystem**

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| **公开号** | [US8311037](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8311037&sv=0a11f81d9367b05b9be6167caeabf133) | **公开日** | 2012/11/13 |
| **申请号** | 12/475,856 | **申请日** | 2009/06/01 |
| **授权日** | 2012/11/13 | **优先日** | 2007/01/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Lili | Zhang; Henliang | Xu; Peili | Zhao; Peng | Wang; Peng |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner, LLP |

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| **摘要** |  |
| The present disclosure discloses a method, apparatus and system for transmitting UE information in a multimedia subsystem. The method includes: a call session control function entity obtains capability information of UE, and transmits the capability information of the UE to an AS; the AS obtaining the capability information of the UE sent from the call session control function entity. The solution of the present disclosure ensures that the AS in the IMS can obtain the capability information of the UE. Therefore, services based on the capability information of the UE can be implemented on the AS successfully. |

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| **主权项** | 专利度:4特征度:21 |  |  |
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A method for transmitting User Equipment (UE) information in a multimedia subsystem, comprising: acquiring capability information of a UE, wherein the capability information of the UE includes at least one of video capability, audio capability, text capability, software supported by the UE, and software edition supported by the UE; and transmitting the acquired capability information of the UE to an Application Server (AS), wherein one or more services rendered to the UE are based on the capability information; wherein the transmitting the capability information of the UE to the AS comprises: adding the capability information of the UE in a third party REGISTER request; and transmitting the third party REGISTER request to the AS; wherein the adding the capability information of the UE in the third party REGISTER request comprises: adding the capability information of the UE to a Contact header field of the third party REGISTER request or an Accept-Contact header field of the third party REGISTER request, or adding a whole content of a field containing the capability information of the UE to the third party REGISTER request; and wherein the third party REGISTER request further comprises address, and wherein the address information is included in a newly-added Path header field when the capability information of the UE is added to the Contact header field of the third party REGISTER request.

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| **对偶主权项** | 专利度:20特征度:18 |  |  |
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A method for transmitting User Equipment (UE) information in a multimedia subsystem, comprising:~~obtaining, by a call session control function entity, capability information of~~acquiring capability information of a UE, wherein the capability information of the UE includes at least one of video capability, audio capability, text capability, software supported by the UE, and software edition supported by theUE;andtransmitting~~, by the call session control function entity, the capability information of the UE to an Application Server (~~the acquired capability information of the UE to an Application Server (AS), wherein one or more services rendered to the UE are based on the capability information; wherein the transmitting the capability information of the UE to the AS comprises: adding the capability information of the UE in a third party REGISTER request; and transmitting the third party REGISTER request to theAS~~)~~;~~and obtaining, by the AS, the capability information of the UE sent from the call session control function entity~~wherein the adding the capability information of the UE in the third party REGISTER request comprises: adding the capability information of the UE to a Contact header field of the third party REGISTER request or an Accept-Contact header field of the third party REGISTER request, or adding a whole content of a field containing the capability information of the UE to the third party REGISTER request; and wherein the third party REGISTER request further comprises address, and wherein the address information is included in a newly-added Path header field when the capability information of the UE is added to the Contact header field of the third party REGISTER request.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and network system for making terminating network domain selection**

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| **公开号** | [US8311034](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8311034&sv=1a96572caa414ca44b96dab45cfe6396) | **公开日** | 2012/11/13 |
| **申请号** | 12/167,522 | **申请日** | 2008/07/03 |
| **授权日** | 2012/11/13 | **优先日** | 2006/01/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Duan; Xiaoqin |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method for making a terminating network domain selection, applied in a network system including a CS network and an IMS. The method includes: receiving an IMS service request destined to a served user; judging whether the service request is appropriate to be delivered to the CS network according to a service category of the IMS service request, making a terminating network domain selection according to terminating network domain selection related factors and performing subsequent delivering processes according to the determination of the terminating network domain selection if determining that the IMS service request is appropriate to be delivered to the CS network. The present disclosure also discloses a communication apparatus and a network system. |

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| **主权项** | 专利度:20特征度:16 |  |  |
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A method for making a terminating network domain selection, comprising: receiving an Internet Protocol Multimedia Subsystem (IMS) service request destined to a served user; judging whether the IMS service request is appropriate to be delivered to a Circuit Switched (CS) network according to a service category of the IMS service request; wherein the service category of the IMS service request is determined according to a method name of the IMS service request and a Session Description Protocol (SDP) description carried in the IMS service request; and the judging whether the IMS service request is appropriate to be delivered to the CS network according to the service category is implemented according to the method name of the IMS service request and the SDP description carried in the IMS service request; if the IMS service request is appropriate to be delivered to the CS network, making a terminating network domain selection and performing subsequent delivering processes according to determination of the terminating network domain selection.

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| **对偶主权项** | 专利度:21特征度:10 |  |  |
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A method for making a terminating network domain selection, comprising:receiving an Internet Protocol Multimedia Subsystem (IMS) service request destined to a served user;judging whether the IMS service request is appropriate to be delivered to a Circuit Switched (CS) network according to a service category of the IMS service request;wherein the service category of the IMS service request is determined according to a method name of the IMS service request and a Session Description Protocol (SDP) description carried in the IMS service request; and the judging whether the IMS service request is appropriate to be delivered to the CS network according to the service category is implemented according to the method name of the IMS service request and the SDP description carried in the IMS service request;if the IMS service request is appropriate to be delivered to the CS network, making a terminating network domain selection and performing subsequent delivering processes according to determination of the terminating network domain selection.

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| **被引用** | 2 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.0 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for obtaining media description information of IPTV services**

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| **公开号** | [US8307049](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8307049&sv=a0ece5cb224a291b5e289cf0e94bfae6) | **公开日** | 2012/11/06 |
| **申请号** | 12/693,071 | **申请日** | 2010/01/25 |
| **授权日** | 2012/11/06 | **优先日** | 2007/10/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Peng; Zhaojun | Yan; Jun | Li; Jincheng | Wang; Feng |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method and device for obtaining media description information of Internet Protocol Television (IPTV) services are provided. The method includes: receiving, by a network device, a Session Initiation Protocol (SIP) request for obtaining media description information, where the SIP request is sent by a User Equipment (UE) through a core IP Multimedia Subsystem (IMS) and carries a content identifier; sending, by the network device, a SIP response that carries the media description information corresponding to the content identifier to the UE through the core IMS. According to the present disclosure, a SIP message is used to obtain media description information, so that a session of the Content on Demand (CoD) service is set up. |

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| **主权项** | 专利度:16特征度:36 |  |  |
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In a network device, a method for obtaining media description information of Internet Protocol Television (IPTV) services that is used to create a media session that uses multiple media delivery channels for delivering multiple media streams of media content and one or more media control channels for controlling playback operations for consuming the media content, the method comprising: receiving, a Session Initiation Protocol (SIP) request for obtaining media description information of a plurality of different media channels corresponding to a plurality of media delivery streams for a single media content, wherein the SIP request is sent by a User Equipment (UE) through a core IP Multimedia Subsystem (IMS) and carries a content identifier; sending, a SIP response that carries the media description information corresponding to the content identifier to the UE through the core IMS, wherein the media description information includes one or more attributes to describe the relation between one or more media control channels and the plurality of media delivery channels corresponding to the plurality of media delivery streams; and wherein the media description information indicates a control state of each of the plurality of media streams, and wherein the control state is one of synchronous control, separate control, or a hybrid of synchronous control and separate control for the plurality of media streams.

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| **对偶主权项** | 专利度:13特征度:7 |  |  |
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~~A~~In a network device, amethod for obtaining media description information of Internet Protocol Television (IPTV) services~~, comprising: receiving, by a network device, a Session Initiation Protocol (SIP) request for obtaining media description information~~that is used to create a media session that uses multiple media delivery channels for delivering multiple media streams of media content and one or more media control channels for controlling playback operations for consuming the media content, the method comprising: receiving, a Session Initiation Protocol (SIP) request for obtaining media description information of a plurality of different media channels corresponding to a plurality of media delivery streams for a single media content, wherein the SIP request is sent by a User Equipment (UE) through a core IP Multimedia Subsystem (IMS) and carries a content identifier;~~and~~sending,~~by the network device,~~a SIP response that carries the media description information corresponding to the content identifier to the UE through the core IMS, wherein the media description information includes one or more attributes to describe the relation between one or more media control channels and the plurality of media delivery channels corresponding to the plurality of media delivery streams; and wherein the media description information indicates a control state of each of the plurality of media streams, and wherein the control state is one of synchronous control, separate control, or a hybrid of synchronous control and separate control for the plurality of media streams.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.7 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and apparatus for mobile CS users to access IMS network and registration method for accessing**

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| **公开号** | [US8306531](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8306531&sv=59712235c1ab22652ad0206948a3c117) | **公开日** | 2012/11/06 |
| **申请号** | 12/254,145 | **申请日** | 2008/10/20 |
| **授权日** | 2012/11/06 | **优先日** | 2006/04/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Li; Yan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present invention provides a system and apparatus for a mobile CS user to access an IMS network and a registration method for accessing. The network under the present invention comprises an IMS network for providing IMS services and a CS access network. The network contains a Register Proxy Function (RPF) entity, which comprises a first interface for communicating with the IMS network and a second interface for communicating with the CS access network. The RPF entity is adapted to map a CS registration event which is originated by the mobile CS user through the second interface to an IMS registration event, and initiate registration to the IMS network through the first interface on behalf of the mobile CS user. The technical solution under the present invention enables a mobile CS user to be registered to an IMS network practicably so that the CS user can enjoy rich IMS services. |

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| **主权项** | 专利度:22特征度:26 |  |  |
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A system for a mobile Circuit Switched (CS) user to access an IP Multimedia Subsystem (IMS) network, comprising the IMS network for providing IMS services, and a CS access network, and further comprising: a Register Proxy Function (RPF) entity, comprising a first interface for communicating with the IMS network and a second interface for communicating with the CS access network, and configured to map a CS registration event which is originated by the mobile CS user through the second interface to an IMS registration event, and initiate registration to the IMS network through the first interface on behalf of the mobile CS user; wherein the configuration of the RFP entity to initiate registration to the IMS network through the first interface on behalf of the mobile CS user comprises at least one of: configured to send the mapped IMS registration event to an IMS network entity wherein the IMS network entity is configured to perform IMS registration for the mobile CS user directly without authenticating the mobile CS user, and complete the registration process, if the IMS network entity determines that the registration is initiated by the mobile CS user; and configured to send the mapped IMS registration event to an IMS network entity wherein the IMS network entity is configured to perform IMS registration for the mobile CS user according to information carried in the mapped IMS registration event and complete the registration process, if the IMS network entity determines that the registration is initiated by the mobile CS user.

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| **对偶主权项** | 专利度:20特征度:19 |  |  |
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A system for a mobile Circuit Switched (CS) user to access an IP Multimedia Subsystem (IMS) network, comprising~~an~~theIMS network for providing IMS services, and a CS access network, and further comprising:a Register Proxy Function (RPF) entity,~~further~~comprising a first interface for communicating with the IMS network and a second interface for communicating with the CS access network, and~~adapt~~configured to map a CS registration event which is originated by the mobile CS user through the second interface to an IMS registration event, and initiate registration to the IMS network through the first interface on behalf of the mobile CSuser; wherein the configuration of the RFP entity to initiate registration to the IMS network through the first interface on behalf of the mobile CS user comprises at least one of: configured to send the mapped IMS registration event to an IMS network entity wherein the IMS network entity is configured to perform IMS registration for the mobile CS user directly without authenticating the mobile CS user, and complete the registration process, if the IMS network entity determines that the registration is initiated by the mobile CS user; and configured to send the mapped IMS registration event to an IMS network entity wherein the IMS network entity is configured to perform IMS registration for the mobile CS user according to information carried in the mapped IMS registration event and complete the registration process, if the IMS network entity determines that the registration is initiated by the mobile CSuser.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.44 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for updating key in an active state**

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| **公开号** | [US8300827](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8300827&sv=ca698a694b539c56f1e79315775bcb6d) | **公开日** | 2012/10/30 |
| **申请号** | 12/748,798 | **申请日** | 2010/03/29 |
| **授权日** | 2012/10/30 | **优先日** | 2007/09/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Yanmei | Huang; Min |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for updating a key in an active state is disclosed according to the embodiments of the present invention. The method includes steps of: initiating a key update by a user equipment in the active state or a network side when a pre-defined condition is met; updating the key by the network side and the user equipment, and negotiating an activation time of the new keys. An apparatus for updating a key in an active state is also disclosed according to the present invention. With the present invention, the user equipment in an active state and the network side may actively initiate the key update procedure in different cases, thereby solving the problem concerning the key update for a session in an active state. |

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| **主权项** | 专利度:11特征度:35 |  |  |
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A method for updating a key in an active state, comprising: initiating a key update procedure by a network side when a pre-defined condition is met; and updating, by an evolved NodeB (eNB) at the network side, air-interface keys based on a new key KeNB, and negotiating, by the eNB at the network side with a user equipment, an activation time of the air-interface keys; wherein the new key KeNB is generated during the key update procedure and informed by a Mobility Management Entity (MME) at the network side; wherein the negotiating, by the eNB at the network side with the user equipment, the activation time of the air-interface keys comprises one or more of: sending, by the eNB at the network side, a message carrying the activation time of the air-interface keys to the user equipment; sending by the eNB at the network side an intra-cell handover command to the user equipment, to instruct the user equipment to use the updated key after an intra-cell handover to a current eNB cell; carrying a key identification along with data packets of the network side, to indicate the key for decryption by the user equipment; carrying the activation time of the air-interface keys in a key update response message sent from the eNB at the network side to the user equipment; negotiating, by the eNB at the network side with the user equipment, the activation time of the air-interface keys, via a Security Mode Command (SMC) procedure; negotiating, by the eNB at the network side with the user equipment, the activation time of the air-interface keys, via a safe mode modification procedure; and negotiating, by the eNB at the network side with the user equipment, the activation time of the air-interface keys via an intra-cell handover procedure.

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| **对偶主权项** | 专利度:11特征度:12 |  |  |
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A method for updating a key in an active state, comprising: initiating a key update procedure by a network side when a pre-defined condition is met;~~informing, by a Mobility Management Entity (MME) at the network side, an evolved NodeB (~~and updating, by an evolved NodeB (eNB) at the network side, air-interface keys based on a new key KeNB, and negotiating, by the eNB at the network side with a user equipment, an activation time of the air-interface keys; wherein the new key KeNB is generated during the key update procedure and informed by a Mobility Management Entity (MME) at the network side; wherein the negotiating, by the eNB at the network side with the user equipment, the activation time of the air-interface keys comprises one or more of: sending, by theeNB~~)~~at the network side~~of a new key KeNB generated during the key update procedure; and updating, by the evolved NodeB (~~, a message carrying the activation time of the air-interface keys to the user equipment; sending by the eNB at the network side an intra-cell handover command to the user equipment, to instruct the user equipment to use the updated key after an intra-cell handover to a current eNB cell; carrying a key identification along with data packets of the network side, to indicate the key for decryption by the user equipment; carrying the activation time of the air-interface keys in a key update response message sent from the eNB at the network side to the user equipment; negotiating, by theeNB~~)~~at the network side~~, air-interface keys based on the new key K~~with the user equipment, the activation time of the air-interface keys, via a Security Mode Command (SMC) procedure; negotiating, by theeNB~~,~~a~~nd nego~~t the network side with the user equipment, the activati~~ng, by the evolved NodeB (~~on time of the air-interface keys, via a safe mode modification procedure; and negotiating, by theeNB~~)~~at the network side with~~a~~theuser equipment,~~an~~theactivation time of the air-interface keysvia an intra-cell handover procedure.

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| **被引用** | 19 | **自引用** | 7 | **公司数** | 1 | **国家数** | 2 | **影响力** | 3.61 |

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| **同族数** | 13 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Medium resource reservation method, service package information obtaining method and apparatus**

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| **公开号** | [US8296444](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8296444&sv=e2ca6b0fe72afc7c1f855d7ee5f44bcd) | **公开日** | 2012/10/23 |
| **申请号** | 12/767,361 | **申请日** | 2010/04/26 |
| **授权日** | 2012/10/23 | **优先日** | 2007/11/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | rpx | **发明人** | Peng; Zhaojun | Wang; Feng |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A medium resource reservation method, a service package information obtaining method, and a service package information obtaining apparatus are provided, which are capable of decreasing resource waste of medium resource reservation. The resource reservation method includes the following steps. A service message carrying Session Description Protocol (SDP) information is received, and the SDP information contains service package information. The service package information is parsed from the SDP information. The service package information is employed for resource reservation. The method can identify the service package, so that the service package processing efficiency is improved, and the resource waste of medium resource reservation is effectively decreased. |

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| **主权项** | 专利度:4特征度:16 |  |  |
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A medium resource reservation method, comprising: receiving a service message carrying Session Description Protocol (SDP) information, wherein the SDP information contains service package information; and obtaining the service package information from the SDP information, wherein the service package information is for resource reservation; wherein the service package information is contained in the SDP information by: setting a service package attribute in an attribute component of an attribute line of the SDP information, and setting a service package identifier or a channel identifier in an attribute value component of the attribute line of the SDP information.

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| **对偶主权项** | 专利度:9特征度:30 |  |  |
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A medium resource reservation method, comprising: receiving a service message carrying Session Description Protocol (SDP) information, wherein the SDP information contains service package information; and obtaining the service package information from the SDP information, wherein the service package information is for resource reservation; wherein the service package information is contained in the SDP information by: setting a service package attribute in an attribute component of an attribute line of the SDP information, and setting a service package identifier or a channel identifier in an attribute value component of the attribute line of the SDP information.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Data re-transferring method based on bit transformation**

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| **公开号** | [US8295398](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8295398&sv=4e2361e83e4b6183781bab6315b30852) | **公开日** | 2012/10/23 |
| **申请号** | 10/491,303 | **申请日** | 2002/03/29 |
| **授权日** | 2012/10/23 | **优先日** | 2001/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Fan; Tao | Hu; Hao |
| **国际 主分类** | H04L 27/36 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The present invention discloses a data re-transferring method based on bit transformation in a communication system which adopts a high order modulation and supports a re-transferring mechanism. The method includes the processes of: exchanging the location of each bit modulated to a symbol in a constellation figure used in Quadrature Amplitude Modulation (QAM) according to a selected transformation mode; mapping re-transferred data to each bit modulated to a symbol in a constellation figure of which the location has been exchanged; performing the QAM of the re-transferred data. With the method, storage amount can be decreased, balance of reliability of bits within the same data symbol after multiple re-transferring processes can be ensured, in addition, performance of the decoder and reliability of data transmission can be improved. |

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| **主权项** | 专利度:19特征度:13 |  |  |
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A data re-transferring method based on bit transformation in a communication system, wherein the communication system adopts a high order modulation and supports a re-transferring mechanism, the method comprising: exchanging the location of each bit modulated to a symbol in a constellation figure used in Quadrature Amplitude Modulation (QAM) according to a selected transformation mode; mapping re-transferred data to each bit modulated to a symbol in a constellation figure of which the location has been exchanged; and performing the QAM of the re-transferred data.

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| **对偶主权项** | 专利度:11特征度:12 |  |  |
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A data re-transferring method based on bit transformation~~, at least comprising the step of:~~in a communication system, wherein the communication system adopts a high order modulation and supports a re-transferring mechanism, the method comprising:exchanging the location of each bit modulated to a symbol in a constellation figure used in Quadrature Amplitude Modulation (QAM) according toaselected transformation mode~~s before implementing QAM during each data~~; mapping re-transferred data to each bit modulated to a symbol in a constellation figure of which the location has been exchanged; and performing the QAM of there-transferr~~ing process~~ed data.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.32 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of session processing in an IMS and interrogating-call state control function**

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| **公开号** | [US8295158](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8295158&sv=fda969d8c03190a2d7124b8dfffe4554) | **公开日** | 2012/10/23 |
| **申请号** | 12/040,571 | **申请日** | 2008/02/29 |
| **授权日** | 2012/10/23 | **优先日** | 2005/08/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Changlin | Zhu; Fenqin | Zhao; Jianguo | Wang; Jing | He; Xiaoyan |
| **国际 主分类** | H04L 12/26 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of session processing in the Internet Protocol (IP) Multimedia Subsystem (IMS) comprises: Interrogating-Call State Control Function (I-CSCF) accessing the Home Subscriber Server (HSS) to query the registration location of the called user, the I-CSCF sending the Session Initiation Protocol (SIP) request to the Serving-Call State Control Function (S-CSCF) based on the response of the HSS; when the response time of the S-CSCF to the SIP request sent from the I-CSCF has expired, the I-CSCF re-selecting the S-CSCF, and sending the SIP request to the S-CSCF. And an Interrogating-Call State Control Function is provided. According to the present invention, if the S-CSCF returned by the HSS to process the unregistered service of the IMS user does not responded because of the device failure or communication interruption or the like, the I-CSCF can re-select other S-CSCF to process the unregistered service of the IMS user, so as to improve the quality of service and to increase the satisfaction of user. |

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| **主权项** | 专利度:19特征度:26 |  |  |
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A session processing method in an Internet Protocol multimedia subsystem, wherein the method comprises: receiving an initial request for a called user by an Interrogating-Call Session Control Function (I-CSCF); inquiring, by the I-CSCF, a Home Subscriber Server (HSS) about a registration location of the called user; receiving, by the I-CSCF, a response from the HSS; sending, by the I-CSCF, a Session Initiation Protocol (SIP) request to a Serving-Call Session Control Function (S-CSCF) according to the response from the HSS; determining, by the I-CSCF, whether a response from the S-CSCF has been received within a prescribed period of time; and reselecting an S-CSCF if receiving no response from the S-CSCF within the prescribed period of time, and sending a SIP request to the reselected S-CSCF, by the I-CSCF, wherein the process of reselecting an S-CSCF comprises: obtaining a set of S-CSCF capabilities required by the called user from the HSS by sending to the HSS a location information request, wherein the location information request comprises at least one of a command Cx-Location-Query, which is extended by newly adding an information element in the command Cx-Location-Query, and a command Cx-Select-Pull, where an IMS Private Identity (IMPI) attribute type of the command Cx-Select-Pull is modified as being conditional, reselecting an S-CSCF in accordance with the set of S-CSCF capabilities.

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| **对偶主权项** | 专利度:17特征度:10 |  |  |
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A session processing method in an Internet Protocol multimedia subsystem, wherein the method comprises:receiving an initial request for a called user by an Interrogating-Call Session Control Function (I-CSCF)~~module~~;inquiring, by the I-CSCF, a Home Subscriber Server (HSS) about~~the~~aregistration location of the called user;receiving, by the I-CSCF, a response from the HSS;sending, by the I-CSCF, a Session Initiation Protocol (SIP) request to a Serving-Call Session Control Function (S-CSCF)~~module according to a response from the HSS~~according to the response from the HSS; determining, by the I-CSCF, whether a response from the S-CSCF has been received within a prescribed period of time; andreselecting an S-CSCF if receiving no response from the S-CSCF within~~a~~theprescribed period of time, and sending a SIP request to the reselected S-CSCF, by the I-CSCF, wherein the process of reselecting an S-CSCF comprises: obtaining a set of S-CSCF capabilities required by the called user from the HSS by sending to the HSS a location information request, wherein the location information request comprises at least one of a command Cx-Location-Query, which is extended by newly adding an information element in the command Cx-Location-Query, and a command Cx-Select-Pull, where an IMS Private Identity (IMPI) attribute type of the command Cx-Select-Pull is modified as being conditional, reselecting an S-CSCF in accordance with the set of S-CSCF capabilities.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for creating IP-CAN session**

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| **公开号** | [US8285861](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8285861&sv=e8b5953241350d7e5651798ba497e97d) | **公开日** | 2012/10/09 |
| **申请号** | 12/704,679 | **申请日** | 2010/02/12 |
| **授权日** | 2012/10/09 | **优先日** | 2007/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Huadong | Zhi; Chunxia | Deng; Tingting | Guo; Yali |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method and an apparatus for creating an Internet Protocol Connectivity Access Network, IP-CAN, session are disclosed herein. The method includes: creating, by a First Policy and Charging Enforcement Function entity, PCEFa entity, a session with a Policy and Charging Rules Function entity, PCRF entity; performing, by the PCEFa entity, mobility registration with a second Policy and Charging Enforcement Function entity, PCEFb entity; creating, by the PCEFb entity, a session with the PCRF entity; and sending, by the PCRF entity, a session information to the PCEFa entity and the PCEFb entity. mobility The apparatus includes: a PCEFa entity, a PCEFb entity, and a PCRF entity. The method and the apparatus for creating an IP-CAN session under the present invention accomplish the purpose of creating an IP-CAN session in the new PCC architecture. |

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| **主权项** | 专利度:17特征度:33 |  |  |
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A method for creating an Internet Protocol Connectivity Access Network (IP-CAN) session, comprising: creating, by a first Policy and Charging Enforcement Function (PCEF) entity, a first session with a Policy and Charging Rules Function (PCRF) entity; performing, by the first PCEF entity, a mobility registration with a second PCEF entity; creating, by the second PCEF entity, a second session with the PCRF entity; and after creating the second session with the PCRF, sending, by the PCRF entity, session information of the second session to the second PCEF entity; wherein performing, by the first PCEF entity, a mobility registration with the second PCEF entity and creating, by the second PCEF entity, the second session with the PCRF entity comprises: sending, by the first PCEF entity, a mobility registration request or a bearer creation request that carries an Access Point Name (APN) and a user ID to the second PCEF entity; allocating, by the second PCEF entity, an IP address to the user; sending, by the second PCEF entity, a mobility registration response or a bearer creation response that carries the allocated IP address to the first PCEF entity; sending, by the second PCEF entity, a Policy and Charging Control (PCC) decision request that carries the APN, the user ID, and the allocated IP address to the PCRF entity; and formulating, by the PCRF entity, a PCC rule according to the APN, the user ID, the allocated IP address, IP-CAN bearer information, and a stored user subscription profile.

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| **对偶主权项** | 专利度:16特征度:4 |  |  |
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A method for creating an Internet Protocol Connectivity Access Network~~,~~(IP-CAN~~,~~)session,~~characterized by~~comprising: creating, by a first Policy and Charging Enforcement Function~~entity,~~(PCEF~~a~~)entity, afirstsession with a Policy and Charging Rules Function~~entity,~~(PCRF)entity; performing, by thefirstPCEF~~a~~entity,amobility registration with a second P~~olicy and Charging Enforcement Function entity,~~CEF entity; creating, by the second PCEF entity, a second session with the PCRF entity; and after creating the second session with the PCRF, sending, by the PCRF entity, session information of the second session to the second PCEF entity; wherein performing, by the first PCEF entity, a mobility registration with the secondPCEF~~b~~entity~~;~~andcreating, by thesecondPCEF~~b~~entity,~~a~~the secondsession with the PCRF entity~~; and send~~comprises: sending, by the first PCEF entity, a mobility registration request or a bearer creation request that carries an Access Point Name (APN) and a user ID to the second PCEF entity; allocating, by thesecondPC~~R~~EF entity, a~~session informatio~~nIP address to the user; sending, by the second PCEF entity, a mobility registration response or a bearer creation response that carries the allocated IP addressto thefirstPCEF~~a~~entity~~and the PCEFb entity~~; sending, by the second PCEF entity, a Policy and Charging Control (PCC) decision request that carries the APN, the user ID, and the allocated IP address to the PCRF entity; and formulating, by the PCRF entity, a PCC rule according to the APN, the user ID, the allocated IP address, IP-CAN bearer information, and a stored user subscription profile.

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| **被引用** | 11 | **自引用** | 2 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.60 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Encoding and detecting cell-specific information in a telecommunication system**

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| **公开号** | [US8284757](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8284757&sv=e2e8cf12f1116ccdd8e6ac4a43c5f36a) | **公开日** | 2012/10/09 |
| **申请号** | 13/331,504 | **申请日** | 2011/12/20 |
| **授权日** | 2012/10/09 | **优先日** | 2006/09/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Berggren; Fredrik |
| **国际 主分类** | H04W 56/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| Method and apparatus are provided for encoding cell-specific information in a telecommunication system. Cell-specific information is encoded by a synchronization code. A synchronization signal including the synchronization code is sent, wherein the synchronization code includes a first repetitive cyclically permutable codeword generated from a first codeword<br/><br/><br/><br/><br/> <br/> (<br/> <br/> <br/> c<br/> 1<br/> <br/> ,<br/> <br/> c<br/> 2<br/> <br/> ,<br/> <br/> …<br/> ⁢<br/> <br/> <br/> <br/> ⁢<br/> <br/> c<br/> <br/> i<br/> ⁢<br/> <br/> <br/> <br/> <br/> <br/> ⁢<br/> …<br/> <br/> ⁢<br/> <br/> <br/> <br/> ,<br/> <br/> c<br/> <br/> ⌈<br/> <br/> M<br/> 2<br/> <br/> ⌉<br/> <br/> <br/> <br/> )<br/> <br/> ,<br/> <br/> where<br/> ⁢<br/> <br/> <br/> <br/> ⁢<br/> <br/> ⌈<br/> <br/> M<br/> 2<br/> <br/> ⌉<br/> <br/> <br/><br/><br/><br/><br/>is the smallest integer not less than M/2, 0≦ci≦N, 1≦i≦M for all i, M, N are positive integers, and the repetitive structure of the first repetitive cyclically permutable codeword is given by repeating the value of at least one codeword element of the first repetitive cyclically permutable codeword in at least one other codeword element position within the first repetitive cyclically permutable codeword.<br/> |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A method of encoding cell-specific information in a telecommunication system, comprising: encoding cell-specific information by a synchronization code; and sending a synchronization signal comprising the synchronization code, wherein the synchronization code comprises a first repetitive cyclically permutable codeword generated from a first codeword ( c 1 , c 2 , …~~⁢~~&

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| **对偶主权项** | 专利度:20特征度:10 |  |  |
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A method of encoding cell-specific information in a telecommunication system, comprising: encoding cell-specific information by a synchronization code; and sending a synchronization signal comprising the synchronization code, wherein the synchronization code comprises a first repetitive cyclically permutable codeword generated from a first codeword ( c 1 , c 2 , … &#xe89e; &#xe89e; c i &#xe89e; &#xe89e; … &#xe89e; , c M 2 ) , where M 2 is the smallest integer not less than M/2, 0≦ci≦N, 1≦i≦M for all i, M, N are positive integers, and the repetitive structure of the first repetitive cyclically permutable codeword is given by repeating the value of at least one codeword element of the first repetitive cyclically permutable codeword in at least one other codeword element position within the first repetitive cyclically permutable codeword.

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| **被引用** | 3 | **自引用** | 3 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.7 |

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| **同族数** | 11 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for obtaining location area information during handover between heterogeneous networks**

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| **公开号** | [US8284735](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8284735&sv=9332354d92943aae042f645527742dd2) | **公开日** | 2012/10/09 |
| **申请号** | 12/767,377 | **申请日** | 2010/04/26 |
| **授权日** | 2012/10/09 | **优先日** | 2008/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shuai; Yanglai |
| **国际 主分类** | H04W 36/32 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method obtains area information during handover between heterogeneous networks. A mobility management entity of a destination network receives location area related information of a User Equipment (UE) from a mobility management entity of a source network. The mobility management entity obtains location area information required by the UE according to the location area related information. The mobility management entity sends the location area information required by the UE to the UE. |

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| **主权项** | 专利度:12特征度:12 |  |  |
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A method for obtaining location area information during handover between heterogeneous networks, the method comprising: receiving, by a mobility management entity of a destination network,~~a Tracking Area Identity (TAI)~~location area related informationof a User Equipment (UE) from a mobility management entity of a source network; obtaining, by the mobility management entity of the destination network,~~a TAI list according to the TAI~~location area information required by the UE according to the location area related information; and sending, by the mobility management entity of the destination network, the~~TAI list to the UE via the mobility management entity of the source network~~location area information required by the UE to the UE.

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| **对偶主权项** | 专利度:20特征度:11 |  |  |
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A method for obtaining location area information during handover between heterogeneous networks, the method comprising: receiving, by a mobility management entity of a destination network, location area related information of a User Equipment (UE) from a mobility management entity of a source network; obtaining, by the mobility management entity of the destination network, location area information required by the UE according to the location area related information; and sending, by the mobility management entity of the destination network, the location area information required by the UE to the UE.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Communication system, network handover processing method and apparatus**

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| **公开号** | [US8279837](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8279837&sv=425421d31ea126a9c6fd8c38946c8acc) | **公开日** | 2012/10/02 |
| **申请号** | 13/249,062 | **申请日** | 2011/09/29 |
| **授权日** | 2012/10/02 | **优先日** | 2007/08/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Qiu; Yong | Huang; Min | Huang; Ying | Zhang; Hongzhuo |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A communication system, a network handover processing method and a network handover processing apparatus are disclosed. The method includes the following steps: receiving, by a target evolved NodeB (T-eNB), identity information sent from a user equipment (UE), the identity information being allocated to the UE by a source evolved NodeB (S-eNB); and sending, by the T-eNB, parameters to the UE if identity information, matching the received identity information sent from the UE, is available in the T-eNB, wherein the parameters are allocated to the UE. The apparatus includes a receiving module and a sending module. The communication system, network handover processing method and network handover processing apparatus can reduce the state change times of the UE in the network handover process and save the system resources. |

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| **主权项** | 专利度:15特征度:18 |  |  |
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A method for performing a network handover process, comprising: receiving from a source evolved NodeB (eNB), by a target eNB, identity information allocated to a user equipment by the source eNB; receiving, by the target eNB, identity information from the user equipment; determining, by the target eNB, whether the identity information received from the user equipment matches the identity information allocated to the user equipment by the source eNB; wherein when the identity information received from the user equipment matches the identity information allocated to the user equipment by the source eNB, the method further comprises: sending, by the target eNB, one or more parameters to the user equipment; receiving, by the target eNB, a mobility complete message responded by the user equipment, and sending a handover complete message to a mobility management entity; receiving, by the target eNB, a handover complete ACK message from the mobility management entity; and sending, by the target eNB, a first release resource message to the source eNB; wherein, when multiple candidate target eNBs are available, a second release resource message is sent by the source eNB to other candidate target eNB(s) of the multiple candidate target eNBs after the reception of the first release resource message; and wherein the one or more parameters sent to the user equipment are allocated to the user equipment by the target eNB.

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| **对偶主权项** | 专利度:20特征度:15 |  |  |
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A method forperforming anetwork handover process~~ing~~, comprising: receiving~~, by a target~~from a sourceevolved NodeB (~~T-~~eNB),by a target eNB,identity information~~sent~~allocated to a user equipment by the source eNB; receiving, by the target eNB, identity informationfrom~~a~~theuser equipment~~(UE), wherein the identity information comprises~~; determining, by the target eNB, whether the identity information received from the user equipment matches theidentity information allocated to the user equipment by~~a~~thesource e~~volved NodeB (S-eNB); det~~NB; wher~~m~~ein~~ing, by the target evolved NodeB, whether the received identity information match any identity information stored in the target evolved NodeB; if the received identity information match any identity information stored in the target evolved NodeB, sending, by the target evolved NodeB, parameters to the user equipment wherein the parameters~~when the identity information received from the user equipment matches the identity information allocated to the user equipment by the source eNB, the method further comprises: sending, by the target eNB, one or more parameters to the user equipment; receiving, by the target eNB, a mobility complete message responded by the user equipment, and sending a handover complete message to a mobility management entity; receiving, by the target eNB, a handover complete ACK message from the mobility management entity; and sending, by the target eNB, a first release resource message to the source eNB; wherein, when multiple candidate target eNBs are available, a second release resource message is sent by the source eNB to other candidate target eNB(s) of the multiple candidate target eNBs after the reception of the first release resource message; and wherein the one or more parameters sent to the user equipmentare allocated to the user equipment by the target e~~volved Node~~NB.

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| **被引用** | 8 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.5 |

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| **同族数** | 19 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for converting session control signaling**

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| **公开号** | [US8279832](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8279832&sv=01a88a018b3c332f6e43dff817273659) | **公开日** | 2012/10/02 |
| **申请号** | 12/496,061 | **申请日** | 2009/07/01 |
| **授权日** | 2012/10/02 | **优先日** | 2007/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Zhang; Hengliang | Ding; Chunyan | Ye; Songhai |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method, system, and device for converting session control signaling are provided. The method includes at least one of the following steps: a first adaptation unit converts a session control signaling message of a circuit switched (CS) session leg into a session control signaling message of an IP multimedia subsystem (IMS) session leg; or the first adaptation unit converts a session control signaling message of an IMS session leg into a session control signaling message of a CS session leg. In embodiments of the present invention, an adaptation unit intercepts a CS signaling message after an inter-mobile switching center (MSC) handover, and converts CS signaling messages to IMS signaling messages and vice versa, so that the IMS domain may continue to control a session after the inter-MSC handover. |

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| **主权项** | 专利度:19特征度:23 |  |  |
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A method for converting session control signaling, comprising: performing a signaling conversion, by a first adaptation unit, between a session control signaling message of a circuit switched (CS) session leg and a session control signaling message of an IP multimedia subsystem (IMS) session leg, wherein the first adaptation unit is on a CS signaling path after a cross mobile switching center (MSC) handover; wherein: the first adaptation unit is on an initial session processing node; an after-handover session processing node exists on a signaling path between the first adaptation unit and user equipment (UE), wherein the initial session processing node and the after-handover session processing node are located in different mobile switching centers (MSCs); the session control signaling message of the CS session leg connected to the first adaptation unit is an E-interface signaling message; and the session control signaling message of the IMS session leg connected to the first adaptation unit is a Session Initiation Protocol (SIP) signaling message.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A method for converting session control signaling, comprising:performing a signaling conversion, by a first adaptation unit, between a session control signaling message of acircuit switched (CS)session leg and a session control signaling message of an IP multimedia subsystem (IMS) session leg, wherein the first adaptation unit is on a~~circuit switched (CS) signaling path after a cross~~CS signaling path after a cross mobile switching center (MSC) handover; wherein: the first adaptation unit is on an initial session processing node; an after-handover session processing node exists on a signaling path between the first adaptation unit and user equipment (UE), wherein the initial session processing node and the after-handover session processing node are located in differentmobile switching centers(MSC~~) handover~~s); the session control signaling message of the CS session leg connected to the first adaptation unit is an E-interface signaling message; and the session control signaling message of the IMS session leg connected to the first adaptation unit is a Session Initiation Protocol (SIP) signaling message.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for roaming user to establish security association with visited network application server**

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| **公开号** | [US8275355](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8275355&sv=b280da54f1c20558ee34e440abaff369) | **公开日** | 2012/09/25 |
| **申请号** | 10/591,065 | **申请日** | 2005/03/24 |
| **授权日** | 2012/09/25 | **优先日** | 2004/04/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Yingxin | Zhang; Wenlin |
| **国际 主分类** | H04M 1/66 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention provides a method for a roaming user to establish security association with the application server in the visited network. When receiving the service request from the roaming user, the application server in the visited network establishes security association with the roaming user by making use of the authentication results of the generic authentication architecture in the home network via the BSF in the local network, or the generic authentication architecture proxy in the local network, or the AAA server in the local network and the AAA server in the roaming user's home network, so as to achieve the object that the roaming user is able to use the services of the visited network after authentication of the generic authentication architecture in his home network. |

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| **主权项** | 专利度:9特征度:20 |  |  |
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A method for an application server in a visited network to establish a security association with a user comprising the steps of: receiving, by the application server in the visited network, a service request message from the roaming user, said service request message containing a Bootstrapping—Transaction Identifier (B-TID), the B-TID being assigned to the roaming user by a Bootstrapping Server Function (BSF) based upon a mutual authentication of the roaming user with the BSF that performs user identity initial verification in a generic authentication architecture in a home network of the roaming user; returning, by the proxy in the visited inquiring, by the application server in the visited network inquiring from a proxy an in the visited network about user's user information of the user associated with the B-TID, the user information comprising user authentication results of the generic authentication architecture in the home network of the user; identifying, by the proxy in the visited network, the home network to which the user belongs according to the B-TID; acquiring, by the proxy in the visited network, the user information associated with the B-TID from the BSF in the home network of the user; network, the acquired user information to the application server; obtaining, by the application server in the visited network the user information of the user comprising the user authentication results of the generic authentication architecture in the home network of the user; and establishing, by the application server in the visited network, a security association with the user according to the user authentication results of the generic authentication architecture in the home network of the user.

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| **对偶主权项** | 专利度:15特征度:10 |  |  |
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A method for a~~roaming user~~n application server in a visited networkto establish a security association with a~~n~~user comprising the steps of: receiving, by theapplication server in~~a~~thevisited network,~~wherein the roaming user has completed a mutual authentication with a Bootstrapping Server Function (BSF)~~a service request message from the roaming user, said service request message containing a Bootstrapping—Transaction Identifier (B-TID), the B-TID being assigned to the roaming user by a Bootstrapping Server Function (BSF) based upon a mutual authentication of the roaming user with the BSFthat performs user identity initial verification in a generic authentication architecture in~~his~~ahome network~~, and obtained a Bootstrapping-Transaction Identifier (B-TID) assigned to him by the BSF, comprising:after receiving a service request messag~~of the roaming user; returning, by the proxy in the visited inquiring, by the application server in the visited network inquiring from a proxy an in the visited network about user's user information of the user associated with the B-TID, the user information comprising user authentication results of the generic authentication architecture in the home network of the user; identifying, by the proxy in the visited network, the home network to which the user belongs according to the B-TID; acquiring, by the~~f~~pro~~m the roaming user with the B-TID carried in the message, the application server in the visited network obtaining the roaming user's user information from the user authentication results of the generic authentication architecture in the roaming user's home network, establishing a security association with the roaming~~xy in the visited network, the user information associated with the B-TID from the BSF in the home network of the user; network, the acquired user information to the application server; obtaining, by the application server in the visited network the user information of the user comprising the user authentication results of the generic authentication architecture in the home network of the user; and establishing, by the application server in the visited network, a security association with the user according to the user authentication results of the generic authentication architecture in the home network of theuser.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 3 | **国家数** | 2 | **影响力** | 0.46 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for controlling power of uplink physical channel**

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| **公开号** | [US8271017](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8271017&sv=06cd08b68baeb53fa890e5ff1af936f5) | **公开日** | 2012/09/18 |
| **申请号** | 13/187,929 | **申请日** | 2011/07/21 |
| **授权日** | 2012/09/18 | **优先日** | 2006/08/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Xu; Liang |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for controlling power of an uplink physical channel includes: computing a relative gain factor in a compressed mode; correcting the relative gain factor to obtain a corrected relative gain factor; generating a gain factor in the compressed mode according to the corrected relative gain factor; controlling power of the uplink physical channel according to the gain factor in the compressed mode generated. In embodiments of the present invention, after being computed, the relative gain factor in the compressed mode is corrected, then the gain factor in the compressed mode is generated according to the corrected relative gain factor. Thus, an accurate gain factor may be acquired for controlling the power of the uplink physical channel. |

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| **主权项** | 专利度:13特征度:29 |  |  |
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A method for controlling power of an uplink physical channel, comprising: generating a gain factor of an uplink Enhanced Dedicated Physical Data Channel (E-DPDCH) in a compressed mode by way of β ed , C , i = β c , C , j · A ed · L e , ref L e , I , i · K e , i K e , ref · 10 ( Δ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N if an Enhanced-Dedicated Channel (E-DCH) Transmission Time Interval (TTI) is 10 msec and a current frame is compressed, wherein the βed,C,i is a gain factor of the E-DPDCH in the compressed mode, the βc,C,j is a gain factor of a Dedicated Physical Control Channel (DPCCH) in the compressed mode, the Aed is a relative gain factor of the E-DPDCH/DPCCH for a reference Enhanced-TFC (E-TFC) in a non-compressed mode, the Le,ref denotes the number of E-DPDCHs for the reference E-TFC, the Le,I,i denotes the number of E-DPDCHs used for i:th E-TFC in a first frame used for transmitting data, the Ke,ref denotes a transport block size of the reference E-TFC, the Ke,i denotes a transport block size of the current E-TFC, the Δharq is a Hybrid Automatic Repeat Request (HARQ) offset, the Npilot,C is the number of pilot bits per slot on the DPCCH in compressed frames, the Npilot,N is the number of pilot bits per slot on the DPCCH in non-compressed frames, and the Nslot,I is the number of non DTX slots in the first frame used for transmitting the data; and controlling power of the uplink physical channel according to the generated gain factor in the compressed mode.

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| **对偶主权项** | 专利度:13特征度:11 |  |  |
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A method for controlling power of an uplink physical channel, comprising: generating a gain factor of an uplink Enhanced Dedicated Physical Data Channel (E-DPDCH) inacompressed mode by way of β ed , C , i = β c , C , j · A ed · L e , ref L e , I , i · K e , i K e , ref · 10 ( Δ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N ifanEnhanced-Dedicated Channel (E-DCH) Transmission Time Interval (TTI) is 10 msec andacurrent frame is compressed, whereintheβed,C,i is~~the~~again factor of the E-DPDCH in the compressed mode,theβc,C,j isagain factor of~~the~~aDedicated Physical Control Channel (DPCCH) in the compressed mode,theAed isarelative gain factor of the E-DPDCH/DPCCH forareference Enhanced-TFC (E-TFC) in~~the~~anon-compressed mode,theLe,ref denotes the number of E-DPDCH~~(s)~~sfor the reference E-TFC,theLe,I,i denotes the number of E-DPDCH~~(s)~~sused for~~the~~i:th E-TFC inafirst frame used for transmitting data,theKe,ref denotesatransport block size of the reference E-TFC,theKe,i denotes~~the~~atransport block size of the current E-TFC,theΔharq isaHybrid Automatic Repeat Request (HAR~~M~~Q) offset,theNpilot,C is the number of pilot bits per slot on the DPCCH in compressed frames,theNpilot,N is the number of pilot bits per slot on the DPCCH in non-compressed frames, andtheNslot,I is the number of non DTX slots in the first frame used for transmitting the data; and controlling power of the uplink physical channel according to the generated gain factor in the compressed mode.

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| **被引用** | 14 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.40 |

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| **同族数** | 19 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for non-access stratum message processing during handover in evolved network**

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| **公开号** | [US8270371](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8270371&sv=2f239da7c625880106901df4e6e232eb) | **公开日** | 2012/09/18 |
| **申请号** | 13/269,301 | **申请日** | 2011/10/07 |
| **授权日** | 2012/09/18 | **优先日** | 2007/08/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Zhang; Hongzhuo | Qiu; Yong | Huang; Ying | Wang; Qiang |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method and an apparatus for non-access stratum (NAS) message processing during handover in an evolved network are provided. The method includes the following steps. An evolved packet core (EPC) receives a message which indicates that a UE is being handed over sent by a source evolved NodeB (S-eNB), and stops sending an NAS message to the UE temporarily. The EPC receives a message which indicates that the UE returns to an S-eNB service area sent by the S-eNB. The EPC sends the NAS message to the UE through the S-eNB, if needed. With the method and the apparatus, the EPC can acquire a location of the UE in time in the case of a handover failure of the UE, a time limit of a retransmission timer is set precisely, and a specific implementation for forwarding an NAS message through an X2 interface is provided. |

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| **主权项** | 专利度:13特征度:13 |  |  |
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A method for processing a Non-access Stratum (NAS) message during a handover of a User Equipment (UE) in an evolved network, the method comprising: receiving, by a source-eNodeB (S-eNB), a direct-transfer message from a mobility management entity (MME), the direct-transfer message including the NAS message; and sending, by the S-eNB, a reply to the MME, the reply including a cause value and the NAS message, the cause value indicating the NAS message has not been sent to the UE because of the handover of the UE.

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| **对偶主权项** | 专利度:19特征度:8 |  |  |
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A method forprocessing aNon-access Stratum (NAS) message~~processing~~during a handoverof a User Equipment (UE)in an evolved network,the methodcomprising: receiving, by a source-eNodeB (S-eNB), a direct-transfer message~~sent by~~froma mobility management entity (MME),~~wherein~~the direct-transfer message~~contains an NAS message to be sent to a User Equipment (UE)~~including the NAS message; and sending, by the S-eNB, a~~message~~replyto the MME,~~w~~there~~in~~ply including a cause value andtheNASmessage~~contains a~~, thecause value~~a~~indicatingthe NAS message~~t~~ha~~t failed to be sent~~s not been sent to the UE because of the handover of the UE.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 19 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for bearer control and deletion, data distribution, and modification**

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| **公开号** | [US8270324](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8270324&sv=05f3d3a74b49a5836d8160feb1d54928) | **公开日** | 2012/09/18 |
| **申请号** | 12/411,989 | **申请日** | 2009/03/26 |
| **授权日** | 2012/09/18 | **优先日** | 2006/09/26 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Jianyong | Zhang; Wei | Liang; Wenliang | Gu; Liang | Feng; Chengyan | Zhao; Yuankui |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Staas & Halsey LLP |

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| **摘要** |  |
| A method for bearer control, bearer deletion, data distribution, and multicast broadcast service MBS modification are described, which enables MBS data to be received successfully and MBS sessions to be managed effectively. According to the invention involved in a communication field, service distribution information for one MBS service is maintained within MBS upstream and downstream nodes, and the MBS service distribution information is composed of a list of downstream nodes corresponding to the respective nodes. A corresponding service bearer and data distribution relation of the MBS are established and maintained based on the service distribution information, and service data of the MBS is distributed based on the service bearer and the data distribution relation. The MBS distribution information is pre-configured and/or dynamically maintained, the establishment of the service bearer is pre-configured and/or dynamically maintained, and the data distribution relation is pre-configured, distributed by default, and/or dynamically maintained. |

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| **主权项** | 专利度:7特征度:23 |  |  |
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A method for bearer control and data distribution, comprising: storing, in at least one node of a multicast broadcast service (MBS), MBS service distribution information comprising information denoting upstream and downstream relations between nodes of the MBS service; establishing or maintaining a service bearer and a data distribution relation corresponding to the MBS according to the MBS service distribution information; and distributing service data of the MBS according to the service bearer and the data distribution relation; wherein a downstream node list corresponding to each node of the MBS service is stored in the respective nodes; wherein before an upstream node sends the service data of the MBS to a downstream node, the downstream node sends to the upstream node a registration request message indicating that the downstream node prepares to receive the MBS service data, and the registration request message carries identification information of the MBS; and wherein after receiving the registration request message, the upstream node establishes a service bearer with the downstream node initiating the MBS registration request or related nodes thereof in the downstream node list; and the related nodes in the downstream node list are downstream nodes located in same MBS zone as the downstream node initiating the registration request in the downstream node list corresponding to the MBS maintained by the upstream node or all downstream nodes in the downstream node list.

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| **对偶主权项** | 专利度:20特征度:22 |  |  |
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A method for bearer control and data distribution, comprising:storing, in at least one node of a multicast broadcast service(MBS), MBS service distribution information comprising information denoting upstream and downstream relations between nodes of the MBS service;establishing or maintaining a service bearer and a data distribution relation corresponding to the MBS according to the MBS service distribution information; anddistributing service data of the MBS according to the service bearer and the data distribution relation; wherein a downstream node list corresponding to each node of the MBS service is stored in the respective nodes; wherein before an upstream node sends the service data of the MBS to a downstream node, the downstream node sends to the upstream node a registration request message indicating that the downstream node prepares to receive the MBS service data, and the registration request message carries identification information of the MBS; and wherein after receiving the registration request message, the upstream node establishes a service bearer with the downstream node initiating the MBS registration request or related nodes thereof in the downstream node list; and the related nodes in the downstream node list are downstream nodes located in same MBS zone as the downstream node initiating the registration request in the downstream node list corresponding to the MBS maintained by the upstream node or all downstream nodes in the downstream node list.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 3 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for sending control signaling**

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| **公开号** | [US8265023](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8265023&sv=09bc09d230261a040cac499b46147401) | **公开日** | 2012/09/11 |
| **申请号** | 12/432,882 | **申请日** | 2009/04/30 |
| **授权日** | 2012/09/11 | **优先日** | 2007/04/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Xianghua | Feng; Xuan |
| **国际 主分类** | H04W 72/04 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method for sending control signaling, including: a transmitter using different states of one field in the control signaling to indicate the payload size or RV; and sends the control signaling indicative of the payload size or RV in the field. It is appropriate that some states of one field indicate different payload sizes, and the remaining states of the field indicate different RVs. An apparatus for sending control signaling is disclosed. The apparatus may be integrated in a base station, and may include a control signaling generating unit and a control signaling sending unit. |

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| **主权项** | 专利度:13特征度:12 |  |  |
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A method of signaling, comprising: generating control signaling comprising a field, wherein the field includes N bits that are either 1 or 0, and a state of the field is indicated by all the N bits of the field, wherein N is a positive integer greater than 1, wherein the field is dynamically indicative of one of a payload size or a Redundancy Version (RV) through the state of the field, wherein the payload size is indicated through a first state of the field when the first state is within a first predetermined range and the RV is indicated through a second state of the field when the second state is within a second predetermined range distinct from the first predetermined range; and sending the control signaling.

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| **对偶主权项** | 专利度:13特征度:5 |  |  |
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A method~~for send~~of signaling, comprising: generating control signaling~~,~~comprising~~:indicating, by a transmitter,~~a field, wherein the field includes N bits that are either 1 or 0, and a state of the field is indicated by all the N bits of the field, wherein N is a positive integer greater than 1, wherein the field is dynamically indicative of one ofa payload size~~and/~~oraRedundancy Version (RV) through~~differen~~thestate~~s~~of~~on~~the field~~in the control signaling; andsending~~, wherein the payload size is indicated through a first state of the field when the first state is within a first predetermined range and the RV is indicated through a second state of the field whenthesecon~~trol signaling indicative of the payload size or RV on the fiel~~dstate is within a second predetermined range distinct from the first predetermined range; and sending the control signaling.

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| **被引用** | 12 | **自引用** | 1 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.79 |

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| **同族数** | 25 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Method, apparatus and system for controlling multicast bearer resources**

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| **公开号** | [US8264998](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8264998&sv=b3ad4401e60013b5765af7fe2d900b16) | **公开日** | 2012/09/11 |
| **申请号** | 12/428,771 | **申请日** | 2009/04/23 |
| **授权日** | 2012/09/11 | **优先日** | 2007/06/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | rpx | **发明人** | Huang; Shibi | Zuo; Yu | Zhu; Ning |
| **国际 主分类** | H04H 20/71 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method, apparatus, and system for controlling multicast bearer resources are disclosed, which employ a resource and admission control subsystem (RACS) to control the multicast bearer resources. The method includes: a network entity in a RACS receives a request for controlling multicast bearer resources from a bearer-layer network entity and controls the multicast bearer resources. The network entity in the RACS includes: a receiving unit adapted to receive a request for controlling multicast bearer resources from a bearer-layer network entity and a control unit adapted to control the multicast bearer resources. |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A method for controlling multicast bearer resources, comprising: receiving, by a Service-based Policy Decision Function (SPDF), a request for controlling multicast bearer resources from a bearer-layer network entity; and controlling, by the SPDF, the multicast bearer resources; wherein, the process of controlling, by the SPDF, the multicast bearer resources comprises: applying, by the SPDF, to an Access-Resource and Admission Control Function (A-RACF), for the multicast bearer resources of an access side; and applying, by the SPDF, to a Core-Resource and Admission Control Function (C-RACF), for the multicast bearer resources of a core network; wherein the A-RACF receives a request for applying for the multicast bearer resources; if the request for applying for the multicast bearer resources does not contain bandwidth information, the A-RACF queries local configuration to obtain a bandwidth required by the multicast group.

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| **对偶主权项** | 专利度:17特征度:9 |  |  |
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A method for controlling multicast bearer resources, comprising:receiving, by a~~network entity in a Resource and Admission Control Subsystem (RACS)~~Service-based Policy Decision Function (SPDF),a request for controlling multicast bearer resources from a bearer-layer network entity; andcontrolling, by the~~network entity in the RACS, the multicast bearer resources~~SPDF, the multicast bearer resources; wherein, the process of controlling, by the SPDF, the multicast bearer resources comprises: applying, by the SPDF, to an Access-Resource and Admission Control Function (A-RACF), for the multicast bearer resources of an access side; and applying, by the SPDF, to a Core-Resource and Admission Control Function (C-RACF), for the multicast bearer resources of a core network; wherein the A-RACF receives a request for applying for the multicast bearer resources; if the request for applying for the multicast bearer resources does not contain bandwidth information, the A-RACF queries local configuration to obtain a bandwidth required by the multicast group.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Measurement control method, user equipment and network-side device**

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| **公开号** | [US8260302](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8260302&sv=78294b89030548e015ce203e87da6e60) | **公开日** | 2012/09/04 |
| **申请号** | 13/294,876 | **申请日** | 2011/11/11 |
| **授权日** | 2012/09/04 | **优先日** | 2007/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yu; Yinghui |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A measurement control method, a UE, and a network-side device are provided to solve the problem in the prior art that no measurement control solution can ensure the UE to perform a measurement and obtain a measurement result in time, as well as reduce the impact of the measurement on the performance of the UE. The method includes the following steps. The UE receives measurement indication information provided by the network side; and the UE performs a measurement after determining that the UE needs to perform the measurement according to the measurement indication information, which ensures that the UE may not perform the measurement frequently but pertinently, and reduces the impact of the measurement on the performance of the UE to the utmost extent. |

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| **主权项** | 专利度:7特征度:14 |  |  |
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A measurement control method, comprising: receiving, by a user equipment (UE), measurement indication information from a network initiated by the network, the measurement indication information including an identification of an area of a current cell where the UE is located; receiving, by the UE, information of a UE group, through a broadcast message or downlink signaling, if the network determines that UEs in the UE group having particular characteristics need to perform a measurement, the UE group including a plurality of UEs grouped by the network according to characteristics thereof; determining, by the UE, whether the identified area is within a preferred area of the UE; determining, by the UE, that the information of the UE group is comprised in the broadcast message or downlink signaling and whether the UE belongs to the UE group; and performing, by the UE, a measurement process if at least one of the following conditions are met: the identified area is not within a preferred area of the UE; or the UE belongs to the UE group that needs to perform the measurement.

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| **对偶主权项** | 专利度:28特征度:11 |  |  |
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A measurement control method, comprising: receiving, by a user equipment (UE), measurement indication information from a network initiated by the network, the measurement indication information including an identification of an area of a current cell where the UE is located;~~determining, by the UE, whether the identified area is within a preferred area of the UE~~receiving, by the UE, information of a UE group, through a broadcast message or downlink signaling, if the network determines that UEs in the UE group having particular characteristics need to perform a measurement, the UE group including a plurality of UEs grouped by the network according to characteristics thereof; determining, by the UE, whether the identified area is within a preferred area of the UE; determining, by the UE, that the information of the UE group is comprised in the broadcast message or downlink signaling and whether the UE belongs to the UE group; and performing, by the UE, a measurement process ifat least one of the following conditions are met:the identified area is not within a preferred area of the UE; or the UE belongs to the UE group that needs to perform the measurement.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Method for simplifying the process of transmitting message**

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| **公开号** | [US8254925](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8254925&sv=860664c66ab18f31c7e949005924c23a) | **公开日** | 2012/08/28 |
| **申请号** | 11/650,189 | **申请日** | 2007/01/04 |
| **授权日** | 2012/08/28 | **优先日** | 2005/03/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ding; Yingzhe |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention discloses a method for messages transmission in a simplified way, UE transmitting the messages to the network through the lower layer, the method includes following steps: if the lower layer indicates the message has been transmitted successfully, then starting timer, otherwise, ending the current procedure; if the UE has received response from the network before the timer expires, stopping the timer; otherwise, ending the current procedure. The method can effectively avoid unnecessary operations, and reduce energy consumption of the UE. |

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| **主权项** | 专利度:18特征度:18 |  |  |
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A method for use in a connection establishment procedure, comprising: transmitting a request message from a User Equipment (UE) to a network entity through a Medium Access Control (MAC) layer; setting an initial value of a counter, and setting a threshold value of the counter; and indicating, by the MAC layer, whether the request message has been transmitted successfully, if the MAC layer indicates that the request message has not been transmitted successfully, ending the connection establishment procedure with failure and without starting a timer in the UE; or if the MAC layer indicates that the request message has been transmitted successfully, starting the timer in the UE; and if a response from the network entity is received before the timer expires, stopping the timer, or if no response from the network entity is received before the timer expires, retransmitting the request message to the network entity, changing the current value of the counter and returning to the process of the MAC layer indicating whether the request message has been transmitted successfully, if the current value of the counter is not greater than the threshold value of the counter; or ending the connection establishment procedure with failure, if the current value of the counter is greater than the threshold value of the counter.

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| **对偶主权项** | 专利度:11特征度:19 |  |  |
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A method for~~messages transmission in a simplified way~~use in a connection establishment procedure, comprising:transmitting arequestmessage from a~~n~~User Equipment (UE) to a networkentitythrough a~~lower~~Medium Access Control (MAC)layer;~~star~~setting a~~timer if the lower~~n initial value of a counter, and setting a threshold value of the counter; and indicating, by the MAC layer, whether the request message has been transmitted successfully, if the MAClayer indicates th~~e~~at the requestmessage hasnotbeen transmitted successfully,~~or~~ending~~a current procedure if the lower~~the connection establishment procedure with failure and without starting a timer in the UE; or if the MAClayer indicates th~~e~~at the requestmessage has been transmitted~~un~~successfully~~;~~,st~~opp~~arting the timer i~~f~~nthe UE~~has received a~~; and if a response from the network entity is received before the timer expires, stopping the timer, or if noresponse from the networkentity is receivedbefore the timer expires,retransmitting the request message to the networken~~d~~tity, changing the current~~procedure if the UE has not received a response from the network before the timer expires~~value of the counter and returning to the process of the MAC layer indicating whether the request message has been transmitted successfully, if the current value of the counter is not greater than the threshold value of the counter; or ending the connection establishment procedure with failure, if the current value of the counter is greater than the threshold value of the counter.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.8 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for synchronization in communication system**

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| **公开号** | [US8254367](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8254367&sv=5a8053da38428ee549bd7505cb5b1497) | **公开日** | 2012/08/28 |
| **申请号** | 12/175,685 | **申请日** | 2008/07/18 |
| **授权日** | 2012/08/28 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Popovic; Branislav | Mauritz; Oskar |
| **国际 主分类** | H04J 3/06 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for uplink synchronization of a first transceiver and a second transceiver in a multi-user cellular communication system having communication resources divided into communication channels. The method includes the following steps. A first signature sequence is transmitted from the second transceiver to the first transceiver, where the signature sequence is selected from a first set of signature sequences. In the first transceiver, the received signal is correlated with at least one signature sequence from a second set of signature sequences to estimate the time of arrival of the signature sequence to synchronize transmission between the second transceiver and the first transceiver. In transmitting the first signature sequence from the second transceiver to the first transceiver, the first signature sequence constitutes at least part of a zero-correlation zone sequence. |

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| **主权项** | 专利度:31特征度:11 |  |  |
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A method for performing an uplink synchronization between a first transceiver and a second transceiver within a cell in a multi-user cellular communication system, the method comprising: receiving, by the first transceiver, a signal from the second transceiver for the uplink synchronization, the signal comprising a first signature sequence, wherein said first signature sequence is selected from a first set of signature sequences, and correlating, the received signal with a second signature sequence in the first transceiver, the second signature sequence selected from a second set of signature sequences to estimate a time of arrival of said first signature sequence, so as to synchronize a transmission between the second transceiver and the first transceiver, wherein said first signature sequence is generated, at least in part, from a sequence with a zero-correlation zone.

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| **对偶主权项** | 专利度:21特征度:3 |  |  |
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A method forperforming anuplink synchronization~~of~~betweena first transceiver and a second transceiver within a cell in a multi-user cellular communication system~~wherein communication resources are divided into communication channels, the method comprising the steps of:transmitting a first signature sequence from the second transceiver to the first transceiver~~, the method comprising: receiving, by the first transceiver, a signal from the second transceiver for the uplink synchronization, the signal comprising a first signature sequence, wherein saidfirstsignature sequence is selected from a first set of signature sequences,~~in the first transceiver,~~andcorrelating,the received signal with a~~t least~~second signature sequence in the first transceiver, the secon~~e~~dsignature sequenceselectedfrom a second set of signature sequences to estimate~~the~~atime of arrival of saidfirstsignature sequence, so asto synchronizeatransmission between the second transceiver and the first transceiver,wherein said first signature sequence~~constitutes~~is generated,at leastinpart~~of~~, froma sequence~~from a set of~~with azero-correlation zone~~sequences~~.

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| **被引用** | 6 | **自引用** | 6 | **公司数** | 1 | **国家数** | 1 | **影响力** | 1.44 |

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| **同族数** | 21 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for charging of push to talk over cellular service and communication system**

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| **公开号** | [US8249639](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8249639&sv=15510f5bc80bc17dac255455dfb76957) | **公开日** | 2012/08/21 |
| **申请号** | 12/342,989 | **申请日** | 2008/12/23 |
| **授权日** | 2012/08/21 | **优先日** | 2007/03/01 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shan; Mingjun | Li; Chun |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for charging of the Push to Talk over Cellular, PoC, service includes: a charging system, initializing charging of a PoC session and sends a response message of PoC Box charging; monitoring a trigger condition of PoC charging according to the response message; and judge, when a PoC user joins the PoC session, whether the user participates in the session as a PoC Box, and if so, setting a PoC Box identification for the user and send charging information to the charging system so as to charge the PoC session of the user, wherein the information includes the identification. The present invention also discloses a communication system, a charging system and a PoC server. With the present invention, the accuracy of PoC charging can be significantly improved. |

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| **主权项** | 专利度:13特征度:24 |  |  |
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A method for charging of Push to Talk over Cellular, PoC, service, comprising: receiving a response message of PoC Box charging returned by a charging system after the charging system initializes charging of a PoC session during an ongoing session; monitoring a trigger condition of PoC charging according to the response message, wherein the trigger condition is PoC trigger type captured in CCA message; and judging, when a PoC user joins the PoC session, whether a session participation mode that the user participates in the session is a PoC Box mode, and if the user participates in the session by the PoC Box mode, setting a PoC Box identification for the user according to the response message, and sending charging information comprising the identification to the charging system so as to charge the PoC session of the user, wherein the charging information is sent during the ongoing session.

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| **对偶主权项** | 专利度:13特征度:13 |  |  |
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A method for charging of Push to Talk over Cellular, PoC, service, comprising:receiving a response message of PoC Box charging returned by a charging system after the charging system~~initializing~~initializes charging of a PoC session~~;~~during an ongoing session;monitoring a trigger condition of PoC charging according to the responsemessage, wherein the trigger condition is PoC trigger type captured in CCAmessage; andjudging, when a PoC user joins the PoC session, whether a session participation mode that the user participates in the session is a PoC Box mode, and if the user participates in the session by the PoC Box mode, setting a PoC Box identification for the user according to the response message, and sending charging information comprising the identification to the charging system so as to charge the PoC session of the user, wherein the charging information is sent during the ongoing session.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 10 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Synchronization method, communication handover method, radio network and node**

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| **公开号** | [US8249020](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8249020&sv=3b56d4260713656d697c31c86ba74fb3) | **公开日** | 2012/08/21 |
| **申请号** | 12/609,363 | **申请日** | 2009/10/30 |
| **授权日** | 2012/08/21 | **优先日** | 2007/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Qiu; Yong |
| **国际 主分类** | H04J 1/16 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A synchronization method, a communication handover method, a radio network, and a RAN node are disclosed. The interface information synchronization method includes: determining whether a condition for initiating interface information update is fulfilled; and sending information about the S1 interface between the RAN node and the core network node, and/or information about the X2 interface between the RAN node and the neighboring RAN node to the neighboring RAN node if the condition for initiating interface information update fulfilled. |

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| **主权项** | 专利度:22特征度:11 |  |  |
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An interface information synchronization method, comprising: determining, by a first radio access network (RAN) node, whether a condition for sending interface information is fulfilled, the interface information including information indicating whether an S1 interface exists between the first RAN node and a core network node; and sending, by the first RAN node, the interface information to a neighboring RAN node through an X2 interface when the condition is fulfilled, wherein the X2 interface is between the first RAN node and the neighboring RAN node.

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| **对偶主权项** | 专利度:20特征度:11 |  |  |
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An interface information synchronization method, comprising: determining~~whether a condition for initiating an interface information update is fulfilled; and sending the interface information to a neighboring R~~, by a first radio~~A~~access~~N~~network (RAN) node~~if the~~, whether acondition for~~initiating the~~sendinginterface information~~update~~is fulfilled,~~wherein~~the interface information~~comprises at least one of information about~~including information indicating whetheran S1 interfaceexistsbetween~~an~~the firstRAN node and a core network node~~,~~;and~~information about an X2 interface~~sending, by the first RAN node, the interface information to a neighboring RAN node through an X2 interface when the condition is fulfilled, wherein the X2 interface isbetween thefirstRAN node and the neighboring RAN node.

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| **被引用** | 14 | **自引用** | 5 | **公司数** | 3 | **国家数** | 2 | **影响力** | 3.56 |

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| **同族数** | 17 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets**

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| **公开号** | [US8249010](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8249010&sv=4052a1fbfe69aec78e9a9d84a7e7af55) | **公开日** | 2012/08/21 |
| **申请号** | 12/610,618 | **申请日** | 2009/11/02 |
| **授权日** | 2012/08/21 | **优先日** | 2008/11/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Fan; Xiaoan | Liu; Guang | Li; Bo | Hou; Yunzhe |
| **国际 主分类** | H04H 20/67 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention relates to radio communications, and discloses a method and apparatus for feeding back and receiving acknowledgment (ACK) information of semi-persistent scheduling (SPS) data packets. The method for feeding back ACK information of SPS data packets includes: receiving an uplink downlink assignment index (UL DAI) from a base station (BS), where the value of the UL DAI indicates the number of downlink data packets (N); mapping ACKs/NAKs of k SPS data packets of the downlink data packets to positions from the (N−k+1)th ACK/NAK to the Nth ACK/NAK; and feeding back N ACKs/NAKs to the BS. This method can guarantee that N ACKs/NAKs are arranged correctly. |

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| **主权项** | 专利度:13特征度:19 |  |  |
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A method for a base station to receive acknowledgement (ACK) information of semi-persistent scheduling (SPS) data packets, comprising: sending an plink data assignment indicator (UL DAI) to a User Equipment (UE), wherein the UL DAI indicates a number (N) of downlink data packets sent to the UE, wherein the number N is larger than one, and wherein a number k (k#x3c;N) of the downlink data packets is/are SPS data packets; and receiving from the UE a feedback signal comprising N acknowledgements/negative acknowledgements (ACKs/NAKs) acknowledging the N downlink data packets starting from the first ACK/NAK at the first position, wherein k ACKs/NAKs of the k SPS data packets is/are placed from (N−k+1)th to Nth positions of the N ACKs/NAKs.

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| **对偶主权项** | 专利度:18特征度:10 |  |  |
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A method for~~feeding back~~a base station to receiveacknowledgement~~,~~(ACK~~,~~)information of semi-persistent scheduling~~,~~(SPS~~,~~)data packets, comprising:~~receiv~~sending an~~u~~plink d~~ownlink~~ataassignment ind~~ex, UL DAI, sent by a BS, where the value of~~icator (UL DAI) to a User Equipment (UE), whereinthe UL DAI indicates~~the~~anumber~~N~~(N)of downlink data packets~~; mapping ACKs/NAKs of k SPS data packets of~~sent to the UE, wherein the number N is larger than one, and wherein a number k (k

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| **被引用** | 20 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.90 |

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| **同族数** | 34 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for allocating and processing sequences in communication system**

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| **公开号** | [US8249006](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8249006&sv=3b1fe716603499a34d6cde7c008dfbaa) | **公开日** | 2012/08/21 |
| **申请号** | 12/493,869 | **申请日** | 2009/06/29 |
| **授权日** | 2012/08/21 | **优先日** | 2007/03/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Qu; Bingyu | He; Yujuan | Feng; Xuan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method and apparatus for allocating and processing sequences in a communication system is disclosed. The method includes: dividing sequences in a sequence group into multiple sub-groups, each sub-group corresponding to its own mode of occupying time frequency resources; selecting sequences from a candidate sequence collection corresponding to each sub-group to form the sequences in the sub-group by: the sequences in a sub-group i in a sequence group k being composed of n sequences in the candidate sequence collection, the n sequences making a |ri/Ni−ck/Np1| or |(ri/Ni−ck/Np1) modu mk,i| function value the smallest, second smallest, till the nth smallest respectively; allocating the sequence group to cells, users or channels. It prevents the sequences highly correlated with the sequences of a specific length from appearing in other sequence groups, thus reducing interference, avoiding the trouble of storing the lists of massive sequence groups. |

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| **主权项** | 专利度:16特征度:19 |  |  |
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A method for allocating sequences in a communication system, comprising: dividing, by the communication system having a processor, sequences in a sequence group into multiple sub-groups, each sub-group corresponding to a mode of occupying time frequency resources; selecting, sequences from a candidate sequence collection corresponding to each sub-group to form the sequences in the sub-group by: the sequences in a sub-group i in a sequence group k being composed of n sequences in the candidate sequence collection, wherein n is a natural number, the n sequences making a |ri/Ni−ck/NP1| or |(ri/Ni−ck/ NP1) modu mk,i| function value a smallest, a second smallest, until an nth smallest respectively, wherein i is a serial number of the sub-group, k is a serial number of the sequence group, NP1 is the length of a reference sub-group sequence, ck is a basic sequence index of a sequence with a length of NP1 determined by the sequence group k; wherein ri is a basic sequence index in the candidate sequence collection, and Ni is the length of a sequence in the candidate sequence collection; wherein mk,i is a variable dependent on the group number k and the sub-group number i; and allocating, by the communication system having the processor, the sequence group to a cell, a user equipment or a channel or a base station.

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| **对偶主权项** | 专利度:16特征度:7 |  |  |
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A method for allocating sequences in a communication system, comprising:dividing, by the communication system having a processor,sequences in a sequence group into multiple sub-groups, each sub-group corresponding to a mode of occupying time frequency resources;selecting,sequences from a candidate sequence collection corresponding to each sub-group to form the sequences in the sub-group by: the sequences in a sub-group i in a sequence group k being composed of n sequences in the candidate sequence collection, wherein n is a natural number, the n sequences making a |ri/Ni~~-~~−ck/N~~p~~P1| or |(ri/Ni~~-~~−ck/~~Np~~NP1) modu mk,i| function value a smallest, a second smallest, until an nth smallest respectively,wherein i is a serial number of the sub-group, k is a serial number of the sequence group, N~~p~~P1 is the length of a reference sub-group sequence, ck is a basic sequence index of a sequence with a length of N~~p~~P1 determined by the sequence group k;wherein ri is a basic sequence index in the candidate sequence collection, and Ni is the length of a sequence in the candidate sequence collection;wherein mk,i is a variable dependent on the group number k and the sub-group number i; andallocating, by the communication system having the processor,the sequence group to a~~t least one of:~~cell~~s~~,auser~~s~~equipmentorachannel~~s~~or a base station.

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| **被引用** | 25 | **自引用** | 7 | **公司数** | 3 | **国家数** | 3 | **影响力** | 7.35 |

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| **同族数** | 31 | **国家数** | 14 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and communication system for storing address of network anchor point to network server**

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| **公开号** | [US8244242](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8244242&sv=62ec224bf454464d86e1765dab52ae19) | **公开日** | 2012/08/14 |
| **申请号** | 12/550,867 | **申请日** | 2009/08/31 |
| **授权日** | 2012/08/14 | **优先日** | 2007/05/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Jian | Zhu; Wenruo | Liu; Lan | Zhou; Sihong | Shuai; Yanglai | Wang; Haining |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for storing an address of a network anchor point to a network server is provided The provided method includes the following steps: a terminal initiates an attach request or a bearer establishment request, and a network selects a network anchor point; and when the network anchor point assigns a first bearer context to the terminal, or a first connection is established between the network anchor point and the terminal, the network registers an address of the network anchor point to a network server. A method for deleting an address of a network anchor point from a network server is also provided, which includes the following steps: when a terminal or an entity in a network initiates a delete bearer request, the network instructs a network server to delete an address of a network anchor point that has been registered to the network server if the network anchor point no longer serves the terminal; and the network server deregisters the address of the network anchor point. A communication system is further provided. |

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| **主权项** | 专利度:13特征度:17 |  |  |
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A method for storing an address of a network anchor point to a network server, comprising: selecting, by a network, the network anchor point, in response to an attach request or a bearer establishment request initiated by a terminal; determining, by the network, whether the terminal is subscribed to mobility capability in a non-3rd Generation Partnership Project (non-3GPP) network; and registering, by the network, the network anchor point and an access point name (APN) corresponding to the network anchor point with a home subscriber server (HSS) if the terminal is subscribed to the mobility capability in the non-3GPP network, the registering being configured to occur after the network anchor point has assigned a first bearer context to the terminal or during an establishment process of a first connection to the terminal.

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| **对偶主权项** | 专利度:17特征度:23 |  |  |
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A method for storing an address of a network anchor point to a network server, comprising:selecting, by a network, the network anchor point, in response to an attach request or a bearer establishment request initiated by a terminal;~~registering, by the network, the address of the network anchor point with the network server,~~determining, by the network, whether the terminal is subscribed to mobility capability in a non-3rd Generation Partnership Project (non-3GPP) network; and registering, by the network, the network anchor point and an access point name (APN) corresponding to the network anchor point with a home subscriber server (HSS) if the terminal is subscribed to the mobility capability in the non-3GPP network, the registering being configured to occurafter the network anchor pointhasassign~~s~~eda first bearer context to the terminal or during an establishment process of a first connection to the terminal.

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| **被引用** | 13 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.22 |

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| **同族数** | 11 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for setting up a bearer**

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| **公开号** | [US8243675](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8243675&sv=cc38d426ff889a91a4762f048dc86641) | **公开日** | 2012/08/14 |
| **申请号** | 12/757,638 | **申请日** | 2010/04/09 |
| **授权日** | 2012/08/14 | **优先日** | 2007/10/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Jinyi | Liu; Lan | Guo; Xiaolong | Li; Ming | Chen; Zhe | Yu; Qi |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| Method and system for setting up a bearer are disclosed. The bearer setup method includes these steps: a packet data network gateway (PGW) obtains first quality of service (QoS) information and a first bearer identifier (ID), and sets up a bearer between the PGW and a radio access network (RAN) according to the first QoS information, where the bearer is associated with the first bearer ID; the RAN sets up a radio bearer (RB) with a user equipment (UE) according to second QoS information associated with the first QoS information, where the RB is associated with a second bearer ID associated with the first bearer ID. According to the technical solution of the present invention, when the UE is connected to a serving gateway (SGW) through a serving general packet radio service support node (SGSN), the SGSN and the SGW set up a bearer between the UE and the PGW. Thus, resources of each network entity in a network are fully utilized. |

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| **主权项** | 专利度:4特征度:16 |  |  |
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A serving general packet radio service support node (SGSN), comprising: a QoS information obtaining unit, adapted to obtain first QoS information; a downlink bearer resource (DBR) allocating unit, adapted to allocate a second DBR for a second bearer according to the first QoS information; a DBR information sending unit, adapted to send the first QoS information and information about the second DBR; an uplink bearer resource (UBR) information receiving unit, adapted to receive the first QoS information, information about a second UBR, and a first bearer ID; a UBR information storing unit, adapted to store the first QoS information, the information about the second UBR, and the first bearer ID; a UBR allocating unit, adapted to allocate a third UBR for the second bearer according to second QoS information associated with the first QoS information; a UBR information sending unit, adapted to send the second QoS information and information about the third UBR; a DBR information receiving unit, adapted to receive the second QoS information, information about a third DBR, and a second bearer ID associated with the first bearer ID; and a DBR information storing unit, adapted to store the second QoS information, the information about the third DBR, and the second bearer ID.

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| **对偶主权项** | 专利度:18特征度:12 |  |  |
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A~~method for setting up a bearer, comprising: obtaining, by a packet data network gateway (PGW), first quality of service (QoS) information and a first bearer identifier (ID), and~~serving general packet radio service support node (SGSN), comprising: a QoS information obtaining unit, adapted to obtain first QoS information; a downlink bearer resource (DBR) allocating unit, adapted to allocate a second DBR for a second bearer according to the first QoS information; a DBR informationse~~tt~~nding u~~p a bearer betwe~~nit, adapted to sendthe~~PGW and a rad~~first QoS information and informationa~~ccess network (RAN) according to the first QoS information; and setting up, by the RAN, a radio bearer (RB) between the RAN and a user equipment (UE) according to second QoS information, wherein the RB is associated w~~bout the second DBR; an uplink bearer resource (UBR) information receiving unit, adapted to receive the first QoS information, information about a second UBR, and a first bearer ID; a UBR information storing unit, adapted to store the first QoS information, the information about the second UBR, and the first bearer ID; a UBR allocating unit, adapted to allocate a third UBR for the second bearer according to second QoS information associated with the first QoS information; a UBR information sending unit~~h~~,a~~second bearer ID;~~dapted to send the second QoS information and information about the third UBR; a DBR information receiving unit, adapted to receivethe second QoS information,i~~s associated with the first QoS information; and the second bearer ID is associated with the first~~nformation about a third DBR, and a second bearer ID associated with the first bearer ID; and a DBR information storing unit, adapted to store the second QoS information, the information about the third DBR, and the secondbearer ID.

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| **被引用** | 11 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 2.80 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, device and system for assigning ACK channels to users**

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| **公开号** | [US8243669](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8243669&sv=ff8b54e139ea023376a4795f95f3cd9f) | **公开日** | 2012/08/14 |
| **申请号** | 12/543,005 | **申请日** | 2009/08/18 |
| **授权日** | 2012/08/14 | **优先日** | 2008/04/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chen; Xiaobo | Liu; Guang |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for assigning acknowledgement (ACK) channels to a user is used to feed back ACKs of a plurality of downlink sub-frames in one uplink sub-frame. According to the method, reserved ACK channels are divided into blocks according to the number of downlink sub-frames; each downlink sub-frame corresponds to one block; each block is divided into several sub-blocks; control channel element (CCE) sets within the same sub-frame are respectively mapped to different sub-blocks; and the ACK channels are assigned to the downlink sub-frames according to a sequence of increasing a mapping label d first and then increasing a sub-block label m. Thus, more unused ACK channels can be released to form resource blocks (RBs) for transmission on other channels, for example, for PUSCH transmission. Other methods for assigning ACK channels to a user, a device for assigning ACK channels to a user, and a communication system are further provided. |

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| **主权项** | 专利度:17特征度:22 |  |  |
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A method for assigning acknowledge (ACK) channels, comprising: dividing reserved ACK channels into N blocks; assigning each of N downlink sub-frames with a unique mapping label d, each mapping label corresponding to one block; dividing each block into a plurality of sub-blocks, each sub-block in one block being assigned with a unique sub-block label m, the sub-block with the sub-block label m contains INTEGER(NCCE,m+1/K)−INTEGER(NCCE,m/K) ACK channels; and assigning the sub-blocks to the N downlink sub-frames according to a control channel element (CCE) label nCCE in the N downlink sub-frames, and a sequence of increasing the mapping label d first and then increasing the sub-block label m; the N and K being positive integers, the d and m being integers greater than or equal to zero; the NCCE,m representing the number of CCEs in the downlink sub-frame when n is equal to m, the NCCE,m+1 representing the number of CCEs in the downlink sub-frame when n is equal to m+1, the n being the number of symbols occupied by a physical downlink control channel (PDCCH), and the INTEGER( ) representing a round up operation or a round down operation.

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| **对偶主权项** | 专利度:19特征度:22 |  |  |
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A method for assigning~~ACK channels to a user, which is used to feed back ACKs of N downlink sub-frames in one uplink sub-frame, the method~~acknowledge (ACK) channels,comprising:dividing reserved ACK channels into N blocks;assigning eachof Ndownlink sub-frameswith auniquemapping label d, each mapping label corresponding to one block;dividing each block into a plurality of sub-blocks, each sub-blockin one blockbeing assigned with auniquesub-block label m, the sub-block with the sub-block label m contains INTEGER(NCCE,m+1/K)−INTEGER(NCCE,m/K) ACK channels; andassigning the~~ACK channel~~sub-blocks to theNdownlink sub-frames according to acontrol channel element (CCE) label nCCE in the N downlink sub-frames, and asequence of increasing the mapping label d first and then increasing the sub-block label m;the N~~being a positive integer~~and K being positive integers, the d and m being integers greater than or equal to zero; the NCCE,m representing the number of CCEs in the downlink sub-frame when n is equal to m, the NCCE,m+1 representing the number of CCEs in the downlink sub-frame when n is equal to m+1, the n being the number of symbols occupied by a physical downlink control channel (PDCCH), and the INTEGER( ) representing a round up operation or a round down operation.

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| **被引用** | 17 | **自引用** | 9 | **公司数** | 1 | **国家数** | 2 | **影响力** | 3.74 |

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| **同族数** | 35 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier**

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| **公开号** | [US8238909](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8238909&sv=4b126c7afcd33fdb9c60474174393a27) | **公开日** | 2012/08/07 |
| **申请号** | 12/691,137 | **申请日** | 2010/01/21 |
| **授权日** | 2012/08/07 | **优先日** | 2007/07/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong | Li; Ming |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for identifying a UE in an SAE network, and an MME are provided herein. The method includes: receiving an SAE-TMSI which is allocated to a UE that accesses an SAE network and includes at least: a pool-ID, an MME-ID, and a UE temporary identifier; using the SAE-TMSI to temporarily identify the UE in the SAE network. The apparatus includes: a receiving unit and a temporary identifying unit. The MME includes a temporary identifier allocating unit. Moreover, a method for transmitting and allocating a temporary identifier, and a method for receiving and transmitting information according to the temporary identifier are disclosed herein. |

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| **主权项** | 专利度:12特征度:20 |  |  |
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A method for identifying a user equipment (UE) which is accessing a system architecture evolved (SAE) network, comprising: receiving, by an mobility management entity (MME) of the SAE network, an SAE-temporary mobile subscriber identity (SAE-TMSI) allocated to the UE from an evolved radio access network (RAN) entity, wherein the SAE-TMSI comprises: a resource pool identifier (pool-ID), a mobility management entity identifier (MME-ID) and a UE temporary identifier; and identifying, by the MME, the UE according to the SAE-TMSI, wherein the pool-ID is unique in a public land mobile network (PLMN), the MME-ID is unique in a resource pool, and the UE temporary identifier is unique in the MME.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method for identifying a user equipment (UE)which is accessinga system architecture evolved (SAE) network, comprising: receiving, by an mobility management entity (MME) of the SAE network,an SAE-temporary mobile subscriber identity (SAE-TMSI) allocated to~~a UE, which accesses the SAE network~~the UE from an evolved radio access network (RAN) entity, wherein the SAE-TMSI~~at least~~comprises: a~~n identifier for resource pool (pool-ID), an identifier for~~resource pool identifier (pool-ID), amobility management entityidentifier(MME-ID) and a UE temporary identifier; and identifying, by the MME,the UE according to the SAE-TMSI, wherein the pool-ID is unique in a public land mobile network (PLMN), the MME-ID is unique in a resource pool, and the UE temporary identifier is unique in the MME.

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| **被引用** | 20 | **自引用** | 10 | **公司数** | 4 | **国家数** | 2 | **影响力** | 8.61 |

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| **同族数** | 36 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Resource allocation method for MIMO-OFDM of multi-user access systems**

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| **公开号** | [US8238462](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8238462&sv=dcb2c236a37a5e3c4ef0f7f596fd9bd7) | **公开日** | 2012/08/07 |
| **申请号** | 12/050,623 | **申请日** | 2008/03/18 |
| **授权日** | 2012/08/07 | **优先日** | 2005/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jiang; Peigang | Wennstrom; Mattias |
| **国际 主分类** | H04L 1/02 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A resource allocation method for MIMO (multi-input multi-output-OFDM (orthogonal frequency-division multiplex) of multi-user access systems includes A) for each sub-carrier or group of sub-carriers of OFDM, grouping signature vectors of users at a time period according to correlations of the signature vectors; B) from the grouping results, selecting the signature vectors according to a scheduling rule; assigning the sub-carrier frequency and time resource to users of which simultaneously the selected signature vectors have low correlations; and assigning spatial resource to the users corresponding to the selected signature vectors. By minimizing the spatial co-channel interference to an acceptable low level, the complexity significantly in the joint multi-user optimization is reduced. |

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| **主权项** | 专利度:15特征度:16 |  |  |
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A resource allocation method used in a multi-input, multi-output-orthogonal frequency division multiplex (MIMO-OFDM) system comprising the steps of: receiving, by a base station, signature vectors fed back from users; for each sub-carrier or group of sub-carriers of the MIMO-OFDM system, grouping the signature vectors of the users at a time period according to correlations of the signature vectors; from the grouping results, selecting signature vectors having low correlations; assigning the sub-carrier or group of sub-carriers at a time period to the users corresponding to the selected signature vectors; and assigning spatial resources to the users corresponding to the selected signature vectors.

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| **对偶主权项** | 专利度:13特征度:17 |  |  |
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A resource allocation method~~for~~used in amulti-input,multi-output-orthogonal frequency~~-~~division multiplex~~,~~(MIMO-OFDM~~, of multi-user access systems, comprising:A~~)system comprising the steps of: receiving, by a base station, signature vectors fed back from users;for each sub-carrier or group of sub-carriers of~~OFDM~~the MIMO-OFDM system, groupingthesignature vectors oftheusers at a time period according to correlations of the signature vectors;~~B )~~from the grouping results, selecting~~the~~signature vectors~~according to a scheduling rule;~~having low correlations;assigning the sub-carrier or group of sub-carriers~~frequency and time resource to users of which simultaneously~~at a time period to the users corresponding tothe selected signature vectors~~have low correlations~~; andassigning spatial resourcesto the users corresponding to the selected signature vectors.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for determining transmit power**

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| **公开号** | [US8233440](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8233440&sv=9839459e4084b2f936a589d88e2448b7) | **公开日** | 2012/07/31 |
| **申请号** | 13/250,073 | **申请日** | 2011/09/30 |
| **授权日** | 2012/07/31 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wang; Weixin | Ma; Xueli | Wang; Zongjie |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for determining transmission power are disclosed. A gain factor of an E-DPDCH in a compressed mode is determined according to the number of E-DPDCH used for initial transmission of data; and the transmission power of the E-DPDCH is determined according to the gain factor of the E-DPDCH in compressed mode. As the gain factor of E-DPDCH in compressed mode is determined according to the number of E-DPDCH for initial transmission of data, the gain factor of the E-DPDCH in compressed mode can be determined accurately, and thus the transmit power of the E-DPDCH can be determined accurately according to the gain factor of the E-DPDCH. Therefore, the waste of transmit power of the E-DPDCH is reduced, and thus the system capacity is improved. |

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| **主权项** | 专利度:6特征度:27 |  |  |
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A terminal comprising: a~~processor comprising a~~gain factor determin~~er~~ing module, configured to determine an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, according to the number oftheE-DPDCH~~s~~for~~an~~initial transmission of data, wherein, when a current frame is a compressed frame, the gain factor determin~~er~~ing moduleis configured to determine the E-DPDCH gain factor as follows:β~~ed~~ed,~~C~~C,~~i~~i=~~β~~βc~~,~~,C,~~j~~j~~·~~·L~~e~~e,ref,~~1~~1L~~e~~e,~~I~~I,i~~·~~·~~(~~((~~L~~Le,ref,~~2~~2~~L~~Le~~,~~,ref~~,~~,1~~⁢~~&

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| **对偶主权项** | 专利度:6特征度:7 |  |  |
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A terminal comprising: a gain factor determining module, configured to determine an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, according to the number of the E-DPDCH for initial transmission of data, wherein, when a current frame is a compressed frame, the gain factor determining module is configured to determine the E-DPDCH gain factor as follows: β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1 &#xe89e; A ed , ref , 2 2 - A ed , ref , 1 2 K e , ref , 2 - K e , ref , 1 ) &#xe89e; ( K e , i - K e , ref , 1 ) + A ed , ref , 1 2 ) · 10 ( Δ &#xe89e; &#xe89e; harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N , wherein, βed,C,i denotes the E-DPDCH gain factor in compressed mode, Le,I,i denotes the number of the E-DPDCH for the initial transmission of data, βc,C,j denotes an Dedicated Physical Control Channel (DPCCH) gain factor used for the j:th TFC in compressed mode, A ed , ref , 1 = β ed , ref , 1 β c , and &#xe89e; &#xe89e; A ed , ref , 2 = β ed , ref , 2 β c , where βc is a DPCCH gain factor in non-compressed mode, βed,ref,1 and βed,ref,2 denote the E-DPDCH gain factors of a first and a second reference E-TFCs respectively, Le,ref,1 and Le,ref,2 denote the number of E-DPDCHs used for the first and second reference E-TFCs respectively, Ke,ref,1 and Ke,ref,2 denote transport block sizes of the first and second reference E-TFCs respectively, Ke,i denotes the transport block size of the i:th E-TFC, Δharq denotes an offset of a Hybrid Automatic Repeat Request (HARQ), Npilot,C is the number of pilot bits per slot on the DPCCH in compressed mode, Npilot,N is the number of pilot bits per slot on the DPCCH in non-compressed mode, and Nslots,I is the number of Discontinuous Transmission (DTX) slots in a frame used for the initial transmission of data.

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| **被引用** | 10 | **自引用** | 4 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.71 |

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| **同族数** | 22 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for determining transmit power**

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| **公开号** | [US8233439](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8233439&sv=26d77e514b41199b0f6c3ee009eed5ce) | **公开日** | 2012/07/31 |
| **申请号** | 13/090,874 | **申请日** | 2011/04/20 |
| **授权日** | 2012/07/31 | **优先日** | 2008/11/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Weixin | Ma; Xueli | Wang; Zongjie |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for determining transmit power are disclosed. The method includes: determining an E-DPDCH gain factor in compressed mode according to the number of E-DPDCH required for initial transmission of data; and determining transmit power of E-DPDCH according to the E-DPDCH gain factor in compressed mode. The E-DPDCH gain factor in compressed mode is determined according to the number of E-DPDCH required for initial transmission of data, and therefore, the E-DPDCH gain factor in compressed mode is determined accurately, the transmit power of E-DPDCH is determined accurately according to the E-DPDCH gain factor, the waste of transmit power of E-DPDCH is reduced, and therefore the system capacity is improved. |

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| **主权项** | 专利度:6特征度:26 |  |  |
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A method for determining an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, comprising: determining the E-DPDCH gain factor in compressed mode according to the number of E-DPDCH required for initial transmission of data; when Le,I,i denotes the number of E-DPDCH required for initial transmission of data, βed,C,i denotes the E-DPDCH gain factor, and a current frame is a compressed frame, β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1 ⁢ A ed , ref , 2 2 - A ed , ref , 1 2 K e , ref , 2 - K e , ref , 1 ) ⁢ ( K e , i - K e , ref , 1 ) + A ed , ref , 1 2 ) · 10 ( Δ ⁢ ⁢ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N , wherein βc,C,j denotes a Dedicated Physical Control Channel (DPCCH) gain factor used for the j:th TFC in compressed mode; A ed , ref , 1 = β ed , ref , 1 β c , A ed , ref , 2 = β ed , ref , 2 β c , and βc is a DPCCH gain factor in non-compressed mode; βed,ref,1 and βed,ref,2 denote E-DPDCH gain factors of first and second reference E-TFCs respectively; Le,ref,1 and Le,ref,2 denote the number of E-DPDCHs used for the first and second reference E-TFCs respectively; Ke,ref,1 and Ke,ref,2 denote the transport block sizes of the first and second reference E-TFCs respectively; Ke,i denotes the transport block size of the i:th E-TFC; Δharq denotes an offset of the HARQ; Npilot,C is the number of pilot bits per slot on the DPCCH in compressed frame; Npilot,N is the number of pilot bits per slot on the DPCCH in non-compressed frame; and Nslots,I is the number of non Discontinuous Transmission (DTX) slots in a frame used for initial transmission of data; and transmitting a signal using the determined E-DPDCH gain factor.

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| **对偶主权项** | 专利度:6特征度:6 |  |  |
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A method for determining an Enhanced Dedicated Channel Dedicated Physical Data Channel (E-DPDCH) gain factor in compressed mode, comprising: determining the E-DPDCH gain factor in compressed mode according to the number of E-DPDCH required for initial transmission of data; when Le,I,i denotes the number of E-DPDCH required for initial transmission of data, βed,C,i denotes the E-DPDCH gain factor, and a current frame is a compressed frame, β ed , C , i = β c , C , j · L e , ref , 1 L e , I , i · ( ( L e , ref , 2 L e , ref , 1&

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| **被引用** | 11 | **自引用** | 5 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.77 |

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| **同族数** | 22 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for protecting a BSF entity from attack**

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| **公开号** | [US8230213](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8230213&sv=4205017b803fa972bfb581fc56badda2) | **公开日** | 2012/07/24 |
| **申请号** | 12/208,375 | **申请日** | 2008/09/11 |
| **授权日** | 2012/07/24 | **优先日** | 2006/03/14 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Yanmei |
| **国际 主分类** | H04L 29/06 | **优先 国家** | CN |
| **代理** | Harness, Dickey & Pierce, P.L.C. |

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| **摘要** |  |
| A method, system and apparatus for protecting a bootstrapping service function (BSF) entity from attack includes: obtaining a first temporary identity and a second temporary identity after a user equipment (UE) performing mutual authentication with the BSF entity, where the first temporary identity is different from the second temporary identity; by the UE, originating a re-authentication request to the BSF entity through the first temporary identity; and originating a service request to a NAF entity through the second temporary identity. The present disclosure prevents attackers from intercepting the temporary identity at the Ua interface and using the temporary identity to originate a re-authentication request at the Ub interface, thus protecting the BSF entity from attack and avoiding unnecessary load on the BSF entity and saving resources. |

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| **主权项** | 专利度:21特征度:19 |  |  |
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A method for protecting a bootstrapping service function (BSF) entity from attack, comprising: sending, by a user equipment (UE), an authentication request to a BSF entity, wherein the authentication request carries an initial temporary identity, wherein the BSF entity checks whether the BSF entity stores a user's private identity correlatively with the initial temporary identity, and wherein the BSF entity requests a home subscriber server (HSS) for authentication information through the user's private identity if the BSF entity stores the user's private identity; performing, by the UE, a mutual authentication with the BSF entity by using the authentication information returned by the HSS; obtaining, by the UE, a first temporary identity and a second temporary identity after the UE performs the mutual authentication with the BSF entity, wherein the first temporary identity is different from the second temporary identity, and wherein the first and second temporary identities are different than the initial temporary identity; sending, by the UE, a request carrying the first temporary identity to the BSF entity; and sending, by the UE, a service request carrying the second temporary identity to a network application function (NAF) entity.

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| **对偶主权项** | 专利度:19特征度:8 |  |  |
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A method for protecting a bootstrapping service function (BSF) entity from attack, comprising:~~obtaining, a first temporary identity and~~sending, by a user equipment (UE), an authentication request to a BSF entity, wherein the authentication request carries an initial temporary identity, wherein the BSF entity checks whether the BSF entity storesause~~cond~~r's private identity correlatively with the initialtemporary identity,a~~fter a user equipment (~~nd wherein the BSF entity requests a home subscriber server (HSS) for authentication information through the user's private identity if the BSF entity stores the user's private identity; performing, by the UE, a mutual authentication with the BSF entity by using the authentication information returned by the HSS; obtaining, by the UE, a first temporary identity and a second temporary identity after theUE~~)~~perform~~ing~~s themutual authentication with the BSF entity, wherein the first temporary identity is different from the second temporary identity~~;by the UE, sending~~, and wherein the first and second temporary identities are different than the initial temporary identity; sending, by the UE,a request carrying the first temporary identity to the BSF entity;andsending,by the UE,~~sending~~a service request carrying the second temporary identity to a network application function (NAF) entity.

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| **被引用** | 9 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.71 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for disaster recovery of IMS**

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| **公开号** | [US8228787](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8228787&sv=496514bb8e8924ef852615f21ae8c2cb) | **公开日** | 2012/07/24 |
| **申请号** | 12/580,643 | **申请日** | 2009/10/16 |
| **授权日** | 2012/07/24 | **优先日** | 2007/09/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Liang; Feng | Shen; Linfei | Shi; Shufeng |
| **国际 主分类** | H04L 1/22 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method, apparatus, and system for disaster recovery of an IP Multimedia Subsystem (IMS) are provided. The method includes: triggering a redundant Call Session Control Function (CSCF); obtaining, by the redundant CSCF, user backup data of registered IMS Private User Identities (IMPIs) that are associated with IMPUs and user service configuration data of IMS Public User Identities (IMPUs) in an IMS subscription from a network storage entity of a user; and recovering, by the redundant CSCF, a corresponding service according to the obtained user backup data of the registered IMPIs and user service configuration data of the IMPUs in the IMS subscription. With the present invention, the one-IMPU multi-IMPI, one-IMPI multi-IMPU, or multi-IMPI multi-IMPU service can be recovered, and this enables the user to have better service continuity experiences. |

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| **主权项** | 专利度:24特征度:22 |  |  |
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A method for disaster recovery, comprising: obtaining, when a redundant Call Session Control Function (CSCF) is triggered, by the redundant CSCF, user backup data of registered IP Multimedia Subsystem (IMS) Private User Identities (IMPIs) that are associated with IMS Public User Identities (IMPUs) and user service configuration data of the IMPUs in an IMS subscription from a network storage device of a user, wherein the step of obtaining comprises: obtaining, by the redundant CSCF, information of the registered IMPIs that are associated with the IMPUs in the IMS subscription transmitted by the network storage device of the user; determining, by the redundant CSCF, an IMPU to be recovered according to the obtained information of the registered IMPIs, and requesting the network storage device of the user to recover user service configuration data of the IMPU and user backup data of a registered IMPI directly associated with the IMPU; and receiving, by the redundant CSCF, the user service configuration data of the IMPU and the user backup data of the registered IMPI directly associated with the IMPU carried in a response returned by the network storage device of the user; and performing, by the redundant CSCF, a corresponding service according to the obtained user backup data of the registered IMPIs and user service configuration data of the IMPUs in the IMS subscription.

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| **对偶主权项** | 专利度:27特征度:14 |  |  |
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A method for disaster recovery, comprising: obtaining, when a redundant Call Session Control Function (CSCF) is triggered, by the redundant CSCF, user backup data of registered IP Multimedia Subsystem (IMS) Private User Identities (IMPIs) that are associated with IMS Public User Identities (IMPUs) and user service configuration data of the IMPUs in an IMS subscription from a network storage~~entity of a user; an~~device of a user, wherein the step of obtaining comprises: obtaining, by the redundant CSCF, information of the registered IMPIs that are associated with the IMPUs in the IMS subscription transmitted by the network storage device of the user; determining, by the redundant CSCF, an IMPU to be recovered according to the obtained information of the registered IMPIs, and requesting the network storage device of the user to recover user service configuration data of the IMPU and user backup data of a registered IMPI directly associated with the IMPU; and receiving, by the redundant CSCF, the user service configuration data of the IMPU and the user backup data of the registered IMPI directly associated with the IMPU carried in a response returned by the network storage device of the user; andperforming, by the redundant CSCF, a corresponding service according to the obtained user backup data of the registered IMPIs and user service configuration data of the IMPUs in the IMS subscription.

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| **被引用** | 21 | **自引用** | 1 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.69 |

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| **同族数** | 12 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Cell access control method and user equipment**

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| **公开号** | [US8224321](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8224321&sv=073fbd2b38d057aa03e2a03ae516097d) | **公开日** | 2012/07/17 |
| **申请号** | 12/642,097 | **申请日** | 2009/12/18 |
| **授权日** | 2012/07/17 | **优先日** | 2007/06/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Qiu; Yong |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A cell access control method and a user terminal are provided, the method includes: obtaining, by a user equipment (UE), cell access information through a pilot channel and/or a synchronization channel; determining a current cell is a macro base station cell or an HNB cell according to the cell access information; determining, when the current cell is an HNB cell, whether the UE is allowed to access the HNB cell according to HNB information of the cell access information, if the UE is allowed to access the HNB cell, performing the access processing, if the UE is not allowed to access the HNB, abandoning the access. A UE is provided accordingly. |

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| **主权项** | 专利度:13特征度:10 |  |  |
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A cell access control method, comprising: obtaining, by a user equipment (UE), cell access information from a synchronization channel; determining, by the UE, whether a cell is a home eNodeB (HNB) cell according to the cell access information obtained by the UE; determining whether the UE is allowed to access the HNB cell by comparing, in instances where the cell is an HNB cell, the cell access information obtained from the synchronization channel with HNB information stored in UE memory; and accessing the HNB cell if the UE determines that the HNB information stored in UE memory corresponds to the HNB cell.

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| **对偶主权项** | 专利度:16特征度:9 |  |  |
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A cell access control method, comprising: obtaining, by a user equipment (UE), cell access information~~through a pilot channel or~~froma synchronization channel; determining, by the UE,whether a~~current~~cell is a~~macro base station cell or a~~home eNodeB (HNB) cell according to the cell access informationobtained by the UE; determining whether the UE is allowed to access the HNB cell by comparing, in instances where the cell is an HNB cell, the cell access information obtained from the synchronization channel with HNB information stored in UE memory; and accessing the HNB cell if the UE determines that the HNB information stored in UE memory corresponds to the HNB cell.

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| **被引用** | 14 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.59 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system, and apparatus for preventing bidding down attacks during motion of user equipment**

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| **公开号** | [US8219064](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8219064&sv=815975421b78a570e909d1384a5d7804) | **公开日** | 2012/07/10 |
| **申请号** | 12/535,889 | **申请日** | 2009/08/05 |
| **授权日** | 2012/07/10 | **优先日** | 2007/09/03 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Chengdong |
| **国际 主分类** |  | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method for preventing bidding down attacks during motion of a User Equipment (UE) is provided. The method includes the UE sends a Tracking Area Update (TAU) Request message to a new MME, the TAU Request carries UE's security capabilities, the UE receives UE's security capabilities sent by the MME, and the UE checks whether the received UE's security capabilities are consistent with the stored UE's security capabilities. A system, an MME, and a UE for preventing bidding down attacks during motion of the UE are also provided. When the UE performs security capability negotiation with the MME, the UE can check whether the received security capabilities are consistent with the stored security capabilities, and determine whether a bidding down attack exists, and therefore may prevent bidding down attacks. |

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| **主权项** | 专利度:12特征度:13 |  |  |
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A method for preventing bidding down attacks during motion of a User Equipment (UE) comprising: sending, by the UE, a Tracking Area Update (TAU) Request to a Mobility Management Entity (MME), wherein the TAU Request carries a first set of security capabilities stored in the UE; receiving, by the UE, a second set of security capabilities sent by the MME; and determining, by the UE, that a bidding down attack occurs if the the second set of security capabilities are inconsistent with the first set of security capabilities.

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| **对偶主权项** | 专利度:12特征度:23 |  |  |
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A method for preventing bidding down attacks during motion of a User Equipment (UE) comprising:sending, by the UE, a Tracking Area Update (TAU) Request to a Mobility Management Entity (MME), wherein the TAU Request carries~~the UE's stored~~a first set ofsecurity capabilities~~;~~stored in the UE;receiving, bythe UE~~'s~~, a second set ofsecurity capabilities sent by the MME; anddetermining, by the UE,that a bidding down attack occurs if the~~received UE's~~the second set ofsecurity capabilities are inconsistent with the~~stored UE's~~first set ofsecurity capabilities.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 15 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for realizing push service of GAA**

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| **公开号** | [US8213905](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8213905&sv=828f19858c256853dbee844c448ba523) | **公开日** | 2012/07/03 |
| **申请号** | 12/347,766 | **申请日** | 2008/12/31 |
| **授权日** | 2012/07/03 | **优先日** | 2006/07/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Yanmei |
| **国际 主分类** | H04M 1/66 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention discloses a method and a device for realizing PUSH service of GAA. The method includes the steps: the network side determines a PUSH service cryptographic key; the subscriber side communicates with the network side, and determines the PUSH service cryptographic key in accordance with the network side, and communicates with the network side using the PUSH service cryptographic key. By means of the method, the cryptographic key type of the PUSH service can be selected conveniently and agilely according to the actual application situation, and the network side and the subscriber side can select the derivation cryptographic key of the cryptographic key type meeting the requirement to communicate with each other. |

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| **主权项** | 专利度:16特征度:18 |  |  |
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A method for implementing a push service of the generic authentication architecture, comprising: selecting, by a bootstrapping authentication protocol server function entity (BSF), a type of key available to a Network Application Function (NAF), obtaining a key Ks for calculation of a push service key of the NAF, and calculating derived keys of Ks; taking one among the derived keys of the selected type of key as the push service key as required by the NAF for use; transmitting, by the BSF, the push service key of the selected type of key to the NAF; and the NAF notifying a user side the push service key type so that the user side obtains the push service by using a qualified push service key associated with the push service key type.

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| **对偶主权项** | 专利度:24特征度:22 |  |  |
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A method for implementing a push service of the generic authentication architecture, comprising:~~determining, at a network side, a push service key, and using the push service key to protect push service; andnotifying, by the network side,~~selecting, by a bootstrapping authentication protocol server function entity (BSF), a type of key available to a Network Application Function (NAF), obtaining a key Ks for calculation of a push service key of the NAF, and calculating derived keys of Ks; taking one among the derived keys of the selected type of key as the push service key as required by the NAF for use; transmitting, by the BSF, the push service key of the selected type of key to the NAF; and the NAF notifyinga user side the push service key type so that the user side obtains the push service by using a qualified push service key associated with the push service key type.

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.65 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Interworking network element, interworking system between the CSI terminal and the IMS terminal and the method thereof**

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| **公开号** | [US8213419](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8213419&sv=d7e52d4101851ebf17712fa28a19cdd5) | **公开日** | 2012/07/03 |
| **申请号** | 12/170,227 | **申请日** | 2008/07/09 |
| **授权日** | 2012/07/03 | **优先日** | 2006/01/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | inventergy | **发明人** | Zhu; Dongming | Zhang; Hengliang |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| An interworking network element, an interworking system between the CSI terminal and the IMS terminal and the method thereof, which relate to the communication technology, enable the CSI terminal and the IMS terminal to interwork and the effective bearing link to be established according to the actual requirement. The interworking network element CSI-IW is added at the network of the called side between the CSI terminal and the IMS terminal. The network element receives the session request from the IMS terminal, determines whether there is need to separate the IMS session including the real time media request and non-real time media request into the two IMS sessions including the real time media request and non-real time media request respectively, and chooses the CS domain or the IMS domain to end the call according to the attribute information of the session, the ability for accessing the network, the ability of the terminal etc, so that the real time session can be borne by the CS domain as possible as it can. |

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| **主权项** | 专利度:3特征度:27 |  |  |
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A method for interworking between a Combining CS and IMS services (CSI), capable terminal and an IP Multimedia Subsystem (IMS), terminal, comprising: receiving an IMS session request initiated by the IMS terminal to the CSI capable terminal; determining whether an IMS session represented by the IMS session request needs to be split, and splitting the IMS session when needed; and selecting a domain for bearing each of the split IMS sessions according to information on domain selection, and terminating the split IMS sessions in at least one of a Circuit Switched (CS) domain and an IMS, wherein the determining of whether the IMS session and the IMS session represented by the IMS session request is needed to be split or not comprises: if the IMS session contains a real-time media component and a non-real-time media component, determining whether the IMS session needs to be split or not according to or any combination of capability information of an access network in which the CSI capable terminal lies, registration status information of the CSI capable terminal in the CS domain, and subscription information of a subscriber of the CSI capable terminal.

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| **对偶主权项** | 专利度:19特征度:13 |  |  |
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A method for interworking between a Combining CS and IMS services~~,~~(CSI), capable terminal and an IP Multimedia Subsystem~~,~~(IMS), terminal, comprising:receiving an IMS session request initiated by~~an~~theIMS terminal to~~a~~theCSI capable terminal;~~andperforming service logic control to ac~~determining whether an IMS session represented by the IMS session request needs to be split, and splitting the IMS session when needed; and selecting a domain for bearing each of the split IMS sessions according to information on domain selection, and terminating the split IMS sessions in at least one of a Circuit Switched (CS) domain and an IMS, wherein the determining of whether the IMS session and the IMS session represented by the IMS session request is needed to be split or notcomp~~l~~ris~~h establishment of a session between the CSI capable terminal and the IMS~~es: if the IMS session contains a real-time media component and a non-real-time media component, determining whether the IMS session needs to be split or not according to or any combination of capability information of an access network in which the CSI capable terminal lies, registration status information of the CSI capable terminal in the CS domain, and subscription information of a subscriber of the CSI capableterminal.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.33 |

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| **同族数** | 11 | **国家数** | 6 |

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**Method, device and system for assigning ACK channels to users**

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| **公开号** | [US8213378](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8213378&sv=089788b3066d4ca43555f4d8cdafe1e8) | **公开日** | 2012/07/03 |
| **申请号** | 13/286,844 | **申请日** | 2011/11/01 |
| **授权日** | 2012/07/03 | **优先日** | 2008/04/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Chen; Xiaobo | Liu; Guang |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for assigning acknowledgement (ACK) channels to a user is used to feed back ACKs of a plurality of downlink sub-frames in one uplink sub-frame. According to the method, reserved ACK channels are divided into blocks according to the number of downlink sub-frames; each downlink sub-frame corresponds to one block; each block is divided into several sub-blocks; control channel element (CCE) sets within the same sub-frame are respectively mapped to different sub-blocks; and the ACK channels are assigned to the downlink sub-frames according to a sequence of increasing a mapping label d first and then increasing a sub-block label m. Thus, more unused ACK channels can be released to form resource blocks (RBs) for transmission on other channels, for example, for PUSCH transmission. Other methods for assigning ACK channels to a user, a device for assigning ACK channels to a user, and a communication system are further provided. |

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| **主权项** | 专利度:29特征度:18 |  |  |
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A method for assigning ACK channels comprising: dividing reserved ACK channels into N blocks, the N being a positive non-zero integer; assigning each of a plurality of N downlink sub-frames with a mapping label d, each mapping label corresponding to one block, the d being a positive integer greater than or equal to zero; dividing each block into a plurality of sub-blocks; assigning each sub-block with a sub-block label m according to a control channel element (CCE) label nCCE in the downlink sub-frame by selecting a value of the m to satisfy INTEGER(NCCE,m/K)×K≦nCCE≦INTEGER(NCCE,m+1/K)×K−1, the m being a positive integer greater than or equal to zero, the K being a positive non-zero integer, the N CCE,m representing the number of CCEs in the downlink sub-frame when n is equal to m, the NCCE,m+1 representing the number of CCEs in the downlink sub-frame when n is equal to m+1, the n being the number of symbols occupied by a physical downlink control channel (PDCCH); and assigning the ACK channels to the downlink sub-frames for acknowledging the downlink sub-frames according to a sequence of increasing the mapping label d first and then increasing the sub-block label m.

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| **对偶主权项** | 专利度:30特征度:6 |  |  |
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A method for assigning ACK channels comprising: dividing reserved ACK channels into N blocks, the N being a positive non-zero integer; assigning each of a plurality of N downlink sub-frames with a mapping label d, each mapping label corresponding to one block, the d being a positive integer greater than or equal to zero; dividing each block into a plurality of sub-blocks~~,~~; assigningeach sub-block~~being assigned~~with a sub-block label m according to a control channel element (CCE) label nCCE in the downlink sub-frame~~; and assigning the ACK channels to~~by selecting a value of the m to satisfy INTEGER(NCCE,m/K)×K≦nCCE≦INTEGER(NCCE,m+1/K)×K−1, the m being a positive integer greater than or equal to zero, the K being a positive non-zero integer, the N CCE,m representing the number of CCEs in the downlink sub-frame when n is equal to m, the NCCE,m+1 representing the number of CCEs in the downlink sub-frame when n is equal to m+1, the n being the number of symbols occupied by a physical downlink control channel (PDCCH); and assigning the ACK channels to the downlink sub-frames for acknowledgingthe downlink sub-frames according to a sequence of increasing the mapping label d first and then increasing the sub-block label m~~; the N being a positive integer~~.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 35 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for managing local terminal equipment accessing a network**

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| **公开号** | [US8208898](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8208898&sv=07fe6d094bee0c047bbcb5b6d45fd3f5) | **公开日** | 2012/06/26 |
| **申请号** | 10/591,151 | **申请日** | 2005/06/21 |
| **授权日** | 2012/06/26 | **优先日** | 2004/06/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Yingxin | Zhang; Wenlin |
| **国际 主分类** | H04M 1/66 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| Methods for managing a local Terminal Equipment (TE) accessing a network are provided. One is to set in a Mobile Terminal (MT) a management list containing the identities of local TEs, and to decide according to the information of the management list whether to accept a request message from the TE, thereby implementing the management of local TE that accesses the network using resources of the MT, improving the function of the MT, and at the same time, enhancing the security of users' accounts. In accordance with this invention, a user is able to define an authority for the TE to access and learn the current state of the TE, which gives the user facilities for daily use. The other method is to modify the existing procedure such that the MT will not send the key(s) information to the TE until having received a notice of successful authentication from the TE or having decided that the message forwarded by the TE is a response message of successful authentication, which makes the procedure more reasonable and saves the network resources the method further includes a management list containing the identities of local TEs on the basis of the modified procedure. |

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| **主权项** | 专利度:19特征度:24 |  |  |
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A method for managing a local terminal equipment (TE) accessing a network through a mobile terminal (MT), wherein a management list is stored in the MT, the management list contains identity and current state information of one or more local TEs and information of whether each of the local TEs is allowed to access the network, wherein the network allows a limited number of local TEs to access via the MT, and wherein a user identity card having an identity is coupled with the MT, the method comprising: receiving, by the MT, an authentication request identity message containing an identity of a local TE from the local TE in a network access establishing procedure, determining, by the MT, according to the current state information of the local TEs in the management list whether the MT is serving the number of the local TEs as limited by the network; if the MT is serving the number of the local TEs as limited by the network, terminating the network access establishing procedure so that the access to the network by the local TE is not established; if the MT is serving fewer local TEs than the number as limited by the network, determining, by the MT, according to the management list whether the local TE is allowed to access the network; if, according to the management list, the local TE is allowed to access the network, acquiring, by the MT, the identity of the user identity card and returning the identity of the user identity card to the local TE, so that the local TE accesses the network by using the identity of the user identity card; and if a message of successful authentication is received from the local TE, modifying by the MT, the current state information of the local TE in the management list to indicate an online state, sending key information to the local TE, wherein the key information is used by the local TE in accessing the network.

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| **对偶主权项** | 专利度:19特征度:6 |  |  |
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A method for managing a local~~T~~terminal~~E~~equipment (TE) accessing a network~~, wherein a management list containing an identity~~through a mobile terminal (MT), wherein a management list is stored in the MT, the management list contains identity and current state information of one or more local TEs and information of whether eachof the local TEsis~~configured in a Mobile Terminal (~~allowed to access the network, wherein the network allows a limited number of local TEs to access via theMT~~)~~,andwhereina user identity card~~is inserted in~~having an identity is coupled withthe MT, the method comprising~~the steps of:after receiving~~: receiving, by the MT,an authentication request identity message containing~~the~~anidentity of a~~nd~~local TEfrom the local TE~~, the MT deciding~~in a network access establishing procedure, determining, by the MT,according to thecurrent stateinformation of thelocalTEsi~~dentity in the management list whether to accept the request;if a decision is made~~n the management list whether the MT is serving the number of the local TEs as limited by the network; if the MT is serving the number of the local TEs as limited by the network, terminating the network access establishing procedure so that the access to the network by the local TE is not established; if the MT is serving fewer local TEs than the number as limited by the network, determining, by the MT, according to the management list whether the local TE is allowedto acce~~pt~~ssthe~~request, the MT acquiring a~~network; if, according to the management list, the local TE is allowed to access the network, acquiring, by the MT, theidentity of the user identity card and returning the identity~~to the TE, the~~of the user identity card to the local TE, so that the localTE access~~ing~~esthe networkbyusing th~~is identity, and the procedure is over; otherwise, refusing to return the identity of the user identity card to the TE, and terminating the procedur~~eidentity of the user identity card; and if a message of successful authentication is received from the local TE, modifying by the MT, the current state information of the local TE in the management list to indicate an online state, sending key information to the local TE, wherein the key information is used by the local TE in accessing the network.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for implementing policy and charging control**

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| **公开号** | [US8208896](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8208896&sv=0cf31bae5da8e8189718ba3c39f40ad7) | **公开日** | 2012/06/26 |
| **申请号** | 12/483,697 | **申请日** | 2009/06/12 |
| **授权日** | 2012/06/26 | **优先日** | 2007/07/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yan | Ni; Hui |
| **国际 主分类** | H04M 11/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for implementing a policy and charging control (PCC) is provided. The method includes: acquiring user location information; and determining a PCC rule of a user according to the acquired user location information. The PCC rule is for a policy and charging enforcement function (PCEF) to perform the corresponding PCC. Corresponding PCEF, policy control and charging rules function (PCRF), gateway, and system for implementing a PCC are also provided. Thus, the PCC based on fine-granularity location information is implemented. |

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| **主权项** | 专利度:12特征度:18 |  |  |
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A method for implementing a Policy and Charging Control (PCC), comprising: acquiring, by a Policy and Charging Rules Function (PCRF), user location acquisition ability information carried in a Credit-Control-Request (CCR) message sent by a Policy and Charging Enforcement Function (PCEF), wherein the user location acquisition ability information comprises a user location information attribute value pair denoting whether the PCEF have an ability of acquiring user location information; and determining, by the PCRF, a PCC rule of a user according to the user location acquisition ability information, in which the PCC rule is for (the PCEF to perform a corresponding PCC.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method for implementing a Policy and Charging Control (PCC), comprising:acquiring~~user location information; anddetermining a PCC rule of a user according to the user location information, in which the PCC rule is for a Policy and Charging Enforcement Function (~~, by a Policy and Charging Rules Function (PCRF), user location acquisition ability information carried in a Credit-Control-Request (CCR) message sent by a Policy and Charging Enforcement Function (PCEF), wherein the user location acquisition ability information comprises a user location information attribute value pair denoting whether the PCEF have an ability of acquiring user location information; and determining, by the PCRF, a PCC rule of a user according to the user location acquisition ability information, in which the PCC rule is for (thePCEF~~)~~to perform~~the~~acorresponding PCC.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.71 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for transporting/receiving notification messages via file delivery over unidirectional protocol**

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| **公开号** | [US8200781](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8200781&sv=b937e03650e73a702f3a61498905691f) | **公开日** | 2012/06/12 |
| **申请号** | 13/198,551 | **申请日** | 2011/08/04 |
| **授权日** | 2012/06/12 | **优先日** | 2007/04/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Yue; Pieyu | Shi; Teng | Zhang; Jie | Chen; Li | Fu; Xin |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for transporting/receiving notification messages via File Delivery over Unidirectional Transport (FLUTE) includes: At the transmitting end, a server carries a notification content in a transport object and carries notification related information and a transport object identifier (TOI) of the transport object carrying the notification content in a first file description table (FDT), and then sends the first FDT and the transport object carrying the notification content in a FLUTE session; the receiving end obtains the notification related information and the TOI of the transport object carrying the notification content from the first FDT, and receives the transport object carrying the notification content according to the obtained related information and the TOI. A server for transporting notification messages via FLUTE, a FLUTE server, a content server and a terminal are also disclosed. With the present invention, the notification transport procedure is simpler and the reliability of notification transport is better. |

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| **主权项** | 专利度:18特征度:16 |  |  |
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A method for receiving a notification message via File Delivery over Unidirectional Transport (FLUTE), comprising: obtaining notification related information and a transport object identifier (TOI) of a transport object that carries a notification content from a file description table (FDT), wherein the notification related information carries in the FDT by use of these steps as follows: setting a Content-Type attribute of a FILE element to a Notification type, wherein the Notification type in the Content-Type attribute of a FILE element of the FDT indicates that a corresponding transport object carries a notification message; and carrying the notification related information in a notification related element, wherein the notification related element is in the FILE element of the FDT to carry the notification related information; and receiving the transport object that carries the notification content in a current FLUTE session according to the obtained notification related information and the TOI.

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| **对偶主权项** | 专利度:19特征度:16 |  |  |
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A method for~~transport~~receiving a notification message via File Delivery over Unidirectional Transport (FLUTE), comprising:~~carrying a notification content in a transport object and carry~~obtaining notification related information and a transport object identifier (TOI) of~~the~~atransport object that carries~~the~~anotification content~~in~~froma file description table (FDT)~~;~~,wherein the~~process of carrying the~~notification related information~~in the first FDT include~~carries in the FDT by use of these steps as follows: setting a Content-Type attribute of a FILE element~~of the FDT~~to a Notification type, wherein the Notification typein the Content-Type attribute of a FILE element of the FDTindicates that a corresponding transport object carries a notification message~~,~~;and carrying the notification related information in a notification related element, wherein the notification related element is in the F~~ile~~ILEelement~~; and sending the FDT and~~of the FDT to carry the notification related information; and receivingthe transport object that carries the notification content in acurrentFLUTE sessionaccording to the obtained notification related information and the TOI.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for identifying user equipment, and method for transmitting and allocating a temporary identifier**

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| **公开号** | [US8200220](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8200220&sv=755a1b66cd18afe134f9d26c86969d2b) | **公开日** | 2012/06/12 |
| **申请号** | 13/253,704 | **申请日** | 2011/10/05 |
| **授权日** | 2012/06/12 | **优先日** | 2007/07/27 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Guo; Xiaolong | Li; Ming |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and an apparatus for identifying a UE in an SAE network, and an MME are provided herein. The method includes: receiving an SAE-TMSI which is allocated to a UE that accesses an SAE network and includes at least: a pool-ID, an MME-ID, and a UE temporary identifier; using the SAE-TMSI to temporarily identify the UE in the SAE network. The apparatus includes: a receiving unit and a temporary identifying unit. The MME includes a temporary identifier allocating unit. Moreover, a method for transmitting and allocating a temporary identifier, and a method for receiving and transmitting information according to the temporary identifier are disclosed herein. |

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| **主权项** | 专利度:11特征度:14 |  |  |
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A method for selecting a mobility management entity (MME) in a system architecture evolved (SAE) network, comprising: receiving, by an evolved radio access network (RAN) entity, an SAE-temporary mobile subscriber identity (SAE-TMSI) from a user equipment (UE), wherein the SAE-TMSI comprises at least one of the following: (a) an identifier for resource pool (pool-ID), and (b) an identifier for the mobility management entity (MME-ID), wherein the pool-ID is unique in a public land mobile network (PLMN), the MME-ID is unique in the resource pool; and selecting or reselecting, by the RAN entity, the MME according to the pool-ID and the MME-ID in the SAE-TMSI.

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| **对偶主权项** | 专利度:15特征度:9 |  |  |
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A method for selecting a mobility management entity (MME) in a system architecture evolved (SAE) network, comprising: receiving, by an e~~NodeB~~volved radio access network (RAN) entity, an SAE-temporary mobile subscriber identity (SAE-TMSI) from a user equipment (UE), wherein the SAE-TMSI comprises at least one of the following: (a) an identifier for resource pool (pool-ID), and (b) an identifier for the mobility management entity (MME-ID), wherein the pool-ID is unique in a public land mobile network (PLMN), the MME-ID is unique in the resource pool; and selecting or reselecting, by the~~eNodeB~~RAN entity, the MME according to the pool-ID and the MME-ID in the SAE-TMSI.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.22 |

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| **同族数** | 36 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for controlling power of uplink physical channel**

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| **公开号** | [US8195217](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8195217&sv=8985e5a83692c7e02adf579083eee612) | **公开日** | 2012/06/05 |
| **申请号** | 13/292,841 | **申请日** | 2011/11/09 |
| **授权日** | 2012/06/05 | **优先日** | 2006/08/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xu; Liang |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for controlling power of an uplink physical channel includes: computing a relative gain factor in a compressed mode; correcting the relative gain factor to obtain a corrected relative gain factor; generating a gain factor in the compressed mode according to the corrected relative gain factor; controlling power of the uplink physical channel according to the gain factor in the compressed mode generated. In embodiments of the present invention, after being computed, the relative gain factor in the compressed mode is corrected; the gain factor in the compressed mode is then generated according to the corrected relative gain factor. Thus, an accurate gain factor may be acquired for controlling the power of the uplink physical channel. |

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| **主权项** | 专利度:3特征度:31 |  |  |
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An apparatus for controlling power of an uplink physical channel, wherein the apparatus is configured to: generate a gain factor of an uplink Enhanced Dedicated Physical Data Channel (E-DPDCH) in compressed mode by way of β ed , C , i = β c , C , j · A ed · L e , ref L e , I , i · K e , i K e , ref · 10 ( Δ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N  if an Enhanced-Dedicated Channel (E-DCH) Transmission Time Interval (TTI) is 10 msec and a current frame is compressed, wherein the βed,C,i is a gain factor of the E-DPDCH in the compressed mode, the βc,C,j is a gain factor of a Dedicated Physical Control Channel (DPCCH) in the compressed mode, the Aed is a relative gain factor of the E-DPDCH/DPCCH for a reference Enhanced-TFC (E-TFC) in a non-compressed mode, the Le,ref denotes the number of E-DPDCHs for the reference E-TFC, the Le,I,i denotes the number of E-DPDCHs used for i:th E-TFC in a first frame used for transmitting data, the Ke,ref denotes a transport block size of the reference E-TFC, the Ke,i denotes a transport block size of the current E-TFC, the Δharq is a Hybrid Automatic Repeat Request (HARM) offset, the Npilot,C is the number of pilot bits per slot on the DPCCH in compressed frames, the Npilot,N is the number of pilot bits per slot on the DPCCH in non-compressed frames, and the Nslot,I is the number of non DTX slots in the first frame used for transmitting the data; and control power of the uplink physical channel according to the gain factor in the compressed mode generated.

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| **对偶主权项** | 专利度:3特征度:4 |  |  |
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An apparatus for controlling power of an uplink physical channel, wherein the apparatus is configured to: generate a gain factor of an uplink Enhanced Dedicated Physical Data Channel (E-DPDCH) in compressed mode by way of β ed , C , i = β c , C , j · A ed · L e , ref L e , I , i · K e , i K e , ref · 10 ( Δ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N ifanEnhanced-Dedicated Channel (E-DCH) Transmission Time Interval (TTI) is 10 msec andacurrent frame is compressed, whereintheβed,C,i is~~the~~again factor of the E-DPDCH in the compressed mode,theβc,C,j isagain factor of~~the~~aDedicated Physical Control Channel (DPCCH) in the compressed mode,theAed isarelative gain factor of the E-DPDCH/DPCCH forareference Enhanced-TFC (E-TFC) in~~the~~anon-compressed mode,theLe,ref denotes the number of E-DPDCH~~(s)~~sfor the reference E-TFC,theLe,I,i denotes the number of E-DPDCH~~(s)~~sused for~~an~~i:th E-TFC inafirst frame used for transmitting data,theKe,ref denotesatransport block size of the reference E-TFC,theKe,i denotes~~the~~atransport block size of the current E-TFC,theΔharq isaHybrid Automatic Repeat Request (HARM) offset,theNpilot,C is the number of pilot bits per slot on the DPCCH in compressed frames,theNpilot,N is the number of pilot bits per slot on the DPCCH in non-compressed frames, andtheNslot,I is the number of non DTX slots in the first frame used for transmitting the data; and control power of the uplink physical channel according to the gain factor in the compressed mode generated.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 19 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for using IMS communication service identifier**

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| **公开号** | [US8185105](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8185105&sv=2c5055cb8d6ec2c4e39950ba63178783) | **公开日** | 2012/05/22 |
| **申请号** | 12/539,890 | **申请日** | 2009/08/12 |
| **授权日** | 2012/05/22 | **优先日** | 2007/02/13 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | inventergy | **发明人** | Zhu; Dongming | He; Xiaoyan | Liang; Shuang |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method, system and apparatus for using an IMS communication service identifier is provided. The method includes getting, by an HSS, arrival of information related to a user subscribed IMS communication service identifier, and sending information of a user subscribed IMS communication service identifier to a SID-requiring network entity according to the information related to the user subscribed IMS communication service. |

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| **主权项** | 专利度:4特征度:21 |  |  |
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A method for using an IP Multimedia Subsystem (IMS) communication service identifier, comprising: getting, by a home location register home subscriber service (HSS), arrival of information related to a user subscribed IMS communication service identifier; and sending, by the HSS, information of a user subscribed IMS communication service identifier to a Service Identifier (SID)-requiring network entity according to the information related to the user subscribed IMS communication service identifier; wherein the SID-requiring network entity is a Serving Call Session Control Function (S-CSCF); the HSS determines arrival of the information related to the user subscribed IMS communication service identifier upon reception of a message requesting for downloading a user service profile from the S-CSCF; and the HSS sends a response message of the message requesting for downloading the user service profile to the S-CSCF, wherein the information of the user subscribed IMS communication service identifier is contained in the response message.

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| **对偶主权项** | 专利度:20特征度:17 |  |  |
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A method for using an IP Multimedia Subsystem (IMS) communication service identifier, comprising:getting, by a home location register home subscriber service (HSS), arrival of information related to a user subscribed IMS communication service identifier; andsending, by the HSS, information of a user subscribed IMS communication service identifier to a Service Identifier (SID)-requiring network entity according to the information related to the user subscribed IMS communication service identifier; wherein the SID-requiring network entity is a Serving Call Session Control Function (S-CSCF); the HSS determines arrival of the information related to the user subscribed IMS communication service identifier upon reception of a message requesting for downloading a user service profile from the S-CSCF; and the HSS sends a response message of the message requesting for downloading the user service profile to the S-CSCF, wherein the information of the user subscribed IMS communication service identifier is contained in the response message.

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| **被引用** | 15 | **自引用** | 1 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.99 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Apparatus, system and method for short message routing control**

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| **公开号** | [US8184621](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8184621&sv=558e84fa5cb143c086508c174cbc165d) | **公开日** | 2012/05/22 |
| **申请号** | 12/198,550 | **申请日** | 2008/08/26 |
| **授权日** | 2012/05/22 | **优先日** | 2006/08/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Zhong; Jianfeng |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The present disclosure provides an apparatus, system and method for short message routing control for delivering the short message when multiple paths exist. The apparatus for short message routing control includes an short message intelligent decision query unit and a Network Domain selection entity (NeDs) connected with each other; the short message intelligent decision query unit is configure to query the NeDs for a routing decision of a short message upon receiving the short message; and the NeDs is configured to determine the routing decision of the short message according to routing decision information stored in the NeDs, and return the determined routing decision to the short message intelligent decision query unit. |

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| **主权项** | 专利度:21特征度:23 |  |  |
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In a short messaging communication system where multiple paths exist for routing a plurality of short messages, an apparatus for short message routing control and routing decision processing, the apparatus comprising: a memory unit for storing routing decision information used in determining one or more routing decisions for one or more short messages; and a routing decision control entity coupled to the memory unit and configured to retrieve the stored routing decision information or use in determining the routing decision of the one or more short messages by first determining when multiple IP connections in an IP multimedia subsystem (IMS) domain are activated, wherein when multiple IP connections in the IMS domain are activated: determining a priority of routes within the IMS domain, and a policy for selecting another of the multiple IP connections upon failing to send the one or more short messages via a first IP connection from the multiple IP connections, otherwise, routing the one or more short messages to a circuit switched (CS) domain upon failing to send the one or more short messages in the IMS domain.

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| **对偶主权项** | 专利度:25特征度:9 |  |  |
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~~A apparatus for short message routing control, comprising:a short message intelligent decision query unit connected with a Network Domai~~In a short messaging communication system where multiple paths exist for routing a plurality of short messages, an apparatus for short message routing control and routing decision processing, the apparatus comprising: a memory unit for storing routing decision informationuse~~lection entity (NeDs), wherein the short message intelligent decision que~~d in determining one or more routing decisions for one or more short messages; and a routing decision control entity coupled to the memory unit~~is~~andconfigured to~~query the NeDs for a routing decision of a short message upon receiving the short message; andthe NeDs is configured to determine the routing decision of the short message according to routing decision information stored in the NeDs, and return the determined routing decision to the short message intelligent decision query unit~~retrieve the stored routing decision information or use in determining the routing decision of the one or more short messages by first determining when multiple IP connections in an IP multimedia subsystem (IMS) domain are activated, wherein when multiple IP connections in the IMS domain are activated: determining a priority of routes within the IMS domain, and a policy for selecting another of the multiple IP connections upon failing to send the one or more short messages via a first IP connection from the multiple IP connections, otherwise, routing the one or more short messages to a circuit switched (CS) domain upon failing to send the one or more short messages in the IMS domain.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.8 |

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| **同族数** | 9 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for obtaining location area information during handover between heterogeneous networks**

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| **公开号** | [US8184595](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8184595&sv=efa2fbf898d76505a11c4fb998295e01) | **公开日** | 2012/05/22 |
| **申请号** | 13/294,008 | **申请日** | 2011/11/10 |
| **授权日** | 2012/05/22 | **优先日** | 2008/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Shuai; Yanglai |
| **国际 主分类** | H04W 36/10 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method obtains area information during handover between heterogeneous networks. A mobility management entity of a destination network receives location area related information of a User Equipment (UE) from a mobility management entity of a source network. The mobility management entity obtains location area information required by the UE according to the location area related information. The mobility management entity sends the location area information required by the UE to the UE. |

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| **主权项** | 专利度:10特征度:15 |  |  |
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A m~~obility management entity of a sourc~~ethod for obtaining location area information during handover between heterogeneousnetworks,the methodcomprising:~~a~~receiv~~er configured to receive a attach request from a User Equipment (UE) to initiate a handover; a processor configured to obtain a Tracking Area Id~~ing, by a mobility management entity of a destination network, a Tracking Area Identity (TAI) of a User Equipment (UE) from a mobility management entity of a source network; obtaining, by the mobility managemententity~~(TAI)~~of the~~UE in accordance with source cell ID of the UE and a mapping between a cell ID of a cell in the source network and a location area in the destination network; and a transmitter configured to send the TAI of~~destination network, location area information required by the UE according to the TAI; and sending, by the mobility management entity of the destination network, the location area information tothe UE~~to a~~via themobility management entity of~~a destination~~the sourcenetwork.

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| **对偶主权项** | 专利度:18特征度:8 |  |  |
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A method for obtaining location area information during handover between heterogeneous networks, the method comprising: receiving, by a mobility management entity of a destination network, a Tracking Area Identity (TAI) of a User Equipment (UE) from a mobility management entity of a source network; obtaining, by the mobility management entity of the destination network, location area information required by the UE according to the TAI; and sending, by the mobility management entity of the destination network, the location area information to the UE via the mobility management entity of the source network.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for notifying changes of cell information in multimedia broadcast/multicast service**

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| **公开号** | [US8180356](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8180356&sv=99409e25ea4a7f131addb2c6a902c730) | **公开日** | 2012/05/15 |
| **申请号** | 11/479,854 | **申请日** | 2006/06/29 |
| **授权日** | 2012/05/15 | **优先日** | 2004/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Hao |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention discloses a method for notifying changes of cell information in MBMS. The method comprises a procedure of the change in cell information of an adjacent cell triggering a UE demodulating the cell information: acquires cell information of adjacent cell in realtime and determines whether the cell information has changed, if changed, carries service information in an instruction message of the control channel and notifies a UE of a change in cell information; otherwise, repeats this step. By means of the method according to the present invention, it is ensured that the UE has correct cell information at any time, even when moving to the border of two adjacent cells. |

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| **主权项** | 专利度:12特征度:24 |  |  |
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A method for providing an indication of radio bearer information change to a User Equipment (UE) in a multimedia broadcast/multicast service (MBMS), wherein the UE is located in a local cell and one or more other cells are adjacent to the local cell, the method comprising: acquiring, by a Base Station Controller/Radio Network Controller (BSC/RNC), radio bearer information of the local cell, and acquiring, by the BSC/RNC, radio bearer information of an adjacent cell in real time; determining whether the radio bearer information of the adjacent cell has changed relative to a prior set of radio bearer information of the adjacent cell; if the radio bearer information of the adjacent cell has changed, determining, by the BSC/RNC, whether radio bearer information of the local cell has also changed relative to a prior set of radio bearer information of the local cell; and if the radio bearer information of the local cell has not changed, selecting an operation instruction for the UE that is presented in two modes; wherein the selecting an operation instruction for a first mode comprises: (a) sending, by the BSC/RNC, service information and an operation instruction to the UE via a control channel; wherein the operation instruction instructs the UE to acquire the radio bearer information of only the adjacent cell; and issuing, by the BSC/RNC, the radio bearer information of the local cell and the changed radio bearer information of the adjacent cell to the UE, and wherein the selecting an operation instruction for a second mode comprises: (b) determining, by the BSC/RNC, which subset of the radio bearer information of the adjacent cell has changed, sending, by the BSC/RNC, service information and an operation instruction to the UE via a control channel; wherein the operation instruction instructs the UE to acquire the changed subset of the radio bearer information of the adjacent cell; and issuing, by the BSC/RNC, the radio bearer information of the local cell and the changed radio bearer information of the adjacent cell to the UE; wherein the radio bearer information of the adjacent cell is divided into two subsets: common information of the adjacent cell and uncommon information of the adjacent cell.

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| **对偶主权项** | 专利度:15特征度:8 |  |  |
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A method for~~notifying changes of cell information in multimedia broadcast/multicast service (MBMS), comprising a procedure of change in adjacent cell information triggering user equipment (UE) demodulating cell~~providing an indication of radio bearer information change to a User Equipment (UE) in a multimedia broadcast/multicast service (MBMS), wherein the UE is located in a local cell and one or more other cells are adjacent to the local cell, the method comprising: acquiring, by a Base Station Controller/Radio Network Controller (BSC/RNC), radio bearer information of the local cell, and acquiring, by the BSC/RNC, radio bearer information of an adjacent cell in real time; determining whether the radio bearer information of the adjacent cell has changed relative to a prior set of radio bearer information of the adjacent cell; if the radio bearer information of the adjacent cell has changed, determining, by the BSC/RNC, whether radio bearerinformation~~,~~ofthe~~procedure comprising: acquiring cell information of the adjacent cell in realtime and determining whether the cell information has changed and, if changed, carrying~~local cell has also changed relative to a prior set of radio bearer information of the local cell; and if the radio bearer information of the local cell has not changed, selecting an operation instruction for the UE that is presented in two modes; wherein the selecting an operation instruction for a first mode comprises: (a) sending, by the BSC/RNC, service information and an operation instruction to the UE via a control channel; wherein the operation instruction instructs the UE to acquire the radio bearer information of only the adjacent cell; and issuing, by the BSC/RNC, the radio bearer information of the local cell and the changed radio bearer information of the adjacent cell to the UE, and wherein the selecting an operation instruction for a second mode comprises: (b) determining, by the BSC/RNC, which subset of the radio bearer information of the adjacent cell has changed, sending, by the BSC/RNC,service information~~in~~and an operation instruction~~message of~~to the UE viaa control channel~~and notifying the UE of a change in the cell~~; wherein the operation instruction instructs the UE to acquire the changed subset of the radio bearer information of the adjacent cell; and issuing, by the BSC/RNC, the radio bearerinformation~~,~~ofthe~~rwise, repeating the aforementioned~~local cell and the changed radio bearer information of the adjacent cell to the UE; wherein the radio bearer information of the adjacent cell is divided into two subsets: common information of the adjacent cell and uncommon information of the adjacent cell.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.8 |

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| **同族数** | 12 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Packet network system with session changing function and implementation method and device thereof**

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| **公开号** | [US8179908](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8179908&sv=2a73eaa0faf57a489b88853f122d6e20) | **公开日** | 2012/05/15 |
| **申请号** | 12/256,638 | **申请日** | 2008/10/23 |
| **授权日** | 2012/05/15 | **优先日** | 2006/04/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Zhang; Hengliang |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present invention provides a method for session changing. The method for session changing is designed for session changing during interworking between a first UE and a second UE in a packet network, and includes: reserving, during setup of an initial session between the first UE and the second UE, an interworking control function for logically controlling the interworking on a path of the initial session; and performing, when the interworking control function receives a subsequent session change request, the corresponding session changing operation according to contents of the subsequent session change request. The invention further provides a device for session changing and a packet network system with session changing function. |

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| **主权项** | 专利度:7特征度:26 |  |  |
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A method for session changing, adapted to change a session during interworking between a first UE and a second UE in a packet network, comprising: reserving, during setup of an initial session between the first UE and the second UE, an interworking control function for controlling the interworking, on a path of the initial session; and when a subsequent session change request is received, performing, by the interworking control function, a corresponding session changing operation according to contents of the subsequent session change request; wherein, the contents of the session change request comprises at least one of: removing at least one media component from a plurality of media components included in the initial session; adding at least one media component to the initial session; and processing upon a change on a media bearing part of the initial session; wherein, the media components comprise a real-time media component and a non-real-time media component; wherein, the session changing operation comprises at least one of the following operations: 1) if the real-time media component of the session with the first UE is to be removed, the interworking control function releases a Circuit Switch call with the first UE; 2) if the non-real-time media component of the session with the first UE is to be removed, the interworking control function initiates a change on media of an original non-real-time IMS session with the first UE, to remove the non-real-time media component from the media; 3) if the real-time media component of the session with the first UE is to be added: if a CS call with the first UE exists, adding of real-time media fails for this time; and if no CS call with the first UE exists, the interworking control function initiates a call to a CS part of the first UE, and the CS call is to be used to bear the real-time media component; 4) if the non-real-time media component of the session with the first UE is to be added: if no IMS session with the first UE exists, the interworking control function initiates a new non-real-time IMS session with the first UE; and if an IMS session with the first UE exists, a change on the original non-real-time IMS session with the first UE is initiated, to add a new non-real-time media component; 5) if the media bearing part for the session with the first UE is changed, the interworking control function initiates a change on information of media bearing for the session with the second UE; and 6) if the media bearing part of the session with the second UE is changed, the interworking control function initiates a change on information of media bearing for the session with the first UE.

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| **对偶主权项** | 专利度:14特征度:21 |  |  |
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A method for session changing, adapted to change a session during interworking between a first UE and a second UE in a packet network, comprising:reserving, during setup of an initial session between the first UE and the second UE, an interworking control function for controlling the interworking, on a path of the initial session; andwhen a subsequent session change request is received, performing, by the interworking control function, a corresponding session changing operation according to contents of the subsequent session change request; wherein, the contents of the session change request comprises at least one of: removing at least one media component from a plurality of media components included in the initial session; adding at least one media component to the initial session; and processing upon a change on a media bearing part of the initial session; wherein, the media components comprise a real-time media component and a non-real-time media component; wherein, the session changing operation comprises at least one of the following operations: 1) if the real-time media component of the session with the first UE is to be removed, the interworking control function releases a Circuit Switch call with the first UE; 2) if the non-real-time media component of the session with the first UE is to be removed, the interworking control function initiates a change on media of an original non-real-time IMS session with the first UE, to remove the non-real-time media component from the media; 3) if the real-time media component of the session with the first UE is to be added: if a CS call with the first UE exists, adding of real-time media fails for this time; and if no CS call with the first UE exists, the interworking control function initiates a call to a CS part of the first UE, and the CS call is to be used to bear the real-time media component; 4) if the non-real-time media component of the session with the first UE is to be added: if no IMS session with the first UE exists, the interworking control function initiates a new non-real-time IMS session with the first UE; and if an IMS session with the first UE exists, a change on the original non-real-time IMS session with the first UE is initiated, to add a new non-real-time media component; 5) if the media bearing part for the session with the first UE is changed, the interworking control function initiates a change on information of media bearing for the session with the second UE; and 6) if the media bearing part of the session with the second UE is changed, the interworking control function initiates a change on information of media bearing for the session with the first UE.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for forking transmission of short message service**

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| **公开号** | [US8170590](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8170590&sv=07d733474ec09a6b9e65c364aac969ce) | **公开日** | 2012/05/01 |
| **申请号** | 12/372,301 | **申请日** | 2009/02/17 |
| **授权日** | 2012/05/01 | **优先日** | 2006/08/17 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Xiao |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present disclosure provides method, system, and apparatus for forking transmission of Short Message Service (SMS) messages in IP Multimedia Subsystems (IMS) networks. The method includes: receiving an SMS message, constructing a SIP message in which the SMS message is encapsulated or in which the SIP message carries the content of the SMS message and further includes a forking indication indicating whether forking shall be employed, sending the SIP message to a Service-Call Session Control Function (S-CSCF) in an IMS network, and determining by the S-CSCF whether forking shall be employed according to the forking indication. The method and system of the present disclosure enables the control over the SMS message from the Circuit Switched (CS) domain so that the SMS message can be sent through forking in the IMS domain to more than one user terminal. |

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| **主权项** | 专利度:4特征度:26 |  |  |
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A method for forking transmission of Short Message Service (SMS), comprising: receiving, by an IP-Short-Message-Gateway (IP-SM-GW), an SMS message; constructing a Session Initiation Protocol (SIP) message in which the SMS message is encapsulated or which carries the content of the SMS message and which carries a forking indication indicating whether forking is to be employed; sending the SIP message to a Service-Call Session Control Function, S-CSCF, in an IP Multimedia Subsystems, IMS, network; and determining, by the S-CSCF, whether forking is to be employed according to the forking indication in the received SIP message; and if the S-CSCF determines that forking is to be employed, determining, by the S-CSCF, the information of user terminals corresponding to a public user identifier carried in the SIP message according to pre-set correspondence between the public user identifier and the information of more than one user terminal; and sending the SIP message to the user terminals corresponding to the information of user terminals, wherein the SIP message further comprises a forking mode indication which indicates the forking mode to be employed by the S-CSCF, and the constructing the SIP message comprises: determining, by the IP-SM-GW, according to pre-set correspondence between a forking mode and Circuit Switched (CS) domain identifications of destination user terminals which are adapted to receive the SMS message, the forking mode indication for the CS domain identifications of the destination user terminals, constructing the SIP message in which the SMS message is encapsulated or which carries the content of the SMS message and which carries the forking mode indication.

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| **对偶主权项** | 专利度:12特征度:26 |  |  |
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A method for forking transmission of Short Message Service (SMS), comprising:receiving, by an IP-Short-Message-Gateway (IP-SM-GW), an SMS message;constructing a Session Initiation Protocol (SIP) message in which the SMS message is encapsulated or~~in~~which~~the SIP message~~carries the content of the SMS message and~~further~~whichcarries a forking indication indicating whether forking is to be employed;sending the SIP message to a Service-Call Session Control Function~~(~~,S-CSCF~~)~~,in an IP Multimedia Subsystems~~(~~,IMS~~)~~,network; anddetermining, by the S-CSCF, whether forking is to be employed according to the forking indication in the received SIP message; and if the S-CSCF determines that forking is to be employed, determining, by the S-CSCF, the information of user terminals corresponding to a public user identifier carried in the SIP message according to pre-set correspondence between the public user identifier and the information of more than one user terminal; and sending the SIP message to the user terminals corresponding to the information of user terminals, wherein the SIP message further comprises a forking mode indication which indicates the forking mode to be employed by the S-CSCF, and the constructing the SIP message comprises: determining, by the IP-SM-GW, according to pre-set correspondence between a forking mode and Circuit Switched (CS) domain identifications of destination user terminals which are adapted to receive the SMS message, the forking mode indication for the CS domain identifications of the destination user terminals, constructing the SIP message in which the SMS message is encapsulated or which carries the content of the SMS message and which carries the forking mode indication.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus of domain selection for routing control**

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| **公开号** | [US8170565](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8170565&sv=da459d608fd88328ae47b7f27afc147c) | **公开日** | 2012/05/01 |
| **申请号** | 11/965,834 | **申请日** | 2007/12/28 |
| **授权日** | 2012/05/01 | **优先日** | 2005/08/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Zhang; Hai | Duan; Xiaoqin |
| **国际 主分类** | H04W 40/00 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| A method of domain selection for routing control, applied to a communication system including a Circuit Switched (CS) network and an IP Multimedia Subsystem (IMS) includes: obtaining call status(es) of a user in any one or both of the CS network and the IMS; selecting a domain via which an incoming call is to be delivered according to the call status(es) upon receiving a routing decision query request from a routing decision query entity, and indicating the routing decision query entity to deliver the incoming call via the CS network or the IMS selected. The method provided by embodiments of the present invention selects the domain according to the call status(es) of the user in any one or both of the CS network and the IMS. Therefore, the problem that two calls are respectively delivered via the CS network and the IMS at the same time may be avoided. |

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| **主权项** | 专利度:19特征度:18 |  |  |
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A method of domain selection for routing an incoming call to a user via a Circuit Switched (CS) network or an IP Multimedia Subsystem (IMS) network, comprising: receiving, by a Routing Policy Decision Point (RPDP), a routing decision query request from a routing decision query entity which receives a request for establishing the incoming call; obtaining, by the RPDP, call status(es) of the user in any one or both of the CS network and the IMS network; selecting, by the RPDP, a domain between the CS network and the IMS network via which the incoming call is to be delivered to the user, according to the call status(es) of the user; and instructing the routing decision query entity to deliver the incoming call via the selected domain.

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| **对偶主权项** | 专利度:25特征度:9 |  |  |
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A method of domain selection for routing~~control, applied in a communication system comprising~~an incoming call to a user viaa Circuit Switched (CS) network~~and~~oran IP Multimedia Subsystem (IMS)network, comprising:~~obtaining~~receiving, by a Routing Policy Decision Point (RPDP), a routing decision query request from a routing decision query entity which receives a request for establishing the incoming call; obtaining, by the RPDP,call status(es) of~~a~~theuser in any one or both of the CS network and the IMS~~; selecting~~network; selecting, by the RPDP, a domain betweenthe CS network~~or~~andthe IMSnetworkvia which~~an~~theincoming call is to be deliveredto the user,according to the call status(es) of the user~~upon receiving a routing decision query request from a routing decision query entity; and indica~~; and instructing the routing decision query entity to deliver the incoming call via the~~CS network or the IMS~~selecteddomain.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for multiplexing broadcast service channel and non-broadcast service channel**

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| **公开号** | [US8165052](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8165052&sv=d8d6c19ea010234a7ffec52682b2ca55) | **公开日** | 2012/04/24 |
| **申请号** | 12/058,686 | **申请日** | 2008/03/29 |
| **授权日** | 2012/04/24 | **优先日** | 2005/09/29 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Qu; Bingyu | Wang; Junwei | Ding; Yingzhe |
| **国际 主分类** | H04H 20/71 | **优先 国家** | CN |
| **代理** | Harness, Dickey & Pierce, P.L.C. |

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| **摘要** |  |
| A method for multiplexing a broadcast service channel and a non-broadcast service channel includes: reserving TF resources for carrying non-broadcast service data on a sub-frame for carrying broadcast service data, and multiplexing the broadcast service data and the non-broadcast service data to the sub-frame for carrying the broadcast service data. Correspondingly, a device for multiplexing a broadcast service channel and a non-broadcast service channel is disclosed. Hence, the system signaling overhead occupied during a TDM process between broadcast service and Unicast service is reduced, and the transmission delay of Unicast service is reduced. |

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| **主权项** | 专利度:20特征度:21 |  |  |
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A method for multiplexing a broadcast service channel and a non-broadcast service channel, comprising: reserving, by a service sending device, Time Frequency, TF, resources for carrying non-broadcast service data with a high quality of Service, QoS, priority in a Multimedia Broadcast/Multicast Service, MBMS, sub-frame carrying broadcast service data, wherein the broadcast service data comprises MBMS service data, and wherein the non-broadcast service data comprises unicast service data; and multiplexing the broadcast service data and the non-broadcast service data with a high QoS priority in the MBMS sub-frame.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A method for multiplexing a broadcast service channel and a non-broadcast service channel, comprising:reserving, by a service sending device,Time Frequency, TF, resources for carrying non-broadcast service data~~on a~~with a high quality of Service, QoS, priority in a Multimedia Broadcast/Multicast Service, MBMS,sub-frame~~for~~carrying broadcast service data~~; andmultiplex~~, wherein~~g~~the broadcast service data~~and the non-broadcast service data to the sub-frame for carrying~~comprises MBMS service data, and wherein the non-broadcast service data comprises unicast service data; and multiplexing the broadcast service data andthenon-broadcast service datawith a high QoS priority in the MBMS sub-frame.

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| **被引用** | 1 | **自引用** | 0 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.2 |

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| **同族数** | 12 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus and system for implementing conference service**

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| **公开号** | [US8160224](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8160224&sv=8e95b4ac41ccbea863515a38528a72e9) | **公开日** | 2012/04/17 |
| **申请号** | 12/276,991 | **申请日** | 2008/11/24 |
| **授权日** | 2012/04/17 | **优先日** | 2006/05/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Youzhu |
| **国际 主分类** | H04M 3/42 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| An apparatus and a system for implementing the conference service is disclosed. The method includes: a conference initiator sends a conference operation message that carries conference information which includes conference initiator information and information of at least one conference participant, or includes information of more than one conference participant; adds more than one user terminal denoted by the conference information to the conference. With the present invention, only one operation is needed to set up a conference. The implementation of conference service is greatly simplified. |

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| **主权项** | 专利度:12特征度:10 |  |  |
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A method for implementing the conference service, comprising: receiving a conference operation message initiated by a conference initiator which carries conference information, the conference information indicates at least one user that joins in the conference, wherein the conference information comprises a dialog identifier, which denotes an established dialog where the at least one user that joins in the conference is engaging; deciding the at least one user that joins in the conference according to the dialog identifier; requesting a conference resource according to the conference operation message; and redirecting the established dialog indicated by the dialog identifier to the conference resource, so as to add the at least one user denoted by the conference information to the conference.

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| **对偶主权项** | 专利度:18特征度:7 |  |  |
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A method for implementing the conference service, comprising:receiving a conference operation message initiated by a conference initiator which carries conference information, the conference information indicates at least one user that joins in the conference~~; andadding more than one user terminal~~, wherein the conference information comprises a dialog identifier, which denotes an established dialog where the at least one user that joins in the conference is engaging; deciding the at least one user that joins in the conference according to the dialog identifier; requesting a conference resource according to the conference operation message; and redirecting the established dialog indicated by the dialog identifier to the conference resource, so as to add the at least one userdenoted by the conference information to the conference.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for service time division multiplexing**

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| **公开号** | [US8160047](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8160047&sv=8d4c9f119322b37d43e431475b233809) | **公开日** | 2012/04/17 |
| **申请号** | 12/903,792 | **申请日** | 2010/10/13 |
| **授权日** | 2012/04/17 | **优先日** | 2007/02/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Junwei | Fan; Xiaoan | Liu; Jianghua |
| **国际 主分类** | H04J 3/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and device for service time division multiplexing as well as a method and a device for transmitting service are disclosed. The method for service time division multiplexing includes: selecting a part or all of radio frames in one time unit as specific radio frames; and selecting a part or all of subframes in the specific radio frames as specific subframes for sending a specific service. The specific service is a multimedia broadcast multicast service, or a unicast service, or one or more than one kind of service transmitted in broadcast or multicast mode. |

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| **主权项** | 专利度:12特征度:23 |  |  |
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A method for transmitting service, comprising: selecting a plurality of radio frames in one time unit as specific radio frames, wherein the time unit comprises 2M successive radio frames, where M is a nonnegative integer, and wherein each of the radio frames contains R subframes that can be allocated to a specific service, where R is a natural number; selecting subframes in the specific radio frames as specific frames for sending the specific service, wherein the specific service is a multimedia broadcast multicast service, or a unicast service, or one or more than one kind of service transmitted in broadcast or multicast mode; sending position information of the specific radio frames on any one of a main broadcast channel, a secondary broadcast channel or a dynamic broadcast channel; sending position information of the specific subframes on any one of the main broadcast channel, the secondary broadcast channel or the dynamic broadcast channel; wherein the position information of the specific radio frames is an interval of the specific radio frames in the time unit, wherein the interval of the specific radio frames in the time unit is 2m, 0≦m≦M+1; and wherein the position information of the specific radio frames and the position information of the specific subframes are sent by sending a value of a joint signaling A, and an expression of the joint signaling A is one of the following forms: if ⁢ ⁢ 0 ≤ m ≤ M , 0 ≤ N ⁢ ⁢ p ≤ R , and ⁢ ⁢ R ≤ M + 1 , then A = { 0 , when ⁢ ⁢ N ⁢ ⁢ p = 0 ( M + 1 ) ⁢ ( N ⁢ ⁢ p - 1 ) + ( m + 1 ) , when ⁢ ⁢ 0 #x3c; N ⁢ ⁢ p ≤ R ; ⁢ ⁢ if ⁢ ⁢ 0 ≤ m ≤ M , 0 ≤ N ⁢ ⁢ p ≤ R , and ⁢ ⁢ M + 1 ≤ R , then ⁢ ⁢ A = { 0 , when ⁢ ⁢ N ⁢ ⁢ p = 0 Rm + N ⁢ ⁢ p , when ⁢ ⁢ 0 #x3c; N ⁢ ⁢ p ≤ R ; wherein a number or an interval of the specific subframes in each of the specific radio frames is Np; and when Np=0, the value of the joint signaling A is 0, which represents that the time unit has no specific subframe.

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| **对偶主权项** | 专利度:18特征度:21 |  |  |
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A method for transmitting service, comprising: selecting a plurality of radio frames in one time unit as specific radio frames~~; selecting subframes in the specific radio frames as specific subframes for sending a specific service, wherein the specific service is a multimedia broadcast multicast service, or a unicast service, or one or more than one kind of service transmitted in broadcast or multicast mode; sending position information of the specific radio frames; wherein the time unit comprises 2M successive radio frames, where M is a nonnegative integer, and wherein each of the radio frames contains R subframes that can be allocated to the specific service, where R is a natural number; wherein the position information of the specific radio frames is a number or an interval of the specific radio frames in the time unit, wherein the number or the interval of the specific radio frames in the time unit is 2m, 0≦m≦M+1~~, wherein the time unit comprises 2M successive radio frames, where M is a nonnegative integer, and wherein each of the radio frames contains R subframes that can be allocated to a specific service, where R is a natural number; selecting subframes in the specific radio frames as specific frames for sending the specific service, wherein the specific service is a multimedia broadcast multicast service, or a unicast service, or one or more than one kind of service transmitted in broadcast or multicast mode; sending position information of the specific radio frames on any one of a main broadcast channel, a secondary broadcast channel or a dynamic broadcast channel; sending position information of the specific subframes on any one of the main broadcast channel, the secondary broadcast channel or the dynamic broadcast channel; wherein the position information of the specific radio frames is an interval of the specific radio frames in the time unit, wherein the interval of the specific radio frames in the time unit is 2m, 0≦m≦M+1; and wherein the position information of the specific radio frames and the position information of the specific subframes are sent by sending a value of a joint signaling A, and an expression of the joint signaling A is one of the following forms: if ⁢ ⁢ 0 ≤ m ≤ M , 0 ≤ N ⁢ ⁢ p ≤ R , and ⁢ ⁢ R ≤ M + 1 , then A = { 0 , when ⁢ ⁢ N ⁢ ⁢ p = 0 ( M + 1 ) ⁢ ( N ⁢ ⁢ p - 1 ) + ( m + 1 ) , when ⁢ ⁢ 0

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 16 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System, method and apparatus for establishing interactive media session based on IP multimedia subsystem**

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| **公开号** | [US8150975](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8150975&sv=bd9bdc54c8e8ff6fbe8c488b7b743da8) | **公开日** | 2012/04/03 |
| **申请号** | 12/916,164 | **申请日** | 2010/10/29 |
| **授权日** | 2012/04/03 | **优先日** | 2006/02/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | rpx | **发明人** | Li; Jicheng | Yan; Jun | Wu; Xiangyang |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and system for establishing an interactive media session based on IP Multimedia Subsystem, including: a terminal adapted to initiate an interactive media session request and receive a media session response; a serving-CSCF adapted to trigger the request to the application server according to a triggering rule and route the message; a proxy-CSCF adapted to forward the request and the response between the terminal and the serving-CSCF; an application server adapted to process the service request; a media control entity adapted to control resource allocation of the media carrier entity; and a media carrier entity adapted to allocate address ports for RTSP connection and RTP connection with the terminal. The present invention can be applied to a NGN network where the carrier and control are separated to improve the media delivery efficiency. |

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| **主权项** | 专利度:34特征度:15 |  |  |
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A method for establishing an interactive media session based on an IP Multimedia Subsystem (IMS) network, comprising: receiving, by a media control entity in the IMS network, an interactive service request initiated by a terminal, wherein the interactive service request carries a first address port for an RTSP connection and a first address port for an RTP connection; controlling, by the media control entity, a media carrier entity in the IMS network to negotiate a second address port for the RTSP connection and a second address port for the RTP connection to communicate with the terminal; and establishing another RTSP connection for interactive control based on the first address port for the RTSP connection and the second address port for the RTSP connection between the terminal and the media carrier entity, and establishing another RTP connection for media stream delivery based on the first address port for the RTP connection and the second address port for the RTP connection between the terminal and the media carrier entity.

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| **对偶主权项** | 专利度:38特征度:8 |  |  |
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A method for establishing an interactive media session based on an IP Multimedia Subsystem(IMS) network, comprising: receiving, by a media control entityin the IMS network, an interactive service request initiated by a terminal, wherein the interactive service request carries a first address port for an RTSP connection and a first address port for an RTP connection; controlling, by the media control entity, a media carrier entityin the IMS networkto negotiate a~~n~~secondaddress port for~~a Real Time Stream Protocol (~~theRTSP~~)~~connection and a~~n~~secondaddress port for~~a Real-time Transport Protocol (~~theRTP~~)~~connection to communicate with the terminal; and establishing anotherRTSP connection for interactive control~~and an RTP connection for media stream delivery~~based on the first address port for the RTSP connection and the second address port for the RTSP connection between the terminal and the media carrier entity, and establishing another RTP connection for media stream delivery based on the first address port for the RTP connection and the second address port for the RTP connectionbetween the terminal and the media carrier entity.

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.6 |

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| **同族数** | 15 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for service time division multiplexing**

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| **公开号** | [US8149814](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8149814&sv=e8a8af2ed9108961a92f045c775253c7) | **公开日** | 2012/04/03 |
| **申请号** | 12/538,357 | **申请日** | 2009/08/10 |
| **授权日** | 2012/04/03 | **优先日** | 2007/02/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Junwei | Fan; Xiaoan | Liu; Jianghua |
| **国际 主分类** | H04B 7/212 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and device for service time division multiplexing as well as a method and a device for transmitting service are disclosed. The method for service time division multiplexing includes: selecting a part or all of radio frames in one time unit as specific radio frames; and selecting a part or all of subframes in the specific radio frames as specific subframes for sending a specific service. The specific service is a multimedia broadcast multicast service, or a unicast service, or one or more than one kind of service transmitted in broadcast or multicast mode. |

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| **主权项** | 专利度:17特征度:11 |  |  |
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A method for transmitting a service by a base station, comprising: selecting at least one radio frame in a time unit as a specific radio frame for carrying the service, wherein the time unit comprises a plurality of radio frames, each of the radio frames contains a number R of subframes that can be allocated to carry the service; selecting at least one subframe in the specific radio frame as a specific subframe for carrying the service; sending position information of the specific radio frame in the time unit and position information of the specific subframe in the specific radio frame on a transport channel, wherein the transport channel is mapped to a physical shared data channel.

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| **对偶主权项** | 专利度:22特征度:25 |  |  |
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A method for~~service time division multiplexing~~transmitting a service by a base station, comprising: selecting a~~part or all of~~t least oneradio frame~~s~~in~~one~~atime unit asaspecific radio frame~~s; and selecting a part or all of~~for carrying the service, wherein the time unit comprises a plurality of radio frames, each of the radio frames contains a number R of subframes that can be allocated to carry the service; selecting at least onesubframe~~s~~in the specific radio frameas a~~s~~specific subframe~~s for sending a specific service~~for carrying the service; sending position information of the specific radio frame in the time unit and position information of the specific subframe in the specific radio frame on a transport channel, wherein the transport channel is mapped to a physical shared data channel.

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| **被引用** | 12 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.19 |

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| **同族数** | 16 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Resource release control method, communication system and device**

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| **公开号** | [US8144665](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8144665&sv=a089e41a7d43007af6c5b5aaef861ecc) | **公开日** | 2012/03/27 |
| **申请号** | 13/182,274 | **申请日** | 2011/07/13 |
| **授权日** | 2012/03/27 | **优先日** | 2008/01/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Hu; Weihua | Zhang; Yanping |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A resource release control method, a communication system, and a device are configured to delete a bearer context on an original-side heterogeneous-system management network element (NE) even if a target-side management NE does not support interaction with a serving gateway (S-GW) and does not support an idle mode signaling reduction (ISR) mechanism. The resource release control method includes: acquiring version information of a target-side management NE, when a user equipment (UE) activating an ISR mechanism is handed over from an original-side network to a target-side network; and deleting a bearer of an original-side heterogeneous-system management NE, if the version information indicates that the target-side management NE does not interact with an S-GW and does not support the ISR mechanism. Meanwhile, a communication system and a relevant device are also provided. |

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| **主权项** | 专利度:8特征度:28 |  |  |
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A method, comprising: acquiring, by a first Serving General Packet Radio Service (GPRS) Supporting Node (SGSN) in a source network, version information of a second SGSN in a target network when a User Equipment (UE) activating an Idle mode Signaling Reduction (ISR) mechanism moves from the source network to the target network; determining, by the first SGSN, the second SGSN does not communicate with a Serving Gateway (S-GW) and does not support the ISR mechanism according to the version information of the second SGSN; sending, by the first SGSN, a first delete bearer message to the S-GW; deleting, by the S-GW, bearer resources on the S-GW after receiving the first delete bearer message; and indicating, by the S-GW, a Mobility Management Entity (MME) in the source network to delete the bearer resources on the MME by sending a second delete bearer message to the MME, wherein acquiring, by the first SGSN in the source network, the version information of the second SGSN in the target network, comprises: receiving by the first SGSN a context request message sent from the second SGSN which carries the version information of the second SGSN; and acquiring, by the first SGSN, the version information of the second SGSN according to the context request message.

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| **对偶主权项** | 专利度:15特征度:6 |  |  |
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A method, comprising: acquiring, by a first Serving General Packet Radio Service (GPRS) Supporting Node (SGSN) in a source network, version information of a second SGSN in a target network when a User Equipment (UE) activating an Idle mode Signaling Reduction (ISR) mechanism moves from the source network to the target network; determining, by the first SGSN, the second SGSN does not communicate with a Serving Gateway (S-GW) and does not support the ISR mechanism according to the version information of the second SGSN; sending, by the first SGSN, a first delete bearer message to the S-GW; deleting, by the S-GW, bearer resources on the S-GW after receiving the first delete bearer message; and indicating, by the S-GW, a Mobility Management Entity (MME) in the source network to deletethebearer resources on the MME by sending a second delete bearer message to the MME, wherein acquiring, by the first SGSN in the source network, the version information of the second SGSN in the target network, comprises: receiving by the first SGSN a context request message sent from the second SGSN which carries the version information of the second SGSN; and acquiring, by the first SGSN, the version information of the second SGSN according to the context request message.

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| **被引用** | 11 | **自引用** | 4 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.19 |

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| **同族数** | 13 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for improving synchronization and information transmission in a communication system**

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| **公开号** | [US8139663](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8139663&sv=dde184cf527a5f1957c062467f87d77d) | **公开日** | 2012/03/20 |
| **申请号** | 12/175,632 | **申请日** | 2008/07/18 |
| **授权日** | 2012/03/20 | **优先日** | 2006/01/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Popovic; Branislav |
| **国际 主分类** | H04K 1/10 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention relates to a method for improving synchronization and information transmission in a communication system, including: generating a signal with a time symmetric property based on a uniquely identifiable sequence c(l) from a set of sequences, sending the signal over a communication channel, receiving the signal, calculating and storing a correlation, finding the delay that result in a maximum correlation magnitude, detecting the unique sequence c(l) from the set of sequences. The method is distinguished by: generating the signal with a centrally symmetric part, s(k), the centrally symmetric part s(k) being symmetric in the shape of the absolute value thereof, storing the reverse differential correlation D(p) from a block of N received signal samples r(k), k=0, 1, . . . , N−1. The present invention also relates to a transmitter unit and a receiver unit of a communication system, and a radio communication system. |

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| **主权项** | 专利度:19特征度:16 |  |  |
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A method~~o~~for improvingsynchronizationand information transmissionin a communication system, comprising:generating a signal with a time symmetric property exploitable for synchronization, wherein the signal is based on a uniquely identifiable sequence c(l) from a set of sequences;sending the signal over a communication channel;~~and,~~in the step of generating the signal, generating the signal with a centrally symmetric part, s(k), wherein the centrally symmetric part s(k) is~~centrally~~symmetric in the shape of the absolute valuethereof, and the centrally symmetric part s(k) is of arbitrary length N,and~~wherein the signal is generated such that s(k) is obtained as an IDFT of a spectrum H(n) of N sub-carrier weights, the spectrum H(n) being generated by using the elements of the sequence c(l), l=0, 1, . . . , L−1, L≦N, as the Fourier coefficients at the occupied sub-carrier frequencies~~/or,receiving the signal;calculating and storing a correlation from a block of N received signal samples;repeating the previous step for a new block of N samples of the received signal, taken after a delay of one sample compared to the previous block, a number of times;finding the delay of the block of N samples that result in a maximum correlation magnitude, and selecting such a delay as the initial timing for demodulation; anddetecting the unique sequence c(l) from the set of sequences and thereby extracting the information transmitted,in the step of calculating and storing a correlation, calculating and storing the reverse differential correlation D(p) from a block of N received signal samples r(k), k=0, 1, . . . , N-1.

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| **对偶主权项** | 专利度:19特征度:9 |  |  |
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A method for improving synchronization and information transmission in a communication system, comprising:generating a signal with a time symmetric property exploitable for synchronization, wherein the signal is based on a uniquely identifiable sequence c(l) from a set of sequences;sending the signal over a communication channel;in the step of generating the signal, generating the signal with a centrally symmetric part, s(k), wherein the centrally symmetric part s(k) is symmetric in the shape of the absolute value thereof, and the centrally symmetric part s(k) is of arbitrary length N,and/or,receiving the signal;calculating and storing a correlation from a block of N received signal samples;repeating the previous step for a new block of N samples of the received signal, taken after a delay of one sample compared to the previous block, a number of times;finding the delay of the block of N samples that result in a maximum correlation magnitude, and selecting such a delay as the initial timing for demodulation; anddetecting the unique sequence c(l) from the set of sequences and thereby extracting the information transmitted,in the step of calculating and storing a correlation, calculating and storing the reverse differential correlation D(p) from a block of N received signal samples r(k), k=0, 1, . . . , N-1.

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| **被引用** | 8 | **自引用** | 8 | **公司数** | 1 | **国家数** | 1 | **影响力** | 2.2 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Mobile communication method, mobile communication system and access entity**

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| **公开号** | [US8139505](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8139505&sv=5586fd0011e422a0e0e052d78b19a223) | **公开日** | 2012/03/20 |
| **申请号** | 12/434,478 | **申请日** | 2009/05/01 |
| **授权日** | 2012/03/20 | **优先日** | 2006/11/03 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Guo; Xiaolong | Liu; Lan |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Huawei Technologies Co., Ltd. |

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| **摘要** |  |
| The present invention relates to communication field, and discloses a mobile communication method. As can be seen from various embodiments, in the process of the access entity performing a location update for the UE or performing a UE access procedure, when the UE needs to be paged, the UE is paged in the paging area administered by the access entity and it is prohibited to page the UE in the paging area administered by the access entity in the other network. |

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| **主权项** | 专利度:18特征度:17 |  |  |
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A method for use in a scenario where a user equipment is moving within a coverage of a first network and a second network, wherein the user equipment is registered with both a first access entity of the first network and a second access entity of the second network, and a first association is established between the first access entity and the second access entity so that when the user equipment needs to be paged, the user equipment is paged in a paging area administered by the first access entity and a paging area administered by the second access entity according to the first association, and the method comprises: receiving, by a third access entity of the second network, a location update request sent from the user equipment; acquiring, by the third access entity, information of the first access entity from the location update request; and determining, by the third access entity, whether a predetermined condition is satisfied, wherein if the predetermined condition is not satisfied, when the user equipment needs to be paged, the paging of the user equipment through the first access entity in the paging area administered by the first access entity is allowed, and if the predetermined condition is satisfied, when the user equipment needs to be paged, the paging of the user equipment through the first access entity in the paging area administered by the first access entity is prohibited, and wherein the predetermined condition comprises one or more of the following: a distance between an area where the user equipment is currently located and the paging area administered by the first access entity exceeds a predetermined threshold; the third access entity cannot be associated with the first access entity; and the speed of the user equipment in a current access entity system is lower than a threshold.

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| **对偶主权项** | 专利度:20特征度:21 |  |  |
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A m~~obile communication m~~ethodfor use in a scenario where a user equipment is moving within a coverage of a first network and a second network, wherein~~a~~theuser equipmentisregister~~s~~edwith~~access entities of at least two networks and the access entities which accept the registration of the user equipment~~both a first access entity of the first network and a second access entity of the second network, and a first association is established between the first access entity and the second access entity so that when the user equipment needs to be paged, the user equipment is paged in a pagingareaa~~ssociated with one another, and the method comprises:prohibiting~~dministered by the first access entity and a paging area administered by the second access entity according to the first association, and the method comprises: receiving, by a third access entity of the second network, a location update request sent from the user equipment; acquiring, by the third access entity, information of the first access entity from the location update request; and determining, by the third access entity, whether a predetermined condition is satisfied, wherein if the predetermined condition is not satisfied, when the user equipment needs to be paged, thepagingofthe user equipment~~in a~~through the first access entity in thepaging area administered by~~an~~the firstaccess entity i~~n another network of the at least~~s allowed, and if the predetermined condition is satisfied, when the user equipment needst~~w~~o~~networks when an access entity in one of the at least two networks performs a l~~be paged, the paging of the user equipment through the first access entity in the paging area administered by the first access entity is prohibited, and wherein the predetermined condition comprises one or more of the following: a distance between an area where the user equipment is currently located and the paging area administered by the first access entity exceeds a predetermined threshold; the third access entity cannot be associat~~ion update for the user equipment or other access procedur~~ed with the first access entity; and the speed of the user equipment in a current access entity system is lower than a threshold.

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| **被引用** | 14 | **自引用** | 6 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.19 |

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| **同族数** | 14 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for implementing multimedia ring back tone service**

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| **公开号** | [US8131265](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8131265&sv=adf589d41b3570c72533bd2019691dd6) | **公开日** | 2012/03/06 |
| **申请号** | 11/964,075 | **申请日** | 2007/12/26 |
| **授权日** | 2012/03/06 | **优先日** | 2006/03/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Cheng; Yihua | Hu; Xiaoqing | Zheng; Yichu |
| **国际 主分类** | H04Q 7/22 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A Multimedia Customized Ring Back Tone (MRBT) service platform, a terminal and a system for implementing an MRBT service are provided in the present invention. A method for implementing an MRBT service is further disclosed, which includes: performing, by a Multimedia Ring Back Tone (MRBT) platform, a first media capability negotiation with a calling party before a called party answers a call after the calling party initiates the call to the called party; playing, by the MRBT platform, an MRBT for the calling party according to the result of the first media capability negotiation. The scheme of the present invention may implement an MRBT service in a 3G communication network. |

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| **主权项** | 专利度:26特征度:17 |  |  |
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A method for implementing a Multimedia Ring Back Tone (MRBT) service, comprising: determining, by an Originated Mobile Switching Center (O-MSC), whether to perform an MRBT; if yes, sending, by the O-MSC, a first message to an MRBT platform to set up a call with the MRBT platform; after a called party paging is successful, sending, by the O-MSC, a second message to a calling party to establish a connection between the calling party and the MRBT platform; performing, by the MRBT platform and the calling party, a first media capability negotiation after the connection is established; playing, by the MRBT platform, an MRBT for the calling party according to the result of the first media capability negotiation via the connection established between the MRBT platform and the calling party before the call is answered.

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| **对偶主权项** | 专利度:27特征度:11 |  |  |
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A method for implementing a Multimedia Ring Back Tone (MRBT) service, comprising:~~perfo~~determining, by a~~Multimedia Ring Back Tone (~~n Originated Mobile Switching Center (O-MSC), whether to perform an MRBT; if yes, sending, by the O-MSC, a first message to anMRBT~~)~~platform~~, a first media capability negotiation with a calling party upon receiving an MRBT service request from an Originated Mobile Switch Center (O\_MSC) be~~to set up a call with the MRBT platform; after a called party paging is successful, sending, by the O-MSC, a second message to a calling party to establish a connection between the calling party and the MRBT platform; performing, by the MRBT platfor~~e~~mand thecall~~ed~~ingparty,a~~nswers a call in a call connection process;~~first media capability negotiation after the connection is established;playing, by the MRBT platform, an MRBT for the calling party according to the result of the first media capability negotiation via~~a link~~the connectionestablished between the MRBT platform and the calling party~~after the first media capability negotiation is successful~~before the call is answered.

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| **被引用** | 15 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.81 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for recovering invalid downlink data tunnel between networks**

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| **公开号** | [US8125889](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8125889&sv=b873c28f485e2bc25ee7d2e6325cbdfb) | **公开日** | 2012/02/28 |
| **申请号** | 12/369,431 | **申请日** | 2009/02/11 |
| **授权日** | 2012/02/28 | **优先日** | 2006/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua |
| **国际 主分类** |  | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| Described herein is a method for processing an invalidation of a downlink data tunnel between networks. The method includes the following steps: (1) a core network user plane anchor receives an error indication of data tunnel sent from an access network device, (2) after deciding that the user plane corresponding to the error indication uses a One Tunnel technology, the core network user plane anchor notifies a relevant core network control plane to request recovering the downlink data tunnel, (3) the core network control plane recovers the downlink data tunnel and notifies the core network user plane anchor to update information of the user plane. In addition, a communication system and a communication device are also provided. The method, system, and device can improve the speed of recovering data transmission after the downlink data tunnel becomes invalid. |

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| **主权项** | 专利度:17特征度:14 |  |  |
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A method for processing an invalidation of a downlink data tunnel between networks, comprising: receiving, by a core network user plane anchor, an error indication of a data tunnel from an access network device; and instructing, by the core network user plane anchor, a core network control plane to recover a downlink data tunnel if a user plane corresponding to the error indication uses a One Tunnel technology; wherein the method further comprises: updating, by the core network user plane anchor, information of the user plane according to a notification sent by the core network control plane, wherein the notification sent by the core network control plane is sent to the core network user plane anchor by the core network control plane after recovering the downlink data tunnel.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method for processing an invalidation of a downlink data tunnel between networks, comprising:receiving, by a core network user plane anchor, an error indication of a data tunnel from an access network device; and~~notifying~~instructing, by the core network user plane anchor,a core network control plane to recover a downlink data tunnel if a user plane corresponding to the error indication uses a One Tunnel technology; wherein the method further comprises: updating, by the core network user plane anchor, information of the user plane according to a notification sent by the core network control plane, wherein the notification sent by the core network control plane is sent to the core network user plane anchor by the core network control plane after recovering the downlink data tunnel.

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| **被引用** | 18 | **自引用** | 6 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.83 |

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| **同族数** | 11 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for idle mode signaling reduction**

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| **公开号** | [US8111666](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8111666&sv=20df993db20f2a078e254b690ac95645) | **公开日** | 2012/02/07 |
| **申请号** | 12/618,177 | **申请日** | 2009/11/13 |
| **授权日** | 2012/02/07 | **优先日** | 2008/01/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and a system for idle mode signaling reduction (ISR) are provided. The method includes: obtaining ISR activation information of a source network, and setting an ISR status of an user equipment (UE) in a target network according to the obtained ISR activation information of the source network. Thus, the ISR status of the UE can be processed when the UE is handed over between networks. |

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| **主权项** | 专利度:26特征度:13 |  |  |
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A method for idle mode signaling reduction (ISR), comprising: obtaining ISR activation information of a source network from a forward handover request message sent by a mobility management network element of the source network; and setting an ISR status of a user equipment (UE) in a target network according to the obtained ISR activation information of the source network.

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| **对偶主权项** | 专利度:29特征度:8 |  |  |
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A method for idle mode signaling reduction (ISR), comprising: obtaining ISR activation information of a sourcenetwork from a forward handover request message sent by a mobility management network element of the sourcenetwork; and setting an ISR status of a user equipment (UE) in a target network according to the obtained ISR activation information of the source network.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 18 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for measuring different frequencies/systems in MBMS and a device for setting measuring time**

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| **公开号** | [US8111628](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8111628&sv=38ceedf01eafbe6f47afa297e4fda051) | **公开日** | 2012/02/07 |
| **申请号** | 11/912,042 | **申请日** | 2006/04/21 |
| **授权日** | 2012/02/07 | **优先日** | 2005/04/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yin; Liyan |
| **国际 主分类** | H04L 12/26 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for measuring Inter-Frequency/Inter-RAT (Radio Access Technology) in Multimedia Broadcast/Multicast Service (MBMS) includes: setting an Inter-Frequency/Inter-RAT measurement time to prevent Inter-Frequency/Inter-RAT measurement time from overlapping constantly the transmission time of MCCH information; performing Inter-Frequency/Inter-RAT measurement by a UE according to the Inter-Frequency/Inter-RAT measurement time. In the present invention, the Inter-Frequency/Inter-RAT measurement time can be prevented from overlapping constantly the time when UTRAN transmits the MCCH information, so that the problem that the UE cannot receive MCCH information during Inter-Frequency/Inter-RAT measurement time may be solved. In the invention, a measurement time setting device is also provided for implementing Inter-Frequency/Inter-RAT measurement in Multimedia Broadcast/Multicast Service. |

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| **主权项** | 专利度:22特征度:12 |  |  |
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A method for implementing Inter-Frequency/Inter-RAT (Radio Access Technology) measurement in Multimedia Broadcast/Multicast Service (MBMS), comprising: setting a time of inter-frequency/inter-RAT measurement based on a transmission time of MBMS point-to-multipoint Control Channel (MCCH) information; and performing, by a user equipment, inter-frequency/inter-RAT measurement according to the time of inter-frequency/inter-RAT measurement set; wherein the time of inter-frequency/inter-RAT measurement set does not overlap constantly with the transmission time of the MCCH information.

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| **对偶主权项** | 专利度:19特征度:33 |  |  |
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~~(canceled)~~A method for implementing Inter-Frequency/Inter-RAT (Radio Access Technology) measurement in Multimedia Broadcast/Multicast Service (MBMS), comprising: setting a time of inter-frequency/inter-RAT measurement based on a transmission time of MBMS point-to-multipoint Control Channel (MCCH) information; and performing, by a user equipment, inter-frequency/inter-RAT measurement according to the time of inter-frequency/inter-RAT measurement set; wherein the time of inter-frequency/inter-RAT measurement set does not overlap constantly with the transmission time of the MCCH information.

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| **被引用** | 21 | **自引用** | 0 | **公司数** | 3 | **国家数** | 2 | **影响力** | 0.16 |

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| **同族数** | 7 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for establishing tunnel in WLAN**

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| **公开号** | [US8102828](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8102828&sv=d61b505f3399f44b65131e62a1c2619b) | **公开日** | 2012/01/24 |
| **申请号** | 12/176,077 | **申请日** | 2008/07/18 |
| **授权日** | 2012/01/24 | **优先日** | 2006/01/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Peng | Zhang; Wenlin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and a system for establishing a tunnel in a wireless local area network (WLAN) are described. The method includes the following steps. A WLAN terminal initiates a tunnel establishment request in an Internet Key Exchange Security Association (IKE SA) that has been established. It is judged whether the number of tunnels already established in the IKE SA reaches a corresponding first threshold or not, if the number of tunnels does not reach the corresponding first threshold, establishing the tunnel for the WLAN terminal; otherwise, rejecting the establishment of the tunnel for the WALN terminal. It is decided whether to establish the tunnel for the WLAN terminal or not by judging whether the number of the tunnels already established in each IKE SA reaches the corresponding threshold or not during the tunnel establishment of the WLAN terminal, thereby effectively controlling the rationality and validity about the tunnel establishment. |

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| **主权项** | 专利度:12特征度:15 |  |  |
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A method for establishing a tunnel in a wireless local area network (WLAN), comprising: receiving, by a packet data gateway (PDG), a tunnel establishment request initiated by a WLAN terminal for establishing a tunnel in an existing Internet Key Exchange Security Association (IKE SA); judging, by the PDG, whether the number of tunnels already established in the IKE SA has reached a first threshold or not, wherein the first threshold is stored in the PDG; if the number of tunnels already established in the IKE SA has not reached the first threshold, judging, by the PDG, whether the number of tunnels already established for the WLAN terminal in all existing IKE SA has reached a second threshold or not, wherein the second threshold is stored in the PDG, and (a) if the number of tunnels already established for the WLAN terminal in all existing IKE SA has not reached the second threshold, establishing the tunnel for the WLAN terminal; and (b) if the number of tunnels already established for the WLAN terminal in all existing IKE SA has reached the second threshold, rejecting the establishment of the tunnel for the WLAN terminal; and if the number of tunnels already established in the IKE SA has reached the first threshold, rejecting the establishment of the tunnel for the WLAN terminal.

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| **对偶主权项** | 专利度:16特征度:15 |  |  |
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A method for establishing a tunnel in a wireless local area network (WLAN), comprising:receiving, by a packet data gateway (PDG),a tunnel establishment request initiated by a WLAN terminal~~in an~~for establishing a tunnel in an existingInternet Key Exchange Security Association (IKE SA)~~that has been established;judging~~; judging, by the PDG,whether the number of tunnels already established in the IKE SAhasreache~~s~~da~~corresponding first threshold or not, and if the number of tunnels doe~~first threshold or not, wherein the first threshold is stored in the PDG; if the number of tunnels already established in the IKE SA has not reachedthe~~corresponding~~first threshold,~~establishing the tunnel for the WLAN terminal; otherwise, rejecting the establishment of the tunnel for the WALN terminal; orjudging whether the number of tunnels already established for the WLAN terminal reaches a corresponding second threshold or not, and if the number of tunnels does not reach the corresponding~~judging, by the PDG, whether the number of tunnels already established for the WLAN terminal in all existing IKE SA has reached a second threshold or not, wherein the second threshold is stored in the PDG, and (a) if the number of tunnels already established for the WLAN terminal in all existing IKE SA has not reached the second threshold, establishing the tunnel for the WLAN terminal; and (b) if the number of tunnels already established for the WLAN terminal in all existing IKE SA has reached thesecond threshold,rejecting theestablish~~ing~~ment ofthe tunnel for the WLAN terminal;~~otherwise~~and if the number of tunnels already established in the IKE SA has reached the first threshold, rejecting the establishment of the tunnel for the WLAN terminal.

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| **被引用** | 5 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 5 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Decision-making method, decision-making system, and policy decision function**

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| **公开号** | [US8099377](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8099377&sv=741d86ecd85aac00239b5bf742cfefd9) | **公开日** | 2012/01/17 |
| **申请号** | 12/776,972 | **申请日** | 2010/05/10 |
| **授权日** | 2012/01/17 | **优先日** | 2008/03/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Qing | Hu; Ying |
| **国际 主分类** | G06F 17/00 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A decision-making method, a decision-making system, and a PDF are disclosed herein. The decision-making method comprises: receiving application session data that carries access network data and access user data; and making policy and charging decisions according to the application session data. Through the decision-making method, decision-making system, and PDF, the application session data comprises access network data and access user data of the UE so that the PCRF can uniquely determine a user according to the access network data or the access user data and the IP address allocated by the network to the UE, and make policy and charging decisions. |

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| **主权项** | 专利度:10特征度:25 |  |  |
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A decision-making method, comprising: receiving, by a Policy Decision Function (PDF) in a mobile network, application session data that comprises access network data and access user data, wherein the access network data comprises a Packet Data Network (PDN) identifier, the access user data comprises an IP address of a User Equipment (UE); determining, by the PDF, an Internet Protocol Connectivity Access Network (IP-CAN) session according to the PDN identifier and the IP address of the UE; and delivering, by the PDF, policy and charging rules to a Policy and Charging Enforcement Function (PCEF) corresponding to the IP-CAN session.

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| **对偶主权项** | 专利度:19特征度:22 |  |  |
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A decision-making method, comprising: receiving,by a Policy Decision Function (PDF)in a mobile network, application session data that comprises access network data and access user data~~; and making, in a Policy Decision Function (PDF) in the mobile network, policy and charging decisions accor~~, wherein the access network data comprises a Packet Data Network (PDN) identifier, the access user data comprises an IP address of a User Equipment (UE); determining, by the PDF, an Internet Protocol Connectivity Access Network (IP-CAN) session according to the PDN identifier and the IP address of the UE; and delivering, by the PDF, policy and charging rules to a Policy and Charging Enforcement Function (PCEF) corresponding to the~~application~~IP-CANsession~~data~~.

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| **被引用** | 7 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.10 |

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| **同族数** | 10 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for implementing communications**

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| **公开号** | [US8089956](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8089956&sv=e790d8dff4f008a437a3f974a1607d0f) | **公开日** | 2012/01/03 |
| **申请号** | 11/562,237 | **申请日** | 2006/11/21 |
| **授权日** | 2012/01/03 | **优先日** | 2004/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Gu; Jiongjiong | Zhu; Dongming |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention discloses a method and a system for implementing communication for a CSI terminal, the system includes: an IP Multimedia Subsystem Terminal Module (IMS TM), a Circuit Switched Terminal Module (CS TM), a CS/IMS interworking gateway. The method includes: the IMS IM indicates the CS TM to establish a CS/IMS interworking call connection from the CS TM to the IMS TM, and establish a CS bearer between the CS TM and CS/IMS interworking gateway, the IMS TM correlated controls the two sessions respectively with the CS/IMS interworking gateway and the peer side, so as to make the media components it exchanged with the peer side be exchanged between the peer side and the CS/IMS interworking gateway via IP bearer, and then be exchanged between the CS/IMS interworking gateway and the CSI terminal through the established CS bearer. Thus the present invention ensures the communication of the CSI terminal. |

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| **主权项** | 专利度:35特征度:36 |  |  |
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A method for implementing communications, comprising: A. an IP Multimedia Subsystem (IMS) Terminal Module (TM) in a Combining Circuit Switched bearer with IP multimedia subsystem (CSI) terminal indicating a Circuit Switched (CS) TM in the CSI terminal to initiate a CS bearer establishment; B. the CS TM taking the IMS TM as a called party and sending a call establish request to a CS domain call control function; C. the CS domain call control function routing the call establish request to a CS/IMS interworking gateway according to called party number information in the received request; D. the CS/IMS interworking gateway converting the received call establish request into an IMS session establish request, and then sending the IMS session establish request to the IMS TM; E. the IMS TM performing a correlated control between two sessions, wherein one is between the IMS TM and the CS/IMS interworking gateway, and the other is between the IMS TM and a peer side, so as to implement a CSI service; and allocating a Mobile Station International Integrated Services Digital Network (MSISDN) number for the CS TM in advance; wherein the step A further comprises the IMS TM obtaining the MISISDN number of the CS TM; the step D further comprises the CS/IMS interworking gateway obtaining the MSISDN number of the CS TM according to a calling party number in the received call establish request, and carrying the MSISDN number of the CS TM in a “From” header field in the IMS session establish request sent to the IMS TM; and before the IMS TM performing the correlated control process, the step E further comprises the IMS TM obtaining the MSISDN number of the CS TM from the “From” header field in the received IMS session establish request, judging whether the current obtained MSISDN number of the CS TM is identical with the MSISDN number obtained in step A, if they are identical, continuing with the correlated control process.

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| **对偶主权项** | 专利度:39特征度:9 |  |  |
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A method for implementing communications, comprising:A. an IP Multimedia Subsystem (IMS) Terminal Module (TM) in a Combining Circuit Switched bearer with IP multimedia subsystem (CSI) terminal indicating a Circuit Switched (CS) TM in the CSI terminal to initiate a CS bearer establishment;B. the CS TM taking the IMS TM as a called party and sending a call establish request to a CS domain call control function;C. the CS domain call control function routing the call establish request to a CS/IMS interworking gateway according to called party number information in the received request;D. the CS/IMS interworking gateway converting the received call establish request into an IMS session establish request, and then send~~s~~ingthe IMS session establish request to the IMS TM;~~and~~E. the IMS TM performing a correlated control between two sessions, wherein one is between the IMS TM and the CS/IMS interworking gateway, and the other is between the IMS TM and a peer side, so as to implement a CSI service; and allocating a Mobile Station International Integrated Services Digital Network (MSISDN) number for the CS TM in advance; wherein the step A further comprises the IMS TM obtaining the MISISDN number of the CS TM; the step D further comprises the CS/IMS interworking gateway obtaining the MSISDN number of the CS TM according to a calling party number in the received call establish request, and carrying the MSISDN number of the CS TM in a “From” header field in the IMS session establish request sent to the IMS TM; and before the IMS TM performing the correlated control process, the step E further comprises the IMS TM obtaining the MSISDN number of the CS TM from the “From” header field in the received IMS session establish request, judging whether the current obtained MSISDN number of the CS TM is identical with the MSISDN number obtained in step A, if they are identical, continuing with the correlated control process.

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| **被引用** | 5 | **自引用** | 0 | **公司数** | 2 | **国家数** | 1 | **影响力** | 0.44 |

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| **同族数** | 8 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Dispatching method, dispatching apparatus and dispatching system**

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| **公开号** | [US8078723](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8078723&sv=1908cf5b80f91efb78afb63fdaacc6e7) | **公开日** | 2011/12/13 |
| **申请号** | 12/623,425 | **申请日** | 2009/11/22 |
| **授权日** | 2011/12/13 | **优先日** | 2008/11/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Jiang; Haijun | Zhao; Ye |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A dispatching method, a dispatching apparatus and a dispatching system are disclosed according to embodiments of the present invention. The dispatching method includes receiving a request initiated by a user terminal, where the request carries address information of the user terminal; obtaining the address information carried in the request and obtaining key information of an access server associated with the address information; searching for a corresponding node based on the key information of the access server and treating the node as a redirected serving node. A dispatching apparatus and a dispatching system are also disclosed according to embodiments of the present invention. The technical solution of the embodiments of the present invention may well solve the dispatching issue and has a more flexible application. |

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| **主权项** | 专利度:16特征度:14 |  |  |
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A dispatching method, comprising: receiving a request initiated by a user terminal, wherein the request carries address information of the user terminal; obtaining the address information carried in the request and obtaining key information of an access server associated with the address information; searching for a corresponding node based on the key information of the access server and treating the node as a redirected serving node; wherein the obtaining the key information of the access server associated with the address information comprises: obtaining, based on recorded bonding relationship between the address information of the user terminal and the key information of the access server, the key information of the access server associated with the address information carried in the request, wherein the bonding relationship is synchronized by a management system; and requesting the key information of the access server associated with the address information from the management system, and receiving from the management system the key information of the access server associated with the address information, if the obtaining of the key information of the access server associated with the address information carried in the request fails.

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| **对偶主权项** | 专利度:20特征度:29 |  |  |
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A dispatching method, comprising: receiving a request initiated by a user terminal, wherein the request carries address information of the user terminal; obtaining the address information carried in the request and obtaining key information of an access server associated with the address information;~~and~~searching for a corresponding node based on the key information of the access server and treating the node as a redirected serving node; wherein the obtaining the key information of the access server associated with the address information comprises: obtaining, based on recorded bonding relationship between the address information of the user terminal and the key information of the access server, the key information of the access server associated with the address information carried in the request, wherein the bonding relationship is synchronized by a management system; and requesting the key information of the access server associated with the address information from the management system, and receiving from the management system the key information of the access server associated with the address information, if the obtaining of the key information of the access server associated with the address information carried in the request fails.

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| **被引用** | 2 | **自引用** | 2 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.73 |

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| **同族数** | 6 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for handling emergency service in network communication**

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| **公开号** | [US8077831](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8077831&sv=84d74798f39946a25bb3d9454bc3d30d) | **公开日** | 2011/12/13 |
| **申请号** | 11/882,924 | **申请日** | 2007/08/07 |
| **授权日** | 2011/12/13 | **优先日** | 2005/04/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Yungu |
| **国际 主分类** | H04M 11/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| The present invention discloses a method for handling an emergency service in a network communication, including: sending, by an emergency service initiating side, an emergency service identifier together with the emergency service to a network side; and allocating, by the network side, resource to a received service firstly when determining that the received service is an emergency service in accordance with the emergency service identifier. With the present invention, a corresponding emergency service may be identified effectively in a network provided with an independent bearer-control-layer entity, and a resource may be allocated to the emergency service in accordance with a special resource allocation policy. Therefore, it is possible to guarantee the connectivity and the resource for the emergency service as requested in the network, and hence to reduce an unexpected and unnecessary loss. |

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| **主权项** | 专利度:10特征度:17 |  |  |
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A method for handling an emergency service in a network with an independent bearer control layer, comprising: receiving, by an Application Function (AF) element, a service session initiated by a user; determining, by the AF element, whether the service session is an emergency service through a service analysis; upon determining the emergency service, sending, by the AF element, a service resource request message carrying an emergency service identifier to a Policy Decision Function/Bearer Control Function (PDF/BCF) element; determining, by the PDF/BCF element, that the service session is an emergency service session according to the emergency service identifier; and allocating, by the PDF/BCF element, a resource to the service session with a priority higher than those of normal service sessions.

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| **对偶主权项** | 专利度:10特征度:13 |  |  |
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A method for handling an emergency service inanetwork~~communication~~with an independent bearer control layer, comprising:~~send~~receiving, by an~~emergency service initiating side, an emergency service identifier tog~~Application Function (AF) element, a service session initiated by a user; determining, by the AF element, whether the service session is an emergency service through a service analysis; upon det~~h~~er~~with~~miningthe emergency service~~to a network side; and allocating, by the network side, a resource to a received service firstly when determining that the received~~, sending, by the AF element, a service resource request message carrying an emergency service identifier to a Policy Decision Function/Bearer Control Function (PDF/BCF) element; determining, by the PDF/BCF element, that theservicesessionis an emergency service~~i~~session accord~~ance with~~ing tothe emergency service identifier; and allocating, by the PDF/BCF element, a resource to the service session with a priority higher than those of normal service sessions.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.22 |

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| **同族数** | 9 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for providing multicast services**

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| **公开号** | [US8077717](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8077717&sv=2310e4de9e6a2eade08da5468de769b1) | **公开日** | 2011/12/13 |
| **申请号** | 12/481,346 | **申请日** | 2009/06/09 |
| **授权日** | 2011/12/13 | **优先日** | 2007/01/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | intertrust technologies | **发明人** | Yan; Jun | Wu; Xiangyang | Li; Jincheng |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present disclosure discloses a method for providing multicast services, which includes receiving a multicast service request sent by a UE through an IMS network, obtaining the media transmission parameters of the multicast media streams, sending a response to the UE through the IMS network with the media transmission parameters carried in the response, and sending the multicast media streams corresponding to the media transmission parameters to the UE. Further, a system providing multicast services and a multicast service support system is disclosed. |

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| **主权项** | 专利度:19特征度:33 |  |  |
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A method for providing multicast services, comprising: receiving, by an application server (AS), a multicast service request sent by a User Equipment (UE) through an IMS network, wherein the multicast service request comprises a multicast service identifier and a Channel ID; analyzing, by the AS, the Channel ID carried in the multicast service request, and requesting the media transmission parameters corresponding to the Channel ID from a Service Schedule Function (SSF); receiving, by the AS, the media transmission parameters from the SSF, wherein the media transmission parameters comprise multicast address; sending, by the AS, a response carrying the media transmission parameters to the UE through the IMS network; and sending, by a Media Resource Function (MRF), multicast service media streams corresponding to the media transmission parameters to the UE; wherein, before receiving, by the AS, the media transmission parameters from the SSF, the method further comprises: finding, by SSF, whether multicast service content corresponding to the media transmission parameters is scheduled, and if yes, providing the media transmission parameters; if no, obtaining a service scheduling plan, obtaining content metadata and content source address from a Content Management Function (CMF) according to the service scheduling plan, and obtaining multicast address and/or port information; sending, by the SSF, a content scheduling message carrying the multicast address and/or port information, the content metadata, and the content source address to the MRF; and obtaining, by the MRF, multicast service content from a media content source device according to the content source address.

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| **对偶主权项** | 专利度:25特征度:7 |  |  |
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A method for providing multicast services, comprising:receiving, by an application server (AS),a multicast service request sent by a User Equipment (UE) through an IMS network,~~obtaining media transmission parameters of the multicast service media stream;sending~~wherein the multicast service request comprises a multicast service identifier and a Channel ID; analyzing, by the AS, the Channel ID carried in the multicast service request, and requesting the media transmission parameters corresponding to the Channel ID from a Service Schedule Function (SSF); receiving, by the AS, the media transmission parameters from the SSF, wherein the media transmission parameters comprise multicast address; sending, by the AS,a response carrying the media transmission parameters to the UE through the IMS network; andsending~~the~~, by a Media Resource Function (MRF),multicast service media streams corresponding to the media transmission parameters to the UE; wherein, before receiving, by the AS, the media transmission parameters from the SSF, the method further comprises: finding, by SSF, whether multicast service content corresponding to the media transmission parameters is scheduled, and if yes, providing the media transmission parameters; if no, obtaining a service scheduling plan, obtaining content metadata and content source address from a Content Management Function (CMF) according to the service scheduling plan, and obtaining multicast address and/or port information; sending, by the SSF, a content scheduling message carrying the multicast address and/or port information, the content metadata, and the content source address to the MRF; and obtaining, by the MRF, multicast service content from a media content source device according to the content source address.

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| **被引用** | 3 | **自引用** | 1 | **公司数** | 3 | **国家数** | 1 | **影响力** | 0.10 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of user access authorization in wireless local area network**

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| **公开号** | [US8077688](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8077688&sv=cd45e80cddabf94633cc3be64b41aa50) | **公开日** | 2011/12/13 |
| **申请号** | 12/389,030 | **申请日** | 2009/02/19 |
| **授权日** | 2011/12/13 | **优先日** | 2003/06/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The present invention discloses a method of user access authorization in wireless local area networks. The method comprises: when a Wireless Local Area Network (WLAN) user terminal is accessing a WLAN operational network, the WLAN operational network, while authenticating this WLAN user terminal, judging whether to allow this WLAN user terminal to access according to authorization conditions having an impact on the access of this WLAN user terminal, if yes, the WLAN operational network will determine the access rules of this WLAN user terminal according to the said authorization conditions; otherwise, the WLAN operational network will notify the WLAN user terminal about the failure. Different users can be controlled to access the network according to different authorization conditions, and be restricted by different access rules after getting accessed. Thus, the access control capability of a wireless local area network is enhanced and the working efficiency of the network is improved. |

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| **主权项** | 专利度:27特征度:21 |  |  |
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A method of user access control to a wireless telecommunications network, comprising: an access authentication process including authenticating a wireless local area network (WLAN) user terminal upon receiving an access request for accessing a WLAN operational network from the WLAN user terminal; and an access authorization process comprising: verifying whether the WLAN user terminal is allowed to access the WLAN operational network, wherein whether the WLAN user terminal is allowed to access the WLAN operational network is verified according to authorization conditions; and determining access rules to be applied to the WLAN user terminal at least based on the authorization conditions, wherein the access rules are configured to restrict the access of the WLAN user terminal to access the WLAN operational network, and wherein the access authorization process occurs after the access authentication process succeeds, and if the access request complies with the access rules, the method further comprises: performing a service authorization, wherein the service authorization determines whether the WLAN user terminal is allowed to access a service.

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| **对偶主权项** | 专利度:22特征度:8 |  |  |
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A method of user access control to a wireless telecommunications network,~~the method~~comprising:an access authentication process including authenticating a wireless local area network (WLAN) user terminal upon receiving an access request for accessing a WLAN operational network from~~said~~theWLAN user terminal; andan access authorization process comprising:verifying whether~~said~~theWLAN user terminal is allowed to access~~said~~theWLAN operational network, wherein whether~~said~~theWLAN user terminal is allowed to accessthe WLAN operational networkis verified according to authorization conditions; anddetermining access rules to be applied to~~said~~theWLAN user terminal at least based on~~said~~theauthorization conditions, wherein~~said~~theaccess rules are configured to restrict~~said~~theaccess of~~said~~theWLAN user terminal~~,~~to access the WLAN operational network, andwherein~~said~~theaccess authorization process occurs after~~a successful~~theaccess authentication process~~and before service authorization is performed~~succeeds, and if the access request complies with the access rules, the method further comprises: performing a service authorization, wherein the service authorization determines whether the WLAN user terminal is allowed to access a service.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.6 |

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| **同族数** | 11 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for processing bearer under ISR mechanism**

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| **公开号** | [US8072927](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8072927&sv=5637e4d42fc3cc6c39930e55957cedaa) | **公开日** | 2011/12/06 |
| **申请号** | 13/103,547 | **申请日** | 2011/05/09 |
| **授权日** | 2011/12/06 | **优先日** | 2008/02/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Di; Zhiyu | Wu; Wenfu | Wang; Shanshan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and a system for processing a bearer under an idle mode signaling reduction (ISR) mechanism are provided. The method for processing a bearer under an ISR mechanism includes the following steps. A mobility management network element acquires an access mode of a current network. The mobility management network element notifies a serving gateway (SGW) of the access mode of the current network, so that the SGW processes bearer according to the access mode of the current network. It can be ensured that the access mode of the current network is consistent with the access mode for a policy and charging control (PCC) strategy adopted during a bearing procedure under the ISR mechanism. |

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| **主权项** | 专利度:8特征度:25 |  |  |
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A method for processing a bearing procedure, comprising: receiving, by a serving gateway (SGW), a first bearer request sent by a packet data network gateway (PGW); notifying, by the SGW, a mobility management network element (MME) to page a user; receiving, by the SGW, an access mode of a current network sent by the MME; comparing, by the SGW, the access mode of the current network with a recorded access mode of an original resident network; notifying, by the SGW, the PGW of the access mode of the current network when a comparison result indicates that the access mode of the current network is different from the access mode of the original resident network; receiving, by the SGW, a second bearer request corresponding to the access mode of the current network sent by the PGW according to a policy and charging control (PCC) rule corresponding to the access mode of the current network; and performing the second bearer request corresponding to the access mode of the current network; wherein the method is performed under an idle mode signaling reduction (ISR) mechanism, and wherein the first bearer request is sent by the PGW in accordance with a PCC rule sent by a policy and charging rules function (PCRF) entity corresponding to the access mode of the original resident network.

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| **对偶主权项** | 专利度:9特征度:14 |  |  |
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A method for processing a bearing procedure~~under an idle mode signaling reduction(ISR) mechanism~~, comprising: receiving, by a serving gateway (SGW), afirstbearer request sent by a packet data network gateway (PGW); notifying, by the SGW, a mobility management network element(MME) to page a user; receiving, by the SGW, an access mode of a current network sent by the MME;~~notifying, by the SGW, the PGW of the access mode of the curr~~comparing, by the SGW, the access mode of the current network with a recorded access mode of an original resident network; notifying, by the SGW, the PGW of the access mode of the current network when a comparison result indicates that the access mode of the current network is different from the access mode of the original resident network; receiving, by the SGW, asecondbearer request corresponding to the access mode of the current network sent by the PGW according to a policy and charging control (PCC) rule corresponding to the access mode of the current network; and performing thesecondbearer request corresponding to the access mode of the currentnetwork; wherein the method is performed under an idle mode signaling reduction (ISR) mechanism, and wherein the first bearer request is sent by the PGW in accordance with a PCC rule sent by a policy and charging rules function (PCRF) entity corresponding to the access mode of the original residentnetwork.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for realizing IP multimedia subsystem disaster tolerance**

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| **公开号** | [US8069365](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8069365&sv=ad946034e7c4c0b0b2d6cedd8580eae1) | **公开日** | 2011/11/29 |
| **申请号** | 12/428,810 | **申请日** | 2009/04/23 |
| **授权日** | 2011/11/29 | **优先日** | 2006/10/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Gu; Jiongjiong | Liang; Feng | Shen; Linfei | Shi; Shufeng | Wen; Kai |
| **国际 主分类** | G06F 11/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for realizing an Internet protocol (IP) multimedia subsystem (IMS) disaster tolerance includes the steps as follows. An S-CSCF receives a user registration, and backs up necessary data which is required when a user service processing is restored on a storage entity in a network. An I-CSCF of user's home domain receives a service request of the user, and if it is found that the S-CSCF currently providing a service for the user fails, assigns a new S-CSCF to the user, and forwards the service request to the newly assigned S-CSCF. The newly assigned S-CSCF interrogates and acquires subscription data of the user and the necessary data backed up by the original S-CSCF from the storage entity, and then restores the user service processing according to the subscription data and the backup data. A device for realizing an IMS disaster tolerance is also provided. |

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| **主权项** | 专利度:28特征度:23 |  |  |
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A method for realizing an Internet protocol multimedia subsystem (IMS) disaster tolerance, comprising: receiving, by a serving call session control function (S-CSCF), a user registration, and backing up necessary data which is required when a user service processing is restored on a storage entity in a network; receiving, by an interrogating CSCF (I-CSCF) of the user's home domain, a service request of the user, and if it is found that the S-CSCF currently providing a service for the user fails, assigning a new S-CSCF to the user, and forwarding the service request to the newly assigned S-CSCF; and interrogating and acquiring, by the newly assigned S-CSCF, subscription data of the user and the necessary data backed up by the original S-CSCF from the storage entity, and then restoring the user service processing according to the subscription data and the necessary data.

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| **对偶主权项** | 专利度:28特征度:31 |  |  |
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A method for realizing an Internet protocol multimedia subsystem (IMS) disaster tolerance, comprising:receiving, by a serving call session control function (S-CSCF), a user registration, and backing up necessary data which is required when a user service processing is restored on a storage entity in a network;receiving, by an interrogating CSCF (I-CSCF) of the user's home domain, a service request of the user, and if it is found that the S-CSCF currently providing a service for the user fails, assigning a new S-CSCF to the user, and forwarding the service request to the newly assigned S-CSCF; andinterrogating and acquiring, by the newly assigned S-CSCF, subscription data of the user and the necessary data backed up by the original S-CSCF from the storage entity, and then restoring the user service processing according to the subscription data and the necessary data.

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| **被引用** | 17 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 2.6 |

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| **同族数** | 10 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for information transfer**

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| **公开号** | [US8059679](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8059679&sv=df483d77dafd870ef933fd50d97f98f3) | **公开日** | 2011/11/15 |
| **申请号** | 12/704,868 | **申请日** | 2010/02/12 |
| **授权日** | 2011/11/15 | **优先日** | 2007/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua | Wu; Wenfu |
| **国际 主分类** | H04J 3/16 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for information transfer includes: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN), version number of GPRS Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE. The embodiment of the invention also provides a device for information transfer. With the embodiment of present invention, corresponding user information transfer may be realized. |

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| **主权项** | 专利度:12特征度:21 |  |  |
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A method, comprising: determining, by a source Mobility Management Network Element (MMNE), a version number of a General Radio Packet Service (GPRS) Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE; transmitting, by the source MMNE, a Context Response message to the destination MMNE, wherein the Context Response message includes user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE; and wherein when a source Access Network (AN) is a higher version and a destination AN is a lower version, the method further comprises: notifying a Serving Gateway (S-GW) to delete bearer resource, by the source MMNE transmitting a Delete Bearer Request message to the Serving Gateway (S-GW) and the S-GW deleting the bearer resource used by a UE; wherein when the GTP version number is GTPV2, the user information corresponding to the version number of the GTP comprises both Packet Data Network Gateway (P-GW) information and Serving Gateway (S-GW) information.

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| **对偶主权项** | 专利度:18特征度:22 |  |  |
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A method~~for information transfer~~, comprising: determining, by a source Mobility Management Network Element (MMNE)~~of a source Access Network (AN)~~, a version number of aGeneral Radio Packet Service (GPRS)Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE~~of a destination AN; and~~;transmitting, by the source MMNE,a Context Response message to the destination MMNE, wherein the Context Response message includesuser information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE~~to the destination MMNE~~; and wherein when a source Access Network (AN) is a higher version and a destination AN is a lower version, the method further comprises: notifying a Serving Gateway (S-GW) to delete bearer resource, by the source MMNE transmitting a Delete Bearer Request message to the Serving Gateway (S-GW) and the S-GW deleting the bearer resource used by a UE; wherein when the GTP version number is GTPV2, the user information corresponding to the version number of the GTP comprises both Packet Data Network Gateway (P-GW) information and Serving Gateway (S-GW) information.

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| **被引用** | 19 | **自引用** | 5 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.65 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Interactive method for reporting location report by target user equipment in location service**

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| **公开号** | [US8055275](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8055275&sv=477c641ef3d1495cdc7d3258dc1afd42) | **公开日** | 2011/11/08 |
| **申请号** | 10/554,544 | **申请日** | 2004/06/14 |
| **授权日** | 2011/11/08 | **优先日** | 2003/06/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| Disclosed is an interactive method for reporting location reports by a target UE in an LCS. The method comprises: the target UE receiving a location request initiated by an applicant and reporting a location report to the LCS system after detecting the occurrence of an event triggering a location report; the LCS system returning to the target UE a location report acknowledgement after receiving the location report submitted by the target UE. Further, while submitting the location report to the LCS system, the target UE starting a timer designating a time period and judging whether it has received a location report acknowledgement returned by the LCS system within the designated time period, if yes, stopping the timer designating the time period; otherwise, reporting once again the location report to the LCS system and re-starting the timer designating the time period at the same time. In accordance with this method, errors in reporting location reports are reduced and the uncertainty in implementation of LCS is lowered. |

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| **主权项** | 专利度:8特征度:16 |  |  |
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An interactive method for reporting location reports by a target user equipment (UE) in a location service (LCS) system, the method comprising: the target UE receiving a location request initiated by an applicant; the target UE reporting a location report to a Core Network (CN) in the LCS system after having detected an occurrence of an event triggering the location report in a Deferred Location Request Procedure; and the target UE receiving a location report acknowledgement in the Deferred Location Request Procedure from the CN after the CN receives the location report from the target UE, wherein the location report acknowledgement carries parameters comprising information of a processing result of the location report.

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| **对偶主权项** | 专利度:11特征度:6 |  |  |
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An interactive method for reporting location reports by a target user equipment (UE) in a location service (LCS)system, the method comprising:~~A.~~the target UE receiving a location request initiated by an applicant~~, and~~; the target UEreporting a location report toa Core Network (CN) inthe LCS system after having detected~~the~~anoccurrence of an event triggering~~a~~thelocation report~~; B. after~~in a Deferred Location Request Procedure; and the target UEreceiving~~the~~alocation report~~reported by the target UE, the LCS system returning to~~acknowledgement in the Deferred Location Request Procedure from the CN after the CN receives the location report fromthe target UE~~a~~, wherein thelocation report acknowledgementcarries parameters comprising information of a processing result of the location report.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 14 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and apparatus for transferring short messages in an IMS**

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| **公开号** | [US8051208](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8051208&sv=e98bf33e307a1bc32f57ce6c5b988ec7) | **公开日** | 2011/11/01 |
| **申请号** | 12/388,275 | **申请日** | 2009/02/18 |
| **授权日** | 2011/11/01 | **优先日** | 2006/08/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Xiao | Xu; Peili |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present invention discloses a method for delivering short messages in an IMS. The method includes: The sender encapsulates multiple concatenated short message segments into an IMS message, and sends the IMS message to the receiver. The present invention also discloses a system and apparatus for delivering short messages in an IMS. Through the embodiments of the present invention, the receiver can obtain a complete short message upon receiving the message. |

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| **主权项** | 专利度:2特征度:23 |  |  |
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A method for transferring short messages in an IP Multimedia Subsystem (IMS), comprising: receiving, by an IP short message gateway (IP-SM-GW), concatenated short message (SM) segments; presetting, by the IP-SM-GW, a waiting time for receiving the concatenated SM segments; formatting, by the IP-SM-GW, contents of the received concatenated SM segments in a type utilized by a Session Initiation Protocol (SIP) request message if the waiting time ends or if all of the concatenated SM segments have been received in the waiting time; setting, by the IP-SM-GW, the formatted contents of the received concatenated SM segments to contents of a body of the SIP request message if the waiting time ends or if all of the concatenated SM segments have been received in the waiting time; and sending, by the IP-SM-GW, the SIP request message to a user equipment (UE) through a Serving Call Session Control Function (S-CSCF) in the IP Multimedia Subsystem.

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| **对偶主权项** | 专利度:21特征度:9 |  |  |
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A method for transferring short messages in an IP Multimedia Subsystem (IMS), comprising:receiving, by a~~sender~~n IP short message gateway (IP-SM-GW), concatenated short message (SM~~S~~) segments;~~encapsula~~presetting, by the IP-SM-GW, a waiting time for receiving the concatenated SM segments; formatting,bythe~~multiple short messages segments into an IMS messag~~IP-SM-GW, contents of the received concatenated SM segments in a type utilized by a Session Initiation Protocol (SIP) request message if the waiting time ends or if all of the concatenated SM segments have been received in the waiting time; setting, by the IP-SM-GW, the formatted contents of the received concatenated SM segments to contents of a body of the SIP request message if the waiting time ends or if all of the concatenated SM segments have been received in the waiting time; andsending, bythe I~~MS message to the receiver~~P-SM-GW, the SIP request message to a user equipment (UE) through a Serving Call Session Control Function (S-CSCF) in the IP Multimedia Subsystem.

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.14 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device of network resource release processing**

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| **公开号** | [US8041361](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8041361&sv=b7b15efae1bc3d624334837e0517fc3f) | **公开日** | 2011/10/18 |
| **申请号** | 12/893,862 | **申请日** | 2010/09/29 |
| **授权日** | 2011/10/18 | **优先日** | 2008/01/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** |  | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of network resource release processing is provided, which includes the following steps. After user equipment (UE) using idle mode signaling reduction (ISR) mechanism registers to two 3rd Generation Partnership Project (3GPP) communication networks, when the UE changes from the 3GPP network to a non-3GPP communication network, a serving gateway (serving GW) receives a message sent from a peer endpoint network element (NE), and deletes network resources established by the two 3GPP communication networks for the UE according to the message. A mobility management NE and a serving GW are also provided. Through the method and device of network resource release processing, the resources are released when the UE using the ISR mechanism changes from the 3GPP network to the non-3GPP communication network. |

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| **主权项** | 专利度:7特征度:40 |  |  |
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A method of network resource release processing, comprising: receiving, by a serving gateway (serving GW), a message sent from a peer endpoint network element (NE), when a user equipment (UE) changes from a 3rd Generation Partnership Project (3GPP) network to a non-3GPP network, wherein the UE using IDLE MODE SIGNALING REDUCTION (ISR) mechanism registers to two 3GPP communication networks; wherein the receiving, by the serving GW, the message sent from the peer endpoint NE comprises: receiving, by the serving GW, a delete bearer request message or a binding revocation indication message sent from a packet data network gateway (PDN GW), wherein the delete bearer request message or the binding revocation indication message includes a first indication information indicating that a communication network of the UE changes from the 3GPP communication network to the non-3GPP communication network; and deleting network resources established by the two 3GPP communication networks for the UE according to the message; wherein the deleting the network resources established by the two 3GPP communication networks for the UE comprises: sending, by the serving GW, the delete bearer request message or a delete Packet Data Protocol (PDP) context request message to notify mobility management NEs of the two 3GPP communication networks to release the network resources established for the UE; receiving, by the mobility management NEs of the two 3GPP communication networks, the delete bearer request message or the delete PDP context request message; and releasing the resources of the UE in the two 3GPP communication networks.

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| **对偶主权项** | 专利度:17特征度:5 |  |  |
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A method of network resource release processing, comprising: receiving, by a serving gateway (serving GW), a message sent from a peer endpoint network element (NE), when a user equipment (UE) changes from a 3rd Generation Partnership Project (3GPP) network to a non-3GPP network, wherein the UE using IDLE MODE SIGNALING REDUCTION (ISR) mechanism registers to two 3GPP communication networks;~~and deleting network resources established by the two 3GPP communication networks for the UE according to the message~~wherein the receiving, by the serving GW, the message sent from the peer endpoint NE comprises: receiving, by the serving GW, a delete bearer request message or a binding revocation indication message sent from a packet data network gateway (PDN GW), wherein the delete bearer request message or the binding revocation indication message includes a first indication information indicating that a communication network of the UE changes from the 3GPP communication network to the non-3GPP communication network; and deleting network resources established by the two 3GPP communication networks for the UE according to the message; wherein the deleting the network resources established by the two 3GPP communication networks for the UE comprises: sending, by the serving GW, the delete bearer request message or a delete Packet Data Protocol (PDP) context request message to notify mobility management NEs of the two 3GPP communication networks to release the network resources established for the UE; receiving, by the mobility management NEs of the two 3GPP communication networks, the delete bearer request message or the delete PDP context request message; and releasing the resources of the UE in the two 3GPP communication networks.

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| **被引用** | 11 | **自引用** | 4 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.4 |

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| **同族数** | 17 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, terminal, and system for cell reselection**

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| **公开号** | [US8041355](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8041355&sv=78bd0b25ad659820ab9253da5304de81) | **公开日** | 2011/10/18 |
| **申请号** | 12/955,392 | **申请日** | 2010/11/29 |
| **授权日** | 2011/10/18 | **优先日** | 2008/04/09 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Roberts; Michael | Johansson; Johan | Xie; Boyun | Huang; Min |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method, terminal, and system for cell reselection are disclosed. The method includes: a terminal obtains a dedicated priority list from a first system; and performs cell reselection according to the dedicated priority list when the terminal camps on a cell of a second system. The corresponding terminal and system are also provided in other embodiments of the invention. According to an embodiment of the invention, the terminal performs cell reselection by using the dedicated priority list obtained from the first system so as to free the second system from establishing the dedicated priority list. Problems in the prior arts that establishment of the dedicated priority list causes too much increased signaling and too high costs for network upgrade are solved. |

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| **主权项** | 专利度:13特征度:11 |  |  |
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A method for cell reselection, comprising: obtaining, by a terminal, a dedicated priority list and a valid time of the dedicated priority list from a Long Term Evolution (LTE) system; and when the terminal camps on a cell of a non-LTE system, performing, by the terminal, cell reselection according to the dedicated priority list before the valid time expires, performing, by the terminal, cell reselection according to a public priority list after the valid time expires, wherein the public priority list is obtained by the terminal from one of the LTE system and the non-LTE system.

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| **对偶主权项** | 专利度:20特征度:12 |  |  |
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A method for cell reselection, comprising: obtaining, by a terminal, a dedicated priority list and a valid time of the dedicated priority list from a~~first system; and~~Long Term Evolution (LTE) system; and when the terminal camps on a cell of a non-LTE system,performing, by the terminal, cell reselection according to the dedicated priority list~~and~~beforethe valid time~~of the dedicated priority list~~expires, performing, by the terminal, cell reselection according to a public priority list after the valid time expires, wherein the~~terminal camps on a cell of a second~~public priority list is obtained by the terminal from one of the LTE system and the non-LTEsystem.

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| **被引用** | 33 | **自引用** | 9 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.23 |

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| **同族数** | 25 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for establishing emergency call**

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| **公开号** | [US8040905](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8040905&sv=01c299f0eb9d1d8a6728a8a847c4cbff) | **公开日** | 2011/10/18 |
| **申请号** | 12/352,818 | **申请日** | 2009/01/13 |
| **授权日** | 2011/10/18 | **优先日** | 2006/07/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Yanfei |
| **国际 主分类** | H04L 12/56 | **优先 国家** | CN |
| **代理** | Harness, Dickey & Pierce, P.L.C. |

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| **摘要** |  |
| A method for establishing an emergency call includes: if an emergency call request message sent by a User Equipment (UE) contains an Internet Protocol Multimedia Subsystem Public User Identity (IMPU) in a TEL URI format, a Proxy-Call Session Control Function entity (P-CSCF) generates an IMPU in a Session Initiation Protocol (SIP) URI format according to the IMPU in the TEL URI format, sends both IMPUs to a Public Safety Answering Point (PSAP), and receives an emergency callback initiated by the PSAP. The PSAP initiates the emergency callback according to one of the two IMPUs. A system for establishing an emergency call includes a UE, a P-CSCF and a PSAP. The PSAP can always acquire the IMPU in the TEL URI format and the IMPU in the SIP URI format of the UE, and initiate an emergency callback to the UE according to the IMPU in the SIP URI format. |

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| **主权项** | 专利度:9特征度:22 |  |  |
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A method for establishing an emergency call, comprising: receiving, by a Proxy-Call Session Control Function entity, P-CSCF, an emergency call request message; if the emergency call request message contains an Internet Protocol Multimedia Subsystem Public User Identity, IMPU, in a Telephone Uniform Resource Identifier, TEL URI, format, generating, by the P-CSCF, an IMPU in a Session Initiation Protocol, SIP, URI format according to the IMPU in the TEL URI format; sending, by the P-CSCF, the IMPU in the TEL URI format and the IMPU in the SIP URI format to a Public Safety Answering Point, PSAP; and receiving, by the P-CSCF, an emergency callback from the PSAP according to the IMPU in the TEL URI format or the IMPU in the SIP URI format.

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| **对偶主权项** | 专利度:9特征度:12 |  |  |
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A method for establishing an emergency call, comprising:receiving, by a Proxy-Call Session Control Function entity, P-CSCF, an emergency call request message;if the emergency call request message contains an Internet Protocol Multimedia Subsystem Public User Identity, IMPU, in a Telephone Uniform Resource Identifier, TEL URI, format~~;~~,generating, by the P-CSCF, an IMPU in a Session Initiation Protocol, SIP, URI format according to the IMPU in the TEL URI format;sending, by the P-CSCF, the IMPU in the TEL URI format and the IMPU in the SIP URI format to a Public Safety Answering Point, PSAP; andreceiving, by the P-CSCF, an emergency callback from the PSAP according to the IMPU in the TEL URI format or the IMPU in the SIP URI format.

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| **被引用** | 11 | **自引用** | 2 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.47 |

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| **同族数** | 9 | **国家数** | 3 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for providing on-line charging and device and system thereof**

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| **公开号** | [US8036210](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8036210&sv=8743b02bbb1be0d4912d6ac97a71f62f) | **公开日** | 2011/10/11 |
| **申请号** | 12/042,952 | **申请日** | 2008/03/05 |
| **授权日** | 2011/10/11 | **优先日** | 2005/10/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Dongming | Duan; Xiaoqin |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| The present invention discloses a method for providing an online-charging to solve a problem that a related charging can not be processed correctly for a service involving simultaneously a CS domain and an IMS. The method includes: not invoking an online charging for the user in the CS domain when the user, who subscribes for the service involving simultaneously the CS domain and the IMS and the online charging service, originates or terminates a call in the CS domain; and performing the credit control in the CS domain and/or the IMS for the user in the IMS when the call of the user is processed through the IMS. The present invention also discloses a device and a system for an online credit control. |

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| **主权项** | 专利度:28特征度:23 |  |  |
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A method for providing an online charging, comprising: in a Circuit Switched (CS) domain, not invoking an online charging for a user who subscribes for a service involving simultaneously the CS domain and an IP Multimedia Subsystem (IMS) and needs the online charging, when the user originates or terminates a call in the CS domain; and in the IMS, performing a credit control for the user when the call of the user is processed in the IMS; wherein the credit control is performed through an interaction of an Application Server (AS) controlling the service involving simultaneously the CS domain and the IMS with at least one of an online charging system (OCS) in the IMS and a prepay system in the CS domain; when the user subscribes for the online charging service simultaneously in the CS domain and the IMS, accomplishing, by the AS controlling the service involving simultaneously the CS domain and the IMS, the credit control in the CS domain and the IMS through interacting with the OCS of the IMS directly via a standard Ro interface and interacting with the prepay system in the CS domain via the OCS of the IMS in accordance with user's subscription data; or, accomplishing, by the AS controlling the service involving simultaneously the CS domain and the IMS, the credit control in the CS domain and the IMS through interacting with the OCS of the IMS via the standard Ro interface and interacting with the prepay system in the CS domain via a CAP interface in accordance with user's subscription data.

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| **对偶主权项** | 专利度:36特征度:24 |  |  |
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A method for providing an online charging, comprising:in a Circuit Switched (CS) domain, not invoking an online charging for a user who subscribes for a service involving simultaneously the CS domain and an IP Multimedia Subsystem (IMS) and needs the online charging, when the user originates or terminates a call in the CS domain; andin the IMS, performing a credit control for the user when the call of the user is processed in the IMS; wherein the credit control is performed through an interaction of an Application Server (AS) controlling the service involving simultaneously the CS domain and the IMS with at least one of an online charging system (OCS) in the IMS and a prepay system in the CS domain; when the user subscribes for the online charging service simultaneously in the CS domain and the IMS, accomplishing, by the AS controlling the service involving simultaneously the CS domain and the IMS, the credit control in the CS domain and the IMS through interacting with the OCS of the IMS directly via a standard Ro interface and interacting with the prepay system in the CS domain via the OCS of the IMS in accordance with user's subscription data; or, accomplishing, by the AS controlling the service involving simultaneously the CS domain and the IMS, the credit control in the CS domain and the IMS through interacting with the OCS of the IMS via the standard Ro interface and interacting with the prepay system in the CS domain via a CAP interface in accordance with user's subscription data.

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| **被引用** | 4 | **自引用** | 0 | **公司数** | 4 | **国家数** | 1 | **影响力** | 0.41 |

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| **同族数** | 11 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for announcement for session**

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| **公开号** | [US8036209](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8036209&sv=0ac77b3888cf39316c5ce6e547b9557f) | **公开日** | 2011/10/11 |
| **申请号** | 11/970,904 | **申请日** | 2008/01/08 |
| **授权日** | 2011/10/11 | **优先日** | 2005/07/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Liu; Zhenhua |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| A method for an announcement for a session includes: adding at least one playing termination in a context of a session; setting up a topology descriptor between a playing termination and a termination which is about to listen to the announcement in the context; and playing the announcement by the playing termination to the termination connected to the playing termination. An apparatus for an announcement for a session includes a playing termination setting unit, a topology descriptor setting unit and an announcement-playing unit. The present invention ensures that a user can always hear complete announcement even when a termination operable for playing an announcement is deleted or removed from the context and thus cannot play the announcement any more. |

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| **主权项** | 专利度:17特征度:8 |  |  |
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A method for an announcement for a session, the method comprising: adding at least one playing termination into a context of a session to play an announcement; setting up a topology descriptor between a playing termination and a termination which is about to listen to the announcement from the playing termination in the context; and playing, by the playing termination, the announcement to the termination topologically connected to the playing termination.

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| **对偶主权项** | 专利度:17特征度:6 |  |  |
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A method for an announcement for a session,the methodcomprising:adding at least one playing termination intoa context of a session~~;~~to play an announcement;setting up a topology descriptor between a playing termination and a termination which is about to listen to~~an~~theannouncement~~o~~fromthe playing termination in the context; andplaying, by the playing termination, the announcement to the termination topologically connected to the playing termination.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device of network resource release processing**

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| **公开号** | [US8027688](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8027688&sv=e4e0b19c34c901ec88d053ccd3fea82e) | **公开日** | 2011/09/27 |
| **申请号** | 12/781,580 | **申请日** | 2010/05/17 |
| **授权日** | 2011/09/27 | **优先日** | 2008/01/21 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 72/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of network resource release processing is provided, which includes the following steps. After user equipment (UE) using idle mode signaling reduction (ISR) mechanism registers to two 3rd Generation Partnership Project (3GPP) communication networks, when the UE changes from the 3GPP network to a non-3GPP communication network, a serving gateway (Serving GW) receives a message sent from a peer endpoint network element (NE), and deletes network resources established by the two 3GPP communication networks for the UE according to the message. A mobility management NE and a Serving GW are also provided. Through the method and device of network resource release processing, the resources are released when the UE using the ISR mechanism changes from the 3GPP network to the non-3GPP communication network. |

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| **主权项** | 专利度:4特征度:36 |  |  |
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A method of network resource release processing, comprising: registering user equipment (UE) using idle mode signaling reduction (ISR) mechanism to two 3rd Generation Partnership Project (3GPP) communication networks; receiving, by a serving gateway (Serving GW), a message sent from a peer endpoint network element (NE), when the UE changes from the 3GPP network to a non-3GPP network; wherein the receiving, by the Serving GW, the message sent from the peer endpoint NE comprises: receiving, by the Serving GW, a delete bearer request message or a binding revocation indication message sent from a packet data network gateway (PDN GW), wherein the delete bearer request message or the binding revocation indication message includes first indication information indicating that a communication network of the UE changes from the 3GPP communication network to the non-3GPP communication network; and deleting network resources established by the two 3GPP communication networks for the UE according to the message, wherein the deleting the network resources established by the two 3GPP communication networks for the UE comprises: (a) sending, by the Serving GW, the delete bearer request message or a delete PDP context request message to notify a mobility management NE of one of the two 3GPP communication networks to release the network resources established for the UE; and (b) receiving, by the mobility management NE of the 3GPP communication network, the delete bearer request message or the delete PDP context request message, deleting the resources used by the UE, and sending a message to notify a mobility management NE of the other 3GPP communication network to release the resources.

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| **对偶主权项** | 专利度:20特征度:28 |  |  |
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A method of network resource release processing, comprising: registering user equipment (UE) using idle mode signaling reduction (ISR) mechanism to two 3rd Generation Partnership Project (3GPP) communication networks; receiving, by a serving gateway (Serving GW), a message sent from a peer endpoint network element (NE), when the UE changes from the 3GPP network to a non-3GPP network;~~and deleting network resources established by the two 3GPP communication networks for the UE according to the message~~wherein the receiving, by the Serving GW, the message sent from the peer endpoint NE comprises: receiving, by the Serving GW, a delete bearer request message or a binding revocation indication message sent from a packet data network gateway (PDN GW), wherein the delete bearer request message or the binding revocation indication message includes first indication information indicating that a communication network of the UE changes from the 3GPP communication network to the non-3GPP communication network; and deleting network resources established by the two 3GPP communication networks for the UE according to the message, wherein the deleting the network resources established by the two 3GPP communication networks for the UE comprises: (a) sending, by the Serving GW, the delete bearer request message or a delete PDP context request message to notify a mobility management NE of one of the two 3GPP communication networks to release the network resources established for the UE; and (b) receiving, by the mobility management NE of the 3GPP communication network, the delete bearer request message or the delete PDP context request message, deleting the resources used by the UE, and sending a message to notify a mobility management NE of the other 3GPP communication network to release the resources.

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| **被引用** | 12 | **自引用** | 4 | **公司数** | 2 | **国家数** | 2 | **影响力** | 2.79 |

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| **同族数** | 17 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, network system and destination network for transmitting QoS during a handover process between systems**

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| **公开号** | [US8027314](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8027314&sv=b31abb75896dbf088ebd235484daf4a2) | **公开日** | 2011/09/27 |
| **申请号** | 12/493,451 | **申请日** | 2009/06/29 |
| **授权日** | 2011/09/27 | **优先日** | 2007/02/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu | Hu; Weihua |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for transmitting quality of service (QoS) during a handover process between systems and a network system and a destination network thereof are provided, which enable the QoS to be transmitted to a second access network during a handover process of a user equipment (UE) between systems. The method comprises: a mobility management network element of the second network acquires QoS of a UE during a handover process of the UE from a first network to a second network; and the mobility management network element of the second network transmits the acquired QoS to the access network of the second network and/or a user plane network element. |

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| **主权项** | 专利度:5特征度:17 |  |  |
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A method for transmitting Aggregate Maximum Bit Rate (AMBR) parameter during a handover process of a UE from a first network to a second network, the method comprising: acquiring, by a second network mobility management network element, a first AMBR of the UE; transmitting, by the second network mobility management network element, the acquired first AMBR to a second network access network and/or a user plane network element; and wherein acquiring the first AMBR of the UE comprises any one of: (a) default AMBR configured in the second network mobility management network element is used as the first AMBR of the UE; (b) the second network mobility management network element acquires MBR parameter values transmitted by the UE from the first network, and accumulates the acquired MBR parameter values as the first AMBR of the UE; and (c) the second network mobility management network element acquires the MBR parameter values transmitted by the UE from the first network, and selects the maximum value as the first AMBR of the UE.

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| **对偶主权项** | 专利度:14特征度:8 |  |  |
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A method for transmitting~~QoS~~Aggregate Maximum Bit Rate (AMBR)parameter~~s~~duringa handover process~~, during which a UE is handed over~~of a UEfrom a first network to a second network, the method comprising:acquiring, by asecond networkmobility management network element~~of the second network, a first QoS parameter of the UE; andtransmitting, by the mobility management network element of the second network, the first QoS parameter to at least one of access network of the second network and a user plane network element~~, a first AMBR of the UE; transmitting, by the second network mobility management network element, the acquired first AMBR to a second network access network and/or a user plane network element; and wherein acquiring the first AMBR of the UE comprises any one of: (a) default AMBR configured in the second network mobility management network element is used as the first AMBR of the UE; (b) the second network mobility management network element acquires MBR parameter values transmitted by the UE from the first network, and accumulates the acquired MBR parameter values as the first AMBR of the UE; and (c) the second network mobility management network element acquires the MBR parameter values transmitted by the UE from the first network, and selects the maximum value as the first AMBR of the UE.

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| **被引用** | 9 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.14 |

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| **同族数** | 16 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for updating a key in an active state**

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| **公开号** | [US8023658](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8023658&sv=a16fa7aabf136c2b625e40ff7d541adf) | **公开日** | 2011/09/20 |
| **申请号** | 12/977,617 | **申请日** | 2010/12/23 |
| **授权日** | 2011/09/20 | **优先日** | 2007/09/28 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Yanmei | Huang; Min |
| **国际 主分类** | H04L 9/08 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for updating a key in an active state is disclosed according to the embodiments of the present invention. The method includes steps of: initiating a key update by a user equipment in the active state or a network side when a pre-defined condition is met; updating the key by the network side and the user equipment, and negotiating an activation time of the new keys. An apparatus for updating a key in an active state is also disclosed according to the present invention. With the present invention, the user equipment in an active state and the network side may actively initiate the key update procedure in different cases, thereby solving the problem concerning the key update for a session in an active state. |

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| **主权项** | 专利度:10特征度:18 |  |  |
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A method for updating a key, when a user equipment is in an active state, comprising: initiating, by a network side, a key update procedure when a pre-defined condition is met; informing, by a Mobility Management Entity (MME) at the network side, an evolved NodeB (eNB) at the network side of a new key KeNB generated during the key update procedure; updating, by the eNB, air-interface keys based on the new key KeNB; and negotiating, by the eNB with the user equipment, an activation time of the air-interface keys; wherein the pre-defined condition comprises that the user equipment has performed one of: a handover between two eNBs, a handover within one eNB, and an inter-system handover.

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| **对偶主权项** | 专利度:12特征度:10 |  |  |
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A method for updating a key, when a user equipment is in an active state, comprising: initiating, by a network side, a key update procedure when a pre-defined condition is met; informing, by a Mobility Management Entity (MME) at the network side, an evolved NodeB (eNB) at the network side of a new key KeNB generated during the key update procedure; updating, by the eNB, air-interface keys based on the new key KeNB; and negotiating, by the eNB with the user equipment, an activation time of the air-interface keys; wherein the pre-defined condition comprises that the user equipment has performed one of: a handover between two eNBs, a handover within one eNB, and an inter-system handover.

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| **被引用** | 16 | **自引用** | 4 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.32 |

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| **同族数** | 13 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for realizing user identity association**

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| **公开号** | [US8023485](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8023485&sv=11a1784a0689efb7e97b100d2eff964e) | **公开日** | 2011/09/20 |
| **申请号** | 12/938,889 | **申请日** | 2010/11/03 |
| **授权日** | 2011/09/20 | **优先日** | 2007/01/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Shufeng | Yan; Xuexia | Yang; Deping |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| The present invention discloses a method for realizing user identity association, the method comprising: setting an equivalent behavior user identifier in a Home Subscription Server (HSS); associating IMS Public User Identities (IMPUs) with the equivalent behavior through the set equivalent behavior user identifier. The present invention also discloses a system and a device realizing user identity association. According to the embodiments of the present invention, the association of the IMPUs with the set equivalent behavior is realized, which improves the user experiences. |

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| **主权项** | 专利度:17特征度:21 |  |  |
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A method for identifying Public User Identity, comprising: setting an equivalent behavior user identifier in a Home Subscription Server (HSS); identifying IP Multimedia Subsystem (IMS) Public User Identities (IMPUs) with the equivalent behavior through the set equivalent behavior user identifier, wherein the IMPUs with the equivalent behavior are linked to~~a~~thesame Service Profile (SP) and havethesame service data; adding, by the HSS, an attribute indicating a set of IMPUs to which~~an~~theIMPU belongs, to a Public Identity class in an SP transmitted to a Serving Call Session Control Function (S-CSCF); indicating set of IMPUs with the equivalent behavior to which each IMPU belongs by assigning a value to the attribute; and presenting, by the HSS, the identifying information to the S-CSCF, by the SP carrying the indication.

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| **对偶主权项** | 专利度:17特征度:6 |  |  |
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A method for identifying Public User Identity, comprising: setting an equivalent behavior user identifier in a Home Subscription Server (HSS); identifying IP Multimedia Subsystem (IMS) Public User Identities (IMPUs) with the equivalent behavior through the set equivalent behavior user identifier, wherein the IMPUs with the equivalent behavior are linked to the same Service Profile (SP) and have the same service data; adding, by the HSS, an attribute indicating a set of IMPUs to which the IMPU belongs, to a Public Identity class in an SP transmitted to a Serving Call Session Control Function (S-CSCF); indicating set of IMPUs with the equivalent behavior to which each IMPU belongs by assigning a value to the attribute; and presenting, by the HSS, the identifying information to the S-CSCF, by the SP carrying the indication.

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| **被引用** | 69 | **自引用** | 0 | **公司数** | 4 | **国家数** | 2 | **影响力** | 1.33 |

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| **同族数** | 22 | **国家数** | 10 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for controlling power of uplink physical channel**

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| **公开号** | [US8014814](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8014814&sv=29a4f79521c36c5708bcbab9b5fc5db4) | **公开日** | 2011/09/06 |
| **申请号** | 12/697,698 | **申请日** | 2010/02/01 |
| **授权日** | 2011/09/06 | **优先日** | 2006/08/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xu; Liang |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method for controlling power of an uplink physical channel includes: computing a relative gain factor in a compressed mode; correcting the relative gain factor to obtain a corrected relative gain factor; generating a gain factor in the compressed mode according to the corrected relative gain factor; controlling power of the uplink physical channel according to the gain factor in the compressed mode generated. In embodiments of the present invention, after being computed, the relative gain factor in the compressed mode is corrected, then the gain factor in the compressed mode is generated according to the corrected relative gain factor. Thus, an accurate gain factor may be acquired for controlling the power of the uplink physical channel. |

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| **主权项** | 专利度:13特征度:27 |  |  |
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A method for controlling power of an uplink physical channel, comprising: generating a gain factor of an uplink Enhanced Dedicated Physical Data Channel (E-DPDCH) in compressed mode by way of β ed , C , i = β c , C , j · A ed · L e , ref L e , I , i · K e , i K e , ref · 10 ( Δ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N if Enhanced-Dedicated Channel (E-DCH) Transmission Time Interval (TTI) is 10 msec and current frame is compressed, wherein βed,C,i is the gain factor of the E-DPDCH in the compressed mode, βc,C,j is gain factor of the Dedicated Physical Control Channel (DPCCH) in the compressed mode, Aed is relative gain factor of the E-DPDCH/DPCCH for reference Enhanced-TFC (E-TFC) in the non-compressed mode, Le,ref denotes the number of E-DPDCH(s) for the reference E-TFC in the non-compressed mode, Le,I,idenotes the number of E-DPDCH(s) of the first transmission of the current frame, Ke,ref denotes transport block size of the reference E-TFC, Ke,i denotes the transport block size of the current E-TFC, Δharq is Hybrid Automatic Repeat Request (HARQ) offset, Npilot,C is the number of pilot bits per slot of the DPCCH in the compressed mode, Npilot,N is the number of pilot bits per slot of the DPCCH in the non-compressed mode, and Nslot,I is the number of non DTX slots in the first transmission frame; and controlling power of the uplink physical channel according to the generated gain factor in the compressed mode.

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| **对偶主权项** | 专利度:13特征度:9 |  |  |
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A method for controlling power of an uplink physical channel, comprising: generating a gain factor of an uplink Enhanced Dedicated Physical Data Channel (E-DPDCH) in compressed mode by way of β ed , C , i = β c , C , j · A ed · L e , ref L e , I , i · K e , i K e , ref · 10 ( Δ harq 20 ) · 15 · N pilot , C N slots , I · N pilot , N if Enhanced-Dedicated Channel (E-DCH) Transmission Time Interval (TTI) is 10 msec and current frame is compressed, wherein βed,C,i is the gain factor of the E-DPDCH in the compressed mode, βc,C,j is gain factor of the Dedicated Physical Control Channel (DPCCH) in the compressed mode, Aed is relative gain factor of the E-DPDCH/DPCCH for reference Enhanced-TFC (E-TFC) in the non-compressed mode, Le,ref denotes the number of E-DPDCH(s) for the reference E-TFC in the non-compressed mode, Le,~~i~~I,idenotesthe number of E-DPDCH(s)~~for~~ofthe~~current E-TFC in the non-compressed mod~~first transmission of the current frame, Ke,ref denotes transport block size of the reference E-TFC, Ke,idenotesthe transport block size of the current E-TFC, Δharq is Hybrid Automatic Repeat Request (HARQ) offset, Npilot,C is the number of pilot bits per slot of the DPCCH in the compressed mode, Npilot,N is the number of pilot bits per slot of the DPCCH in the non-compressed mode, and Nslot,I is the number of non~~-idle~~DTXslots in the first transmission frame; and controlling power of the uplink physical channel according to the generated gain factor in the compressed mode.

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| **被引用** | 16 | **自引用** | 4 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.99 |

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| **同族数** | 19 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, codebook, and base station for precoding**

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| **公开号** | [US8014453](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8014453&sv=d993f9f801e49f967f15da68e33eb2a9) | **公开日** | 2011/09/06 |
| **申请号** | 12/983,103 | **申请日** | 2010/12/31 |
| **授权日** | 2011/09/06 | **优先日** | 2009/08/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhou; Yongxing | Wu; Qiang |
| **国际 主分类** | H04B 14/04 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method, a codebook, and a Base Station (BS) for precoding are provided. The precoding method includes: obtaining a total uplink power of a User Equipment (UE); if the total uplink power is greater than ¾ of a rated total transmit power of antennas, selecting a codeword from a first codebook with imbalanced power between layers; otherwise, selecting a codeword from the first codebook and a second codebook with balanced power between layers, so as for precoding data to be transmitted according to the selected codeword. Thus, a loss of an antenna performance at a high signal-to-noise ratio is reduced, and the loss of the power amplification of the antenna is reduced if the transmit power of the antenna is restricted. |

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| **主权项** | 专利度:13特征度:7 |  |  |
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An apparatus, comprising: at least one processor, configured to precode data using a codeword from a codebook consisting of exactly twelve code words, each codeword being based on a Binary Phase Shift Keying (BPSK) character set, the codewords being: 1 2 ⁡ [ 0 1 0 1 0 0 0 0 1 1 0 0 ] , 1 2 ⁡ [ 0 1 0 1 0 0 0 0 1 - 1 0 0 ] , 1 2 ⁡ [ 1 0 0 0 1 0 1 0 0 0 0 1 ] , 1 2 ⁡ [ 1 0 0 0 1 0 - 1 0 0 0 0 1 ] , 1 2 ⁡ [ 1 0 0 1 0 0 0 1 0 0 0 1 ] , ⁢ 1 2 ⁡ [ 1 0 0 - 1 0 0 0 1 0 0 0 1 ] , 1 2 ⁡ [ 0 1 0 0 0 1 1 0 0 1 0 0 ] , 1 2 ⁡ [ 0 1 0 0 0 1 1 0 0 - 1 0 0 ] , ⁢ 1 2 ⁡ [ 1 0 0 0 0 1 0 1 0 1 0 0 ] , 1 2 ⁡ [ 1 0 0 0 0 1 0 1 0 - 1 0 0 ] , 1 2 ⁡ [ 0 1 0 1 0 0 1 0 0 0 0 An apparatus, comprising: at least one processor, configured to precode data using a codeword from a codebook which comprises 1 2 #xe8a0; [ 0 1 0 1 0 0 0 0 1 1 0 0 ] , 1 2 #xe8a0; [ 0 1 0 1 0 0 0 0 1 - 1 0 0 ] , 1 2 #xe8a0; [ 1 0 0 0 1 0 1 0 0 0 0 1 ] , 1 2 #xe8a0; [ 1 0 0 0 1 0 - 1 0 0 0 0 1 ] , 1 2 #xe8a0; [ 1 0 0 1 0 0 0 1 0 0 0 1 ] , #xe89e; 1 2 #xe8a0; [ 1 0 0 - 1 0 0 0 1 0 0 0 1 ] , 1 2 #xe8a0; [ 0 1 0 0 0 1 1 0 0 1 0 0 ] , 1 2 #xe8a0; [ 0 1 0 0 0 1 1 0 0 - 1 0 0 ] , #xe89e; 1 2 #xe8a0; [ 1 0 0 0 0 1 0 1 0 1 0 0 ] , 1 2 #xe8a0; [ 1 0 0 0 0 1 0 1 0 - 1 0 0 ] , 1 2 #xe8a0; [ 0 1 0 1 0 0 1 0 0 0 华为

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| **对偶主权项** | 专利度:13特征度:25 |  |  |
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An apparatus, comprising: at least one processor, configured to precode data using a codeword from a codebook consisting of exactly twelve code words, each codeword being based on a Binary Phase Shift Keying (BPSK) character set, the codewords being: 1 2 ⁡ [ 0 1 0 1 0 0 0 0 1 1 0 0 ] , 1 2 ⁡ [ 0 1 0 1 0 0 0 0 1 - 1 0 0 ] , 1 2 ⁡ [ 1 0 0 0 1 0 1 0 0 0 0 1 ] , 1 2 ⁡ [ 1 0 0 0 1 0 - 1 0 0 0 0 1 ] , 1 2 ⁡ [ 1 0 0 1 0 0 0 1 0 0 0 1 ] , ⁢ 1 2 ⁡ [ 1 0 0 - 1 0 0 0 1 0 0 0 1 ] , 1 2 ⁡ [ 0 1 0 0 0 1 1 0 0 1 0 0 ] , 1 2 ⁡ [ 0 1 0 0 0 1 1 0 0 - 1 0 0 ] , ⁢ 1 2 ⁡ [ 1 0 0 0 0 1 0 1 0 1 0 0 ] , 1 2 ⁡ [ 1 0 0 0 0 1 0 1 0 - 1 0 0 ] , 1 2 ⁡ [ 0 1 0 1 0 0 1 0 0 0 0An apparatus, comprising: at least one processor, configured to precode data using a codeword from a codebook which comprises 1 2 #xe8a0; [ 0 1 0 1 0 0 0 0 1 1 0 0 ] , 1 2 #xe8a0; [ 0 1 0 1 0 0 0 0 1 - 1 0 0 ] , 1 2 #xe8a0; [ 1 0 0 0 1 0 1 0 0 0 0 1 ] , 1 2 #xe8a0; [ 1 0 0 0 1 0 - 1 0 0 0 0 1 ] , 1 2 #xe8a0; [ 1 0 0 1 0 0 0 1 0 0 0 1 ] , #xe89e; 1 2 #xe8a0; [ 1 0 0 - 1 0 0 0 1 0 0 0 1 ] , 1 2 #xe8a0; [ 0 1 0 0 0 1 1 0 0 1 0 0 ] , 1 2 #xe8a0; [ 0 1 0 0 0 1 1 0 0 - 1 0 0 ] , #xe89e; 1 2 #xe8a0; [ 1 0 0 0 0 1 0 1 0 1 0 0 ] , 1 2 #xe8a0; [ 1 0 0 0 0 1 0 1 0 - 1 0 0 ] , 1 2 #xe8a0; [ 0 1 0 1 0 0 1 0 0 0 华为

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.4 |

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| **同族数** | 18 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for transporting/receiving notification messages via file delivery over unidirectional protocol**

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| **公开号** | [US8010626](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8010626&sv=c0d49c5c4f8bd524d68ddadeb39d5b22) | **公开日** | 2011/08/30 |
| **申请号** | 12/345,994 | **申请日** | 2008/12/30 |
| **授权日** | 2011/08/30 | **优先日** | 2007/04/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yue; Pieyu | Shi; Teng | Zhang; Jie | Chen; Li | Fu; Xin |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A method for transporting/receiving notification messages via File Delivery over Unidirectional Transport (FLUTE) includes: At the transmitting end, a server carries a notification content in a transport object and carries notification related information and a transport object identifier (TOI) of the transport object carrying the notification content in a first file description table (FDT), and then sends the first FDT and the transport object carrying the notification content in a FLUTE session; the receiving end obtains the notification related information and the TOI of the transport object carrying the notification content from the first FDT, and receives the transport object carrying the notification content according to the obtained related information and the TOI. A server for transporting notification messages via FLUTE, a FLUTE server, a content server and a terminal are also disclosed. With the present invention, the notification transport procedure is simpler and the reliability of notification transport is better. |

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| **主权项** | 专利度:16特征度:18 |  |  |
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A method for transporting a notification message via File Delivery over Unidirectional Transport (FLUTE), comprising: pre-adding a Notification type in a Content-Type attribute of a FILE element of a first file description table (FDT) to indicate that a corresponding transport object carries a notification message; and adding a notification related element in the FILE element of the first FDT to carry a notification related information; carrying a notification content in a transport object and carrying notification related information and a transport object identifier (TOI) of the transport object that carries the notification content in the first FDT; wherein the process of carrying the notification related information in the first FDT includes: setting the Content-Type attribute of the FILE element to the Notification type and carrying the notification related information in the notification related element; and sending the first FDT and the transport object that carries the notification content in a FLUTE session.

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| **对偶主权项** | 专利度:20特征度:45 |  |  |
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A method for transporting a notification message via File Delivery over Unidirectional Transport (FLUTE), comprising:pre-adding a Notification type in a Content-Type attribute of a FILE element of a first file description table (FDT) to indicate that a corresponding transport object carries a notification message; and adding a notification related element in the FILE element of the first FDT to carry a notification related information;carrying a notification content in a transport object and carrying notification related information and a transport object identifier (TOI) of the transport object that carries the notification content in~~a~~thefirst~~file description table (FDT)~~FDT; wherein the process of carrying the notification related information in the first FDT includes: setting the Content-Type attribute of the FILE element to the Notification type and carrying the notification related information in the notification related element; andsending the first FDT and the transport object that carries the notification content in a FLUTE session.

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| **被引用** | 2 | **自引用** | 2 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.76 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for controlling charging of packet data service**

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| **公开号** | [US8009573](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US8009573&sv=174f7868df0afd2a76eec4adea4c4554) | **公开日** | 2011/08/30 |
| **申请号** | 11/502,921 | **申请日** | 2006/08/11 |
| **授权日** | 2011/08/30 | **优先日** | 2004/04/01 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin |
| **国际 主分类** | G01R 31/08 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method for controlling the charging of packet data service includes: monitoring a number of event triggers; and when one of the event triggers is met, a Traffic Plane Function (TPF) requesting charging rules from a Charging Rule Function (CRF). In the preferred embodiments, the event triggers, which the TPF is required for request charging rules from the CRF according to are set by the CRF and then are provided to the TPF. Charging-relevant input information is provided in the request, based on which the CRF determines proper charging rules and sends the determined charging rules to the TPF. In this way, the timing that the TPF requests charging rules from the CRF becomes controllable, and redundant information caused by the unnecessary charging rule from the TPF becomes avoidable, which enables effective interaction between the TPF and the CRF and reasonable charging control of packet data service. |

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| **主权项** | 专利度:8特征度:14 |  |  |
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A method for controlling charging of packet data service, comprising: monitoring, by a Traffic Plane Function (TPF), an event trigger provided by a Charging Rule Function (CRF); sending, by the TPF, a charging rule request to the CRF, if the event trigger is met; receiving, by the TPF, a charging rule from the CRF in a charging rule provision procedure; and taking, by the TPF, statistics of charging information according to the received charging rule.

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| **对偶主权项** | 专利度:6特征度:10 |  |  |
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A method for controlling~~the~~charging of packet data service, comprising~~the steps of: monitoring a plurality of event triggers; and sending a charging rule request from a Traffic Plane Function (TPF) to~~: monitoring, by a Traffic Plane Function (TPF), an event trigger provided by a Charging Rule Function (CRF); sending, by the TPF, a charging rule request to the CRF, if the event trigger is met; receiving, by the TPF,a~~C~~charging~~R~~rule~~Function (CRF), when one of said event trigger is met~~from the CRF in a charging rule provision procedure; and taking, by the TPF, statistics of charging information according to the received charging rule.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 4 | **国家数** | 1 | **影响力** | 2.96 |

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| **同族数** | 15 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for voice activity detection, and encoder**

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| **公开号** | [US7996215](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7996215&sv=9ce27ca7ab0110ed8ec8783f44aa74c8) | **公开日** | 2011/08/09 |
| **申请号** | 13/086,099 | **申请日** | 2011/04/13 |
| **授权日** | 2011/08/09 | **优先日** | 2009/10/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Zhe | Zhang; Qing |
| **国际 主分类** | G10L 11/06 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. odolph; Grant |

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| **摘要** |  |
| A method and an apparatus for Voice Activity Detection (VAD) and an encoder are provided. The method for VAD includes: acquiring a fluctuant feature value of a background noise when an input signal is the background noise, in which the fluctuant feature value is used to represent fluctuation of the background noise; performing adaptive adjustment on a VAD decision criterion related parameter according to the fluctuant feature value; and performing VAD decision on the input signal by using the decision criterion related parameter on which the adaptive adjustment is performed. The method, the apparatus, and the encoder can be adaptive to fluctuation of the background noise to perform VAD decision, so as to enhance the VAD decision performance, save limited channel bandwidth resources, and use the channel bandwidth efficiently. |

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| **主权项** | 专利度:20特征度:19 |  |  |
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A method for Voice Activity Detection (VAD), comprising: Acquiring, via a programmed processor, a fluctuant feature value of a background noise when an input signal is the background noise, wherein the fluctuant feature value is used to represent fluctuation of the background noise; performing an adaptive adjustment on a VAD decision criterion related parameter according to the fluctuant feature value, wherein the VAD decision criterion related parameter comprises any one or more of a primary decision threshold, a hangover trigger condition, a hangover length, and an update rate of a long term parameter related to background noise; and performing the VAD decision on the input signal by using the VAD decision criterion related parameter on which the adaptive adjustment is performed.

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| **对偶主权项** | 专利度:20特征度:4 |  |  |
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A method for Voice Activity Detection (VAD), comprising:~~a~~Acquiring, via a programmed processor,a fluctuant feature value of a background noise when an input signal is the background noise, wherein the fluctuant feature value is used to represent fluctuation of the background noise; performing an adaptive adjustment on a VAD decision criterion related parameter according to the fluctuant feature value, wherein the VAD decision criterion related parameter comprises any one or more of a primary decision threshold, a hangover trigger condition, a hangover length, and an update rate of a long term parameter related to background noise; and performing the VAD decision on the input signal by using the VAD decision criterion related parameter on which the adaptive adjustment is performed.

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| **被引用** | 3 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.3 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for sequence distributing and sequence processing in communication system**

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| **公开号** | [US7983237](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7983237&sv=17ffd75b53a702e5de629a68a6dc6287) | **公开日** | 2011/07/19 |
| **申请号** | 12/982,655 | **申请日** | 2010/12/30 |
| **授权日** | 2011/07/19 | **优先日** | 2006/09/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Qu; Bingyu | He; Yujuan |
| **国际 主分类** | H04B 7/208 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A sequence distributing and sequence processing method and apparatus in a communication system are provided. The sequence distributing method includes the following steps of: generating sequence groups including a number of sequences, the sequences in the sequence groups are determined according to the sequence time frequency resource occupation manner which is supported by the system; distributing the sequence groups to cells. The method avoids the phenomenon that signaling transmission is needed to distribute the sequences to the cells for different time frequency resource occupation manner, and saves in so far as possible the wireless network transmission resource occupied during the process of distributing the sequences through distributing the sequence groups comprising a number of sequences to the cells. |

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| **主权项** | 专利度:20特征度:16 |  |  |
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A method for allocating sequences in a communication system, comprising: generating a sequence group comprising a plurality of sequences, wherein the sequences in the sequence group are determined according to occupation modes of time-frequency resources of the sequences supported in the system; wherein the sequences in the sequence group at least comprises one of the following: constant amplitude zero auto-correlation (CAZAC), sequence, a fragment of CAZAC sequence, and the sequence obtained through combining a CAZAC sequence with a fragment of a CAZAC sequence; wherein the CAZAC sequence is a Zadoff-Chu sequence; wherein when the occupation modes of time-frequency resources of the sequences at least comprise: different sequences occupying the time-frequency resources having different bandwidths, the generating a sequence group comprising a plurality of sequences comprises: taking two sequences occupying the time-frequency resources having different bandwidths as the sequences in the sequence group; wherein indexes ri of the two sequences comply with ri=bi·k+δi, i=1,2; wherein the same k indicates the same sequence group, bi, δi are determined by the time-frequency resources having different bandwidths occupied by a user, and i=1, 2 differentiates different time-frequency resources; and allocating the sequence group to a cell.

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| **对偶主权项** | 专利度:20特征度:7 |  |  |
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A method for allocating sequences in a communication system, comprising: generating a sequence group comprising a plurality of sequences, wherein the sequences in the sequence group are determined according to occupation modes of time-frequency resources of the sequences supported in the system; wherein the sequences in the sequence group at least comprises one of the following: constant amplitude zero auto-correlation~~,~~(CAZAC), sequence, a fragment of CAZAC sequence, and the sequence obtained through combining a CAZAC sequence with a fragment of a CAZAC sequence; wherein the CAZAC sequence is a Zadoff-Chu sequence; wherein when the occupation modes of time-frequency resources of the sequences at least comprise: different sequences occupying the time-frequency resources having different bandwidths, the generating a sequence group comprising a plurality of sequences comprises: taking two sequences occupying the time-frequency resources having different bandwidths as the sequences in the sequence group; wherein indexes ri of the two sequences comply with ri=bi·k+δi, i=1,2; wherein the same k indicates the same sequence group, bi, δi are determined by the time-frequency resources having different bandwidths occupied by a user, and i=1, 2 differentiates different time-frequency resources;and allocating the sequence group to a cell.

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| **被引用** | 20 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 35 | **国家数** | 13 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of authentication in IP multimedia subsystem**

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| **公开号** | [US7974604](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7974604&sv=4550cb5afd1488f1988ea1cd8a3e6ee7) | **公开日** | 2011/07/05 |
| **申请号** | 11/842,668 | **申请日** | 2007/08/21 |
| **授权日** | 2011/07/05 | **优先日** | 2005/07/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yan; Jun | Wang; Ying | He; Chengdong |
| **国际 主分类** | H04M 1/66 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method of authentication in an IMS includes: after receiving a Register message from a UE, locating, by a P-CSCF, a CLF according to information contained in the Register message and a pre-configured relationship; querying, by the P-CSCF, the CLF about NASS attachment information of the UE to obtain a query result, and sending the Register message carrying the query result to an I-CSCF; forwarding, by the I-CSCF, the Register message carrying the query result to a S-CSCF assigned by a UPSF or the HSS; authenticating the UE and sending an authentication result to the UE by the S-CSCF. In embodiments of the present invention, the UPSF or the HSS in the service layer determines the authentication mechanism of the user, and the S-CSCF implements the authentication, which is more reasonable. Embodiments of the present invention also provide combinations of NBA with other authentication mechanisms, thereby guarantees the authentication of the user after the NBA authentication fails. |

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| **主权项** | 专利度:20特征度:25 |  |  |
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A method of authentication in an IP Multimedia Subsystem (IMS), comprising:after receiving a Register message from a User Equipment (UE), locating, by a Proxy-Call Session Control Function (P-CSCF), a Connection Location Function (CLF) according to information contained in the Register message and a pre-configured corresponding relationship between the information contained in the Register message and the CLF;obtaining, by the P-CSCF, a query result by querying the CLF about~~attachment~~Network Attach Sub System (NASS)information of the UE in an access network, and sending the Register message carrying the query result to an Interrogating-Call Session Control Function (I-CSCF);forwarding, by the I-CSCF, the Register message carrying the query result to a Service-Call Session Control Function (S-CSCF);authenticating, by the S-CSCF, the UE according to an authentication mechanism obtained from a User Profile Service Function (UPSF) or a Home Subscriber Server (HSS), and sending an authentication result to the UE.

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| **对偶主权项** | 专利度:20特征度:9 |  |  |
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A method of authentication in an IP Multimedia Subsystem (IMS), comprising: after receiving a Register message from a User Equipment (UE), locating, by a Proxy-Call Session Control Function (P-CSCF), a Connection Location Function (CLF) according to information contained in the Register message and a pre-configured corresponding relationship between the information contained in the Register message and the CLF; obtaining, by the P-CSCF, a query result by querying the CLF about Network Attach Sub System (NASS) information of the UE in an access network, and sending the Register message carrying the query result to an Interrogating-Call Session Control Function (I-CSCF); forwarding, by the I-CSCF, the Register message carrying the query result to a Service-Call Session Control Function (S-CSCF); authenticating, by the S-CSCF, the UE according to an authentication mechanism obtained from a User Profile Service Function (UPSF) or a Home Subscriber Server (HSS), and sending an authentication result to the UE.

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| **被引用** | 10 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.76 |

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| **同族数** | 16 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Service transmission method for multimedia broadcast/multicast service**

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| **公开号** | [US7970002](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7970002&sv=9ae860dd2f41012c8eb1d96216f6edf8) | **公开日** | 2011/06/28 |
| **申请号** | 11/433,252 | **申请日** | 2006/05/12 |
| **授权日** | 2011/06/28 | **优先日** | 2004/08/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Hao |
| **国际 主分类** | H04J 3/26 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner, LLP |

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| **摘要** |  |
| The present invention provides a service transmission method for MBMS, comprising: a core network initiates an MBMS service; having received a session start instruction of the MBMS service, the RNC selects the PTM mode or the PTP mode as a service bearer mode to bear the MBMS service for each cell that belongs to the RNC. The method of the invention makes it possible to directly adopt the PTM mode or the PTP mode to bear an MBMS service, skipping the complicated Counting process adopted by the prior art, reducing the complexity of the system, decreasing interaction of signaling of the air interface, and lowering power consumption of the UE. |

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| **主权项** | 专利度:13特征度:15 |  |  |
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A service transmission method for a multimedia broadcast/multicast service (MBMS service) comprising: receiving, by a radio network controller (RNC), a session start instruction of the MBMS service from a core network (CN); selecting, by the RNC, a service bearer mode to carry the MBMS service for a cell that belongs to the RNC; and providing, by the RNC, the MBMS service using the selected service bearer mode for the cell, wherein the service bearer mode is a point-to-multipoint (PTM) mode or a point-to-point (PTP) mode, and the selecting the bearer mode is based on a characteristic of the MBMS service or a current service load of the cell.

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| **对偶主权项** | 专利度:13特征度:8 |  |  |
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A service transmission method foramultimedia broadcast/multicast service (MBMS~~),~~service)comprising:~~a. a core network (CN) initiating a MBMS service; b. having received a session start instruction of the MBMS service, a radio network controller (RNC) selecting one of~~receiving, by a radio network controller (RNC), a session start instruction of the MBMS service from a core network (CN); selecting, by the RNC, a service bearer mode to carry the MBMS service for a cell that belongs to the RNC; and providing, by the RNC, the MBMS service using the selected service bearer mode for the cell, wherein the service bearer mode isa point-to-multipoint (PTM) mode~~and~~ora point-to-point (PTP) mode,a~~s a service bearer mode to bear~~nd the selecting the bearer mode is based on a characteristic ofthe MBMS service~~f~~or~~each cell that belongs to~~a current service load ofthe~~RNC~~cell.

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| **被引用** | 11 | **自引用** | 0 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.47 |

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| **同族数** | 16 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Handling method after updating of privacy profile of target user equipment**

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| **公开号** | [US7962158](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7962158&sv=544b4c7f47061a9993185664c58dc2e2) | **公开日** | 2011/06/14 |
| **申请号** | 10/556,913 | **申请日** | 2004/10/09 |
| **授权日** | 2011/06/14 | **优先日** | 2003/10/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin | Ge; Zhengkai |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention discloses a handling method after updating of privacy profile of a target user equipment (UE). When the location service (LCS) system is aware that the privacy profile of a target UE was updated, for every outstanding Location Request against that UE, the location service (LCS) system perform a new privacy check based on the updated privacy profile. If the said location request passes the privacy check, the location service system continues to handle the said location request until the handling process is ended; if the location request fails in the privacy check, the location service system initials a cancellation procedure to the said location request. In accordance with this invention, When the location service (LCS) system is aware that the privacy profile of a target UE was updated, the LCS system will be able to perform a new privacy check for the location request based on the updated privacy profile of the target UE, and implement corresponding processing depending on the result of the privacy check for the location request, e.g. for a location request fails in the privacy check, the LCS system shall initiate a cancellation procedure. In this case, the processing is ended earlier and the system resource is saved. |

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| **主权项** | 专利度:15特征度:35 |  |  |
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A handling method after updating of privacy profile of a target UE, the method comprising: when a location service (LCS) system is aware that a privacy profile of the target UE was updated, for a deferred location request in activated state against the target UE, the deferred location request being from a LCS client requesting for location information of the target UE, the LCS system performing a privacy check based on the updated privacy profile of the target UE, if the deferred location request passes the privacy check, the LCS system continuing to handle the deferred location request; otherwise, if the deferred location request does not pass the privacy check, the LCS system initializing a cancellation procedure to the deferred location request, wherein the deferred location request is a UE available event location request, and initiating the cancellation procedure comprises the steps of: a Gateway Mobile Location Center (GMLC) of the LCS system sending to a Core Network (CN) a request for cancelling the deferred location request, the cancellation request carrying an identification of the UE available event location request; the CN deleting saved information corresponding to the UE available event location request in accordance with the received identification of the UE available event location request, and then sending to the GMLC a message of acknowledgement of the cancellation of the UE available event location request; the GMLC deleting saved information corresponding to the UE available event location request in accordance with the identification of the UE available event location request upon receiving the acknowledgement message from the CN.

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| **对偶主权项** | 专利度:11特征度:3 |  |  |
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A handling method after updating of privacy profile of a target UE,~~w~~the~~rein,~~method comprising:when~~the~~alocation service (LCS) system is aware that~~the~~aprivacy profile of the target UE was updated,~~the method comprising the steps of: A. For a location request against that UE, the LCS system performing a privacy check, if the said location request passes the privacy check, going to step B, otherwise going to step C; B. The LCS system continuing to handle the location request until the end of the handling process of the said location request; C. The LCS system initialing a cancellation procedure to the said location request~~for a deferred location request in activated state against the target UE, the deferred location request being from a LCS client requesting for location information of the target UE, the LCS system performing a privacy check based on the updated privacy profile of the target UE, if the deferred location request passes the privacy check, the LCS system continuing to handle the deferred location request; otherwise, if the deferred location request does not pass the privacy check, the LCS system initializing a cancellation procedure to the deferred location request, wherein the deferred location request is a UE available event location request, and initiating the cancellation procedure comprises the steps of: a Gateway Mobile Location Center (GMLC) of the LCS system sending to a Core Network (CN) a request for cancelling the deferred location request, the cancellation request carrying an identification of the UE available event location request; the CN deleting saved information corresponding to the UE available event location request in accordance with the received identification of the UE available event location request, and then sending to the GMLC a message of acknowledgement of the cancellation of the UE available event location request; the GMLC deleting saved information corresponding to the UE available event location request in accordance with the identification of the UE available event location request upon receiving the acknowledgement message from the CN.

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.5 |

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| **同族数** | 12 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Control method, system and function entity for reporting bearer event of signaling IP flow**

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| **公开号** | [US7961706](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7961706&sv=45dd11b50c6165479aedc10ee94602fb) | **公开日** | 2011/06/14 |
| **申请号** | 12/634,147 | **申请日** | 2009/12/09 |
| **授权日** | 2011/06/14 | **优先日** | 2007/03/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Shibi | Zhao; Peng | Mao; Yuxin | Tan; Shiyong | Wei; Weihua | Li; Yan |
| **国际 主分类** | H04J 3/24 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A control method, system and function entity for reporting a bearer event of a signaling IP flow are provided. Flow identifier information such as a 5-tuple is generated for a signaling IP flow and a media IP flow so as to unify a mechanism for reporting a signaling path status and a mechanism for reporting a bearer event of a media IP flow, so that the mechanism for reporting a signaling path status is not limited by the parameter of Flow Usage, the PDP context with a signaling tag, thereby establishing corresponding PCC rules for signaling and the association between a signaling IP flow and a bearer. A method for reporting a signaling path status is further provided in the invention. In the method, for a default PDP context or a PDP context of a signaling IP flow, the predefined PCC rules are activated or signaling PCC rules generated in accordance with an Application Function address are installed, thereby an IP signaling path status is reported in accordance with rule names of the predefine PCC rules or the signaling PCC rules. |

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| **主权项** | 专利度:5特征度:21 |  |  |
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A method for reporting a bearer event of a signaling IP flow, comprising: generating, by a processor of an apparatus operable to provide an Application Function, flow identifier information of a signaling IP flow; sending, by the apparatus operable to provide an Application Function, a subscription request for subscribing to a bearer event of the signaling IP flow to an apparatus operable to provide Policy Control and Charging Rules Function, wherein the subscription request carries the flow identifier information of the signaling IP flow; and receiving, by the apparatus operable to provide an Application Function, a bearer event report of the signaling IP flow generated by a processor of the apparatus operable to provide Policy Control and Charging Rules Function, wherein the bearer event report carries the flow identifier information of the signaling IP flow, wherein the flow identifier information comprises a media component number and an IP flow number, and the signaling IP flow is provided with a default media component number 0.

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| **对偶主权项** | 专利度:9特征度:20 |  |  |
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A method for reporting a bearer event of a signaling IP flow, comprising: generating, bya processor of an apparatus operable to providean Application Function, flow identifier information of a signaling IP flow; sending, by theapparatus operable to provide anApplication Function, a subscription request for subscribing to a bearer event of the signaling IP flow to an apparatus operable to providePolicy Control and Charging Rules Function, wherein the subscription request carries the flow identifier information of the signaling IP flow; and receiving, by theapparatus operable to provide anApplication Function, a bearer event report of the signaling IP flow~~from th~~generated by a processor of the apparatus operable to provide Policy Control and Charging Rules Function, wherein the bearer event report carries the flow identifier information of the signaling IP flow, wherein the flow identifier information comprises a media component number and an IP flow number, and the signaling IP flow is provided with a default media component number 0.

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| **被引用** | 13 | **自引用** | 3 | **公司数** | 3 | **国家数** | 2 | **影响力** | 1.4 |

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| **同族数** | 14 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for reducing load of traffic plane function**

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| **公开号** | [US7957719](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7957719&sv=26788cc8cbcbf87b5625a1674106da48) | **公开日** | 2011/06/07 |
| **申请号** | 11/497,687 | **申请日** | 2006/08/02 |
| **授权日** | 2011/06/07 | **优先日** | 2004/08/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Yajuan |
| **国际 主分类** | H04M 11/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| Disclosed is a method for reducing the load of Traffic Plane Function (TPF). According to the obtained indication on whether to perform charging, the TPF determines whether to perform charging operation for the service data flow using appropriate charging rules, if yes, the TPF performs the charging operation for the counting result of the service data flow and submits the charging information to the charging associated entities; otherwise, the TPF does not perform the charging operation for the counting result of the service data flow. Operation in the TPF is optimized such that the TPF only needs to perform necessary charging instead of performing charging operation for the service data flow not needing to be charged. As a result, the load of the TPF and network devices are reduced, system efficiency is improved, and waste of network resources from various operator charging policies, e.g., free of charge policy, is avoided. |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A method for reducing load of a Traffic Plane Function (TPF), applicable to a Flow Based Charging (FBC) system, comprising: obtaining, by the Traffic Plane Function, an indication on whether to perform charging according to charging rule information received from a Charging Rule Function (CRF); and if the indication indicates to perform charging, collecting, by the Traffic Plane Function, charging-related information, and generating and submitting, by the Traffic Plane Function, charging information; if the indication indicates to perform no charging, filtering, by the Traffic Plane Function, service data flow, and not generating, by the Traffic Plane Function, charging information.

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| **对偶主权项** | 专利度:13特征度:10 |  |  |
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A method for reducing load of a Traffic Plane Function (TPF), applicable to a Flow Based Charging (FBC) system, comprising:~~the TPF~~obtaining, by the Traffic Plane Function,an indication on whether to perform charging according to~~the~~charging rule information received fromaCharging Rule Function (CRF)~~,~~;and~~determining the content o~~if the indication~~, if it is~~indicate~~d~~sto perform charging,~~the TPF~~collecting~~and generating~~, by the Traffic Plane Function,charging-relatedinformation,a~~fter filtering a service data flow,~~nd generatingand submitting, bythe~~generated~~Traffic Plane Function,charging information;if~~it is~~the indicationindicate~~d~~sto perform no charging,~~the TPF ending the operation after filtering the service data flow~~filtering, by the Traffic Plane Function, service data flow, and not generating, by the Traffic Plane Function, charging information.

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| **被引用** | 3 | **自引用** | 2 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.80 |

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| **同族数** | 14 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Disposal method of location information request in location service**

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| **公开号** | [US7953421](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7953421&sv=57ba2081e370187a85027172ad64eae2) | **公开日** | 2011/05/31 |
| **申请号** | 10/563,259 | **申请日** | 2004/07/02 |
| **授权日** | 2011/05/31 | **优先日** | 2003/07/04 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin | Zhang; Wenlin |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention discloses a method for processing a location information request in a location service, comprising: a location information request initiator sending a location information request containing a processing indication to a location information request receiver; after receiving the location information request, the location information request receiver determining whether to perform synchronous processing or asynchronous processing for the location information request according to type of the processing indication, and then implementing corresponding processing for the location information request. This method is capable of effectively saving system resource of a LCS system, avoiding resource waste at a location service interface and increasing processing performance of a location service. |

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| **主权项** | 专利度:14特征度:12 |  |  |
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A method for processing a location information request in a location service, the method comprising: a second Gateway Mobile Location Center receiving a location information request sent from a first Gateway Mobile Location Center, the location information request containing a processing indication, and type of the processing indication being used for indicating synchronous processing or asynchronous processing; and after receiving the location information request, the second Gateway Mobile Location Center performing either synchronous processing or asynchronous processing for the location information request according to the type of the processing indication, and then implementing corresponding processing for the location information request; wherein, when the second Gateway Mobile Location Center performs synchronous processing for the location information request according to the type of the processing indication, implementing corresponding processing for the location information request comprises the second Gateway Mobile Location Center sending a location information response containing locating result of a target UE to the first Gateway Mobile Location Center after a LCS system locates the target UE.

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| **对偶主权项** | 专利度:7特征度:17 |  |  |
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A method for processing a location information request in a location service,the methodcomprising:~~A. a location information request initiator sending a location information request containing a processing indication to a location information request receiver~~a second Gateway Mobile Location Center receiving a location information request sent from a first Gateway Mobile Location Center, the location information request containing a processing indication, and type of the processing indication being used for indicating synchronous processing or asynchronous processing; and~~B.~~after receiving the location information request, the~~location information request receiver determining whether to perform synchronous processing or a~~second Gateway Mobile Location Center performing either synchronous processing or asynchronous processing for the location information request according to the type of the processing indication, and then implementing corresponding processing for the location information request; wherein, when the second Gateway Mobile Location Center performssynchronous processing for the location information request according tothetype of the processing indication,~~and then~~implementing corresponding processing for the location information requestcomprises the second Gateway Mobile Location Center sending a location information response containing locating result of a target UE to the first Gateway Mobile Location Center after a LCS system locates the target UE.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.4 |

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| **同族数** | 12 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for verifying the validity of a user**

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| **公开号** | [US7941121](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7941121&sv=abb6babc300391cd1626cad6afbef49c) | **公开日** | 2011/05/10 |
| **申请号** | 11/413,732 | **申请日** | 2006/04/28 |
| **授权日** | 2011/05/10 | **优先日** | 2003/11/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Huang; Yingxin |
| **国际 主分类** | H04M 3/16 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The invention disclose a method for verifying the validity of a user, making full use of a TID as the bridge for establishing confidence between a NAF and a user equipment, and the BSF assigning a term of validity for the TID, thereby extending the function of the TID, enabling the NAF to verify the term of validity for using the TID, and accordingly, achieving a further verification of the validity to the user. By using the method of the invention, it is possible to avoid the situation in which one TID is permanently valid for one or more NAFs, enhance the system security, decrease the risks caused by the theft of users' TID and corresponding secret keys, and at the same time, implement TID management by the NAF. In addition, a combination of the method with billing system makes it easy to implement the function of charging a user. |

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| **主权项** | 专利度:27特征度:25 |  |  |
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A method for a network application function unit (NAF) of a third generation wireless communication network to verify validity of a user, comprising: receiving an application request message containing a transaction identifier (TID) from a user equipment device (UE) of the user, checking whether there is information of the TID stored in the NAF; if the information of the TID is found, determining whether the TID has expired based on a preset term of validity for the TID, if the TID has not expired, making normal communications with the UE; if the TID has expired, instructing the UE to connect to a bootstrapping server function unit (BSF) for performing a bootstrapping authentication; wherein the term of validity for the TID is assigned by the BSF; and if the information of the TID is not found, sending to the BSF a TID inquiring message containing an identity of the NAF, wherein if the BSF finds the TID inquired by the NAF, the BSF returns to the NAF a response message of success containing the information of the TID and the term of validity of the TID, and the method further comprises: storing the information of the TID and the term of validity of the TID in the response message and making normal communications with the UE; or if the BSF fails to find the TID inquired by the NAF, the BSF returns to the NAF a response message of failure, and the method further comprises: instructing the UE to perform a bootstrapping authentication with the BSF.

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| **对偶主权项** | 专利度:26特征度:6 |  |  |
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A method for~~verifying the validity of a user, applied to the~~a network application function unit (NAF) of athird generation~~radio~~wirelesscommunication~~s in which a network application function (NAF) verifying the validity of a user by means of a generic authentication architecture, the method~~network to verify validity of a user,comprising:~~upon~~receiving an application request message containing a~~bootstrapping~~transaction identifier (~~B-~~TID) from a user equipmentdevice(UE)~~,~~ofthe~~NAF~~user,checking whether there is~~the B-TID~~informationof the TID storedin the NAF;if~~finding the B-TID~~theinformation~~,~~ofthe~~NAF~~TID is found,determining whether the~~B-~~TIDhasexpire~~s~~dbased on a preset term of validity for the~~B-~~TID,if the~~B-~~TIDhas notexpire~~s~~d,~~the NAF~~making normal communications with the UE;~~otherwise, the NAF~~if the TID has expired,instructing the UE to~~return~~connectto a bootstrapping server functionunit(BSF)~~to~~forperforminga bootstrapping authentication;~~if not finding~~wherein the term of validity forthe~~B-~~TIDis assigned by the BSF; and if theinformation~~,~~ofthe~~NAF~~TID is not found,sending to the BSF a~~B-~~TID inquiring message containing an identity of the NAF,whereinif the BSF find~~ing~~sthe~~B-~~TID inquired by the NAF, the BSF return~~ing~~sto the NAF a response message of success containing the information of the~~B-~~TID and the term of validity of the~~B-~~TID, and the~~NAF~~method further comprises:storing~~said~~the information of~~B-~~theTID and the term of validity of the~~B-~~TID in the response message and making normal communications with the UE;orif the BSF fail~~ing~~sto find the~~B-~~TID inquired by the NAF, the BSF return~~ing~~sto the NAF a response message of failure, and the~~NAF~~method further comprises:instructing the UE to perform a bootstrapping authentication~~in~~withthe BSF.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and communication system for implementing calling tapping at flash**

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| **公开号** | [US7924821](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7924821&sv=db86d7ffecdf2623821a34cec500f158) | **公开日** | 2011/04/12 |
| **申请号** | 11/481,600 | **申请日** | 2006/07/05 |
| **授权日** | 2011/04/12 | **优先日** | 2005/07/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Youzhu |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The invention discloses a method for implementing Calling Tapping at Flash, which includes the steps of: when there is a new voice message for a user, actively initiating an SIP message carrying the description information of the voice message by a Voice Mail Application Server; sending the SIP message to the user terminal or the home network device of the user by the Voice Mail Application Server, and notifying the user by the user terminal or the network device; converting the SIP message into an inter-exchange signaling message in CS domain and transmitting it to the CS domain where the user accesses by a Media Gateway Control Unit (MGCU), and notifying the user by a switching control unit in the CS domain in accordance with the prompt means of Calling Tapping at Flash of the user. The invention also discloses a communication system for implementing Calling Tapping at Flash service. |

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| **主权项** | 专利度:7特征度:35 |  |  |
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A method for implementing Calling Tapping at Flash, comprising the following steps of: when there is a new voice message for a user, actively initiating a Session Initiation Protocol (SIP) message which carries the description information of the new voice message by a Voice Mail Application Server; sending the SIP message to a user terminal or a home network device of the user terminal, and notifying the user by the user terminal or the home network device; wherein when the user is a terminal user in a Packet Service (PS) domain, said notifying the user comprises the following steps of: triggering the SIP message to a supplementary service control unit by a call session control unit in the PS domain; determining the prompt means of Calling Tapping at Flash of the user by the supplementary service control unit; when the prompt means is “display on telephone interface”, transmitting the SIP message to an SIP user agent node by the supplementary service control unit, parsing the SIP message and sending a prompt message by the SIP user agent node to the user terminal; and when the prompt means is “go off hook to listen for cue tone”, recording the description information of the voice message in the SIP message in accordance with the presubscribed off-hook signal event by the supplementary service control unit; playing the cue tone for the voice message when the user goes off the hook.

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| **对偶主权项** | 专利度:23特征度:14 |  |  |
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A method for implementing Calling Tapping at Flash, comprising thefollowingsteps of:when there is a new voice message for a user, actively initiating a Session Initiation Protocol (SIP) message which carries the description information of the new voice message by a Voice Mail Application Server;sending the SIP message to a user terminal or a home network device of the user terminal~~;~~,and notifying the user by the user terminal or the home network device; wherein when the user is a terminal user in a Packet Service (PS) domain, said notifying the user comprises the following steps of: triggering the SIP message to a supplementary service control unit by a call session control unit in the PS domain; determining the prompt means of Calling Tapping at Flash of the user by the supplementary service control unit; when the prompt means is “display on telephone interface”, transmitting the SIP message to an SIP user agent node by the supplementary service control unit, parsing the SIP message and sending a prompt message by the SIP user agent node to the user terminal; and when the prompt means is “go off hook to listen for cue tone”, recording the description information of the voice message in the SIP message in accordance with the presubscribed off-hook signal event by the supplementary service control unit; playing the cue tone for the voice message when the user goes off the hook.

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| **被引用** | 0 | **自引用** | 0 | **公司数** | 0 | **国家数** | 0 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for acquiring multimedia broadcast/multicast service access information**

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| **公开号** | [US7924760](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7924760&sv=d297feebd962b3025b0f05e0fa746fc4) | **公开日** | 2011/04/12 |
| **申请号** | 11/736,309 | **申请日** | 2007/04/17 |
| **授权日** | 2011/04/12 | **优先日** | 2004/11/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Ding; Yingzhe | Wang; Yanhong |
| **国际 主分类** | H04H 20/71 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| The invention discloses a method for acquiring MBMS access information comprising: in a modification period, upon receiving an MBMS access information message transmitted from a network a UE initiating a corresponding procedure according to its state; if completing the corresponding procedure successfully, the UE stopping receiving a further MBMS access information messages; if not completing the corresponding procedure successfully the UE continuing acquiring further MBMS access information messages. The method facilitates the UE to automatically control MBMS access information acquiring procedure, and further reduces energy consumption of the UE to the maximum extent. |

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| **主权项** | 专利度:6特征度:18 |  |  |
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A method for acquiring Multimedia Broadcast/ Multicast Service (MBMS) access information, comprising: in a modification period of MBMS Point to Multipoint Control Channel (MCCH) information, upon receiving an MBMS access information transmitted from a network, a User Equipment (UE) initiating a responding procedure to respond to the MBMS access information according to current state of the UE; and the UE judging whether the UE responds to the MBMS access information successfully, if yes, the UE stopping receiving further MBMS access information in the modification period of MCCH information; if not, the UE continuing acquiring further MBMS access information in the modification period of MCCH information; wherein the MBMS access information transmitted from network comprises a probability factor for the MBMS activated by the UE; before the UE initiating the responding procedure, further comprising: upon receiving the MBMS access information that comprises the probability factor, the UE generating a random number uniformly distributed within [0, 1]; and judging whether the generated random number satisfies an assigned initiating condition, upon comparing the generated random number with the probability factor comprised in the MBMS access information, if yes, the UE initiating the responding procedure according to the state of the UE, if not, the UE continuing acquiring the further MBMS access information in the modification period.

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| **对偶主权项** | 专利度:17特征度:14 |  |  |
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A method for acquiring Multimedia Broadcast/Multicast Service (MBMS) access information, comprising:in a modification periodof MBMS Point to Multipoint Control Channel (MCCH) information, upon receiving an MBMS access information~~message~~transmitted from a network, a U~~E~~ser Equipment (UE)initiating a~~cor~~responding procedureto respond to the MBMS access informationaccording to~~its~~current state~~; and judging whether the corresponding procedure has been completed successfully, if yes, the UE stopping receiving the further MBMS access information message;~~of the UE; and the UE judging whether the UE responds to the MBMS access information successfully, if yes, the UE stopping receiving further MBMS access information in the modification period of MCCH information; if not, the UE continuing acquiring further MBMS access information in the modification period of MCCH information; wherein the MBMS access information transmitted from network comprises a probability factor for the MBMS activated by the UE; before the UE initiating the responding procedure, further comprising: upon receiving the MBMS access information that comprises the probability factor, the UE generating a random number uniformly distributed within [0, 1]; and judging whether the generated random number satisfies an assigned initiating condition, upon comparing the generated random number with the probability factor comprised in the MBMS access information, if yes, the UE initiating the responding procedure according to the state of the UE,if not, the UE continuing acquiring the further MBMS access information~~message~~in the modification period.

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| **被引用** | 11 | **自引用** | 0 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.79 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System, method and apparatus for establishing interactive media session based on IP Multimedia Subsystem**

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| **公开号** | [US7917637](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7917637&sv=acb4d7049dd6d20a1e495de6077a01d9) | **公开日** | 2011/03/29 |
| **申请号** | 12/192,985 | **申请日** | 2008/08/15 |
| **授权日** | 2011/03/29 | **优先日** | 2006/02/18 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | rpx | **发明人** | Li; Jincheng | Yan; Jun | Wu; Xiangyang |
| **国际 主分类** | G06F 15/16 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and system for establishing an interactive media session based on an IP Multimedia Subsystem, including: a terminal adapted to initiate an interactive media session request and receive a media session response; a serving-CSCF adapted to trigger the request to the application server according to a triggering rule and route the message; a proxy-CSCF adapted to forward the request and the response between the terminal and the serving-CSCF; an application server adapted to process the service request; a media control entity adapted to control resource allocation of the media carrier entity; and a media carrier entity adapted to allocate address ports for RTSP connection and RTP connection with the terminal. The present invention can be applied to a NGN network where the carrier and control are separated to improve the media delivery efficiency. |

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| **主权项** | 专利度:15特征度:20 |  |  |
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A method for establishing an interactive media session based on an IP Multimedia Subsystem, comprising: receiving, by a media control entity, an interactive service request initiated by a terminal; controlling, by the media control entity, a media carrier entity to negotiate a first address port for RTSP connection and a first address port for RTP connection to communicate with the terminal; and establishing a RTSP connection for interactive control and a RTP connection for media stream delivery between the terminal and the media carrier entity; wherein the interactive service request carries the terminal's information about a second address port for RTSP connection and a second address port for RTP connection; and the controlling, by the media control entity, the media carrier entity to negotiate the first address port for RTSP connection and the first address port for RTP connection to communicate with the terminal comprises: controlling, by the media control entity, the media carrier entity to interact, and acquiring the first address port allocated by the media carrier entity for RTSP connection and the first address port allocated by the media carrier entity for RTP connection; and returning, by the media control entity, a service request response to the terminal, wherein the service request response carries the first address port for RTSP connection and the first address port for RTP connection.

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| **对偶主权项** | 专利度:38特征度:19 |  |  |
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A method for establishing an interactive media session based on an IP Multimedia Subsystem, comprising:receiving, by a media control entity, an interactive service request initiated by a terminal;controlling, by the media control entity, a media carrier entity to negotiate a~~n~~firstaddress port for RTSP connection and a~~n~~firstaddress port for RTP connection to communicate with the terminal; andestablishing a RTSP connection for interactive control and a RTP connection for media stream delivery between the terminal and the media carrier entity; wherein the interactive service request carries the terminal's information about a second address port for RTSP connection and a second address port for RTP connection; and the controlling, by the media control entity, the media carrier entity to negotiate the first address port for RTSP connection and the first address port for RTP connection to communicate with the terminal comprises: controlling, by the media control entity, the media carrier entity to interact, and acquiring the first address port allocated by the media carrier entity for RTSP connection and the first address port allocated by the media carrier entity for RTP connection; and returning, by the media control entity, a service request response to the terminal, wherein the service request response carries the first address port for RTSP connection and the first address port for RTP connection.

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| **被引用** | 3 | **自引用** | 3 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.75 |

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| **同族数** | 15 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for implementing multimedia ring back tone service**

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| **公开号** | [US7912198](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7912198&sv=e2928551dec71cca720ef9c7915f641d) | **公开日** | 2011/03/22 |
| **申请号** | 11/626,803 | **申请日** | 2007/01/24 |
| **授权日** | 2011/03/22 | **优先日** | 2005/05/16 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Hui | Jin; Weirong | Cheng; Yihua |
| **国际 主分类** | H04M 3/42 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A system for implementing multimedia ring back tone service is disclosed, which includes a communication network, an MRBT platform storing multimedia ring back tones in the communication network and a VIG. The MRBT platform is respectively connected to the Service Switch Center dominating the terminal and an MGW in the communication network through the VIG; when a calling terminal initiates a call through the Service Switch Center, the VIG establishes a communication link from the terminal to the MRBT platform through the MGW and the VIG before the call is put through; and MRBT platform plays multimedia ring back tones for the calling terminal via the established communication link. The present invention also provides a method for implementing multimedia ring back tone service is also disclosed. The system and the method can implement multimedia ring back tone service in 3G communication networks. |

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| **主权项** | 专利度:17特征度:18 |  |  |
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A system for implementing Multimedia Ring Back Tone (MRBT) service, comprising: a communication network; a Video Interactive Gateway (VIG), for establishing a communication link from a calling terminal to an MRBT platform through a Multimedia Gateway (MGW) and the VIG during the interval of a call being initiated through a Service Switch Center by the calling terminal and the call being put through; the MRBT platform, connected to the Service Switch Center dominating the calling terminal and the MGW in the communication network via the VIG respectively, for storing multimedia ring back tones and playing a multimedia ring back tone for the calling terminal via the established communication link.

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| **对偶主权项** | 专利度:18特征度:16 |  |  |
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A system for implementing Multimedia Ring Back Tone (MRBT) service, comprising:a communication network;a Video Interactive Gateway (VIG), for establishing a communication link from a calling terminal to an MRBT platform through a Multimedia Gateway (MGW) and the VIG during the interval of a call being initiated through a Service Switch Center by the calling terminal and the call being put through;the MRBT platform, connected to the Service Switch Center dominating the calling terminal and the MGW in the communication network via the VIG respectively, for storing multimedia ring back tones and playing a multimedia ring back tone for the calling terminal via the established communication link.

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| **被引用** | 14 | **自引用** | 2 | **公司数** | 5 | **国家数** | 2 | **影响力** | 1.96 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for feeding back and receiving acknowledgement information of semi-persistent scheduling data packets**

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| **公开号** | [US7912007](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7912007&sv=036857a1ce3e1fa8bdbba008949fea0b) | **公开日** | 2011/03/22 |
| **申请号** | 12/830,246 | **申请日** | 2010/07/02 |
| **授权日** | 2011/03/22 | **优先日** | 2008/11/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Fan; Xiaoan | Liu; Guang | Li; Bo | Hou; Yunzhe |
| **国际 主分类** | H04Q 7/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention relates to radio communications and discloses a method and apparatus for feeding back and receiving acknowledgment (ACK) information of semi-persistent scheduling (SPS) data packets. The method for feeding back ACK information of SPS data packets includes receiving an uplink downlink assignment index (UL DAI) from a base station (BS), wherein the UL DAI indicates a number (N) of downlink data packets, mapping acknowledgements/negative acknowledgements (ACKs/NAKs) of k SPS data packets of the downlink data packets to positions from the (N k+1)th ACK/NAK to the Nth ACK/NAK, and feeding back N ACKs/NAKs to the BS. |

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| **主权项** | 专利度:16特征度:16 |  |  |
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A method for feeding back acknowledgement information of semi-persistent scheduling (SPS) data packets, the method comprising: receiving an uplink downlink assignment index (UL DAI) sent by a base station (BS), wherein the UL DAI indicates a number (N) of downlink data packets; mapping acknowledgements/negative acknowledgements (ACKs/NAKs) of k SPS data packets of the downlink data packets to positions from the (N−k+1)th ACK/NAK to the Nth ACK/NAK, where k is a positive integer; and feeding back N ACKs/NAKs to the BS.

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| **对偶主权项** | 专利度:16特征度:11 |  |  |
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A method for feeding back acknowledgement information of semi-persistent scheduling (SPS) data packets, the method comprising: receiving an uplink downlink assignment index (UL DAI) sent by a base station (BS), wherein the UL DAI indicates a number (N) of downlink data packets; mapping acknowledgements/negative acknowledgements (ACKs/NAKs) of k SPS data packets of the downlink data packets to positions from the (N−k+1)th ACK/NAK to the Nth ACK/NAK, where k is a positive integer; and feeding back N ACKs/NAKs to the BS.

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| **被引用** | 25 | **自引用** | 3 | **公司数** | 5 | **国家数** | 2 | **影响力** | 1.47 |

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| **同族数** | 34 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for WLAN user equipment accessing new operation network**

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| **公开号** | [US7904087](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7904087&sv=904fe0ba3cd8d572e8c00eabaeefdb43) | **公开日** | 2011/03/08 |
| **申请号** | 11/496,364 | **申请日** | 2006/07/31 |
| **授权日** | 2011/03/08 | **优先日** | 2004/02/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin | Zhang; Hai |
| **国际 主分类** | H04Q 7/20 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| The present invention discloses an interactive method for a WLAN UE accessing a new operation network, which comprises: when the WLAN UE which has accessed a first Visited Mobile Communication Network needs to re-select a second Visited Mobile Communication Network to access, the WLAN UE sending authentication information to a Home Network of the WLAN UE through a WLAN Access Network and the second Visited Mobile Communication Network; after receiving the authentication information, the Home Network of the WLAN UE authenticate the WLAN UE according to the authentication information via the second Visited Mobile Communication Network, and sending an access instruction to the WLAN Access Network through the second Visited Mobile Communication Network; and on receiving the access instruction, the WLAN UE accesses the second Visited Mobile Communication Network via the WLAN Access Network. The method enables a WLAN UE to reselect another Visited Mobile Communication Network after accessing a Visited Mobile Communication Network. |

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| **主权项** | 专利度:17特征度:19 |  |  |
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An interactive method for a Wireless Local Area Network (WLAN) User equipment (UE) to access a new communication network, comprising: sending, by the WLAN UE that has accessed a first Visited Mobile Communication Network, authentication information to a Home Network of the WLAN UE through a WLAN Access Network and a second Visited Mobile Communication Network, if the WLAN UE is in need of access to the second Visited Mobile Communication Network; receiving, by the WLAN UE, either an Access Permission message or an Access Rejection message from the Home Network via the WLAN Access Network and the second Visited Mobile Communication Network, based on the Home Network having received the authentication information and having authenticated the WLAN UE according to the authentication information; accessing, by the WLAN UE, the second Visited Mobile Communication Network via the WLAN Access Network if the Access Permission message is received; and disconnecting the WLAN UE from a the first Visited Mobile Communication Network based on a disconnection message sent from the Home Network to the first Visited Mobile Communication Network, and wherein accessing the second Visited Mobile Communication Network comprises: establishing, by the WLAN UE, a connection between the WLAN UE and the second Visited Mobile Communication Network, if the WLAN Access Network determines that the Access Permission message is received, otherwise, receiving, by the WLAN UE, the Access Rejection message from the WLAN Access Network.

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| **对偶主权项** | 专利度:34特征度:17 |  |  |
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An interactive method for a Wireless Local Area Network (WLAN) User equipment (UE)toaccess~~ing~~a new communication network, comprising:~~when~~sending, bythe WLAN UEthat hasaccess~~ing~~eda first Visited Mobile Communication Network~~needs access~~, authentication information to a Home Network of the WLAN UE through a WLAN Access Network anda second Visited Mobile Communication Network,ifthe WLAN UE~~sending authentication information to th~~is in need of access to the second Visited Mobile~~H~~Com~~e Network where the WLAN UE locates~~munication Network; receiving, by the WLAN UE, either an Access Permission message or an Access Rejection message from the Home Networkvia~~a~~theWLAN Access Network and the second Visited Mobile Communication Network~~; upon receiving~~, based on the Home Network having receivedthe authentication information~~, the Home Network~~and havingauthenticat~~ing~~edthe WLAN UE according to the authentication information~~and sending an access instruction to~~; accessing, by the WLAN UE, the second Visited Mobile Communication Network viathe WLAN Access Network~~via~~ifthe~~second Visited Mobile Communication Network; and upon receiving the~~Access Permission message is received; and disconnecting the WLAN UE from a the first Visited Mobile Communication Network based on a disconnection message sent from the Home Network to the first Visited Mobile Communication Network, and whereinaccessin~~struction,~~g the second Visited Mobile Communication Network comprises: establishing, bythe WLAN UE,a~~ccessing~~connection between the WLAN UE andthe second Visited Mobile Communication Network~~via~~, if the WLAN Access Network determines that the Access Permission message is received, otherwise, receiving, by the WLAN UE, the Access Rejection message fromthe WLAN Access Network.

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| **被引用** | 10 | **自引用** | 0 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.34 |

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| **同族数** | 10 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System for managing reserved bits in a variable-length message and optimizing message decoding utilizing the same**

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| **公开号** | [US7899079](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7899079&sv=eea97d0f859ff9365d205535650a1db7) | **公开日** | 2011/03/01 |
| **申请号** | 11/780,203 | **申请日** | 2007/07/19 |
| **授权日** | 2011/03/01 | **优先日** | 2006/08/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Yang; Yunsong |
| **国际 主分类** | H04J 3/16 | **优先 国家** | US |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A system of structures and operations is provided for managing reserved bits in a variable-length message, and for optimizing decoding performance of such a message using such reserved bits. |

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| **主权项** | 专利度:18特征度:12 |  |  |
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A method for a mobile station in a wireless communications system to process a variable length message, comprising the steps of: determining if cyclic redundancy check for the variable length message is successful; at the mobile station, receiving a Message Type field at the beginning of the variable length message; at the mobile station, determining a number of reserved bits based upon the Message Type field received; at the mobile station, receiving the remainder of the variable length message if the number of reserved bits is zero, otherwise, determining if received reserved bits are known bits; at the mobile station, discarding the message if the received reserved bits are not known bits; and at the mobile station, receiving the remainder of the variable length message if the received reserved bits are known bits, wherein the received reserved bits are located immediately adjacent to the received Message Type field.

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| **对偶主权项** | 专利度:20特征度:5 |  |  |
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A method~~of managing reserved bits in a variable length message transmitted in a communications system, comprising the steps of:providing a target total message length;plac~~for a mobile station in a wireless communications system to process a variable length message, comprising the steps of: determining if cyclic redundancy check for the variable length message is successful; at the mobile station, receiving a Message Type field at the beginning of the variable length message;at the mobile station,determining a number of reserved bits~~needed,~~based upon~~on~~the Message Type field~~and the target total message length;placing a R~~received; at the mobile station, receiving the remainder of the variable length message if the number of reserved~~B~~bits~~field after the Message Type field, if the number of reserved bits needed is not zero; andplacing at least one more field in the variable length message~~is zero, otherwise, determining if received reserved bits are known bits; at the mobile station, discarding the message if the received reserved bits are not known bits; and at the mobile station, receiving the remainder of the variable length message if the received reserved bits are known bits, wherein the received reserved bits are located immediately adjacent to the received Message Type field.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.5 |

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| **同族数** | 1 | **国家数** | 1 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, system and device for controlling policy information required by a requested service**

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| **公开号** | [US7895145](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7895145&sv=fc6cbd22d760455468a43f9789e0c77e) | **公开日** | 2011/02/22 |
| **申请号** | 11/830,952 | **申请日** | 2007/07/31 |
| **授权日** | 2011/02/22 | **优先日** | 2006/07/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Xu | Zhang; Jin |
| **国际 主分类** | G06N 5/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method for controlling policy information required by a requested service includes: obtaining a second decision result of a second network on policy information required by a requested service; making decision on the policy information required by the requested service according to a first policy information in the first network and the second decision result; and generating a final decision result on the policy information required by the requested service. A device and a system for controlling policy information required by a requested service are further disclosed. If different networks have different related policies, solutions provided by the present invention may provide a process for controlling policy information required by a requested service. |

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| **主权项** | 专利度:18特征度:8 |  |  |
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A method for controlling policy information required by a requested service, comprising: obtaining, by a first Policy Control and Charging Rules Function (PCRF), in a first network, a second decision result of a second network on the policy information required by the requested service from a second PCRF in the second network; and making, by the first PCRF, a decision on the policy information required by the requested service according to first policy information in the first network and the second decision result, and generating a decision result on the policy information required by the requested service.

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| **对偶主权项** | 专利度:19特征度:16 |  |  |
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A method for controlling policy information required by a requested service, comprising:obtaining, by a first Policy Control and Charging Rules Function (PCRF), in a first network,a second decision result of a second network onthepolicy information required by~~a~~therequested servicefrom a second PCRF in the second network; andmaking, by the first PCRF,a decision on the policy information required by the requested service according to first policy information in~~a~~thefirst network and the second decision result, and generating a decision result on the policy information required by the requested service.

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| **被引用** | 9 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.32 |

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| **同族数** | 6 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for providing RBT in communication network**

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| **公开号** | [US7889856](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7889856&sv=91f4356846e0d73c88c9477a34566e92) | **公开日** | 2011/02/15 |
| **申请号** | 11/274,939 | **申请日** | 2005/11/15 |
| **授权日** | 2011/02/15 | **优先日** | 2003/05/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Bin | Cheng; Yihua | Hu; Xiaoqing | Mo; Xiaojun | Dong; Jihong | Yu; Qian | Lu; Xuanming | Zhao; Xiaodong | Cai; Yongfeng | Xu; Junrong | Yang; Guodao | Chen; Youjun | Li; Zujian | Tong; Guofan | Xiao; Shichang | Zhang; Yi | Liu; Jiaqing | Wu; Yonghong | Li; Shiqian |
| **国际 主分类** | H04M 5/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| Disclosed are systems and methods for providing ring back tones in a communication network. At first, a ring back tone device for storing and playing the ring back tone customized by a subscriber is established in the communication network. Whether a subscriber is a ring back tone service register subscriber is judged with a certain triggering mode, such as intelligent network triggering, signaling interception triggering, call forwarding triggering or switching device triggering. If it is judged the subscriber is a ring back tone service registered subscriber, a connection between the originating switching device and the terminating switching device and a connection between a switching device and the ring back tone device are established. When the called terminal is idle, the ring back tone device provides a piece of customized ring back tone to the calling subscriber for replacing traditional ring back tone. |

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| **主权项** | 专利度:4特征度:45 |  |  |
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A method for providing ring back tones in a communication network which at least includes a Service Control Point (SCP), an originating switching device and a terminating switching device, said method comprising: a. establishing a ring back tone device for storing and playing ring back tones in the communication network, and storing ring back tone service register information of subscribers in said SCP, wherein said ring back tone service register information at least includes identification information indicating whether a subscriber is a ring back tone service registered subscriber and routing information of the ring back tone device; b. after receiving a call request, the originating switching device submitting call information to the SCP, the SCP judging whether a certain subscriber relating to the call is a ring back tone service registered subscriber according to said identification information, if so, the SCP returning the routing information of the ring back tone device to the originating switching device, and then going to section c, else going to section d; and c. establishing a connection between the originating switching device and the terminating switching device, and establishing a connection between the originating switching device and the ring back tone device according to the routing information of the ring back tone device, determining whether the called terminal is idle, the ring back tone device playing a ring back tone pre-customized by said certain subscriber to the calling subscriber only when the called terminal is idle; or d. establishing a connection between the originating switching device and the terminating switching device; wherein said establishing a connection between the originating switching device and the terminating switching device, and establishing a connection between the originating switching device and the ring back tone device according to the routing information of the ring back tone device in section c comprise: said originating switching device establishing a connection to the ring back tone device according to the routing information of the ring back tone device; and said ring back tone device obtaining a roaming number of the called subscriber, and establishing a connection to the terminating switching device according to said roaming number; wherein the information that the SCP returns to the originating switching device includes a called number and an original called number, wherein said called number is a roaming number of the called subscriber with a routing prefix which is a routing number of the ring back tone device; wherein the originating switching device establishing a connection to the ring back tone device according to the routing information of the ring back tone device comprises: the originating switching device establishing a connection to the ring back tone device according to the routing prefix in the called number, and sending an Initial Address Message (IAM) simultaneously to the ring back tone device, wherein the called number included in said IAM is the roaming number of the called subscriber with a routing prefix; and wherein the ring back tone device obtaining a roaming number of the called subscriber is removing the routing prefix from the called number so as to obtain the roaming number of the called subscriber; wherein said ring back tone service register information is stored in a ring back tone SCP in the communication network, and the communication network further comprises an intelligent service SCP which stores intelligent service contract information of the subscriber except ring back tone service register information; the method further comprising triggering intelligent service from the intelligent service SCP, wherein the SCP in section b is the ring back tone SCP; wherein said communication network is a Code Division Multiple Access (CDMA) network, the method further comprising changing SCP address of a Called Route Address Available (CDRAA) trigger to address of the ring back tone SCP in advance, while SCP address of other triggers still is address of the intelligent service SCP; the originating switching device submitting the call information to the SCP in section b is implemented through triggering the CDRAA trigger and sending analysis message ANLYZD to the ring back tone SCP; before triggering intelligent service from the intelligent service SCP, said method further comprising: the ring back tone SCP obtaining address information of the intelligent service SCP from the Home Location Register (HLR) to which the called terminal is attached, then forwarding analysis message ANLYZD received from the originating switching device to the intelligent service SCP according to said address information; after triggering intelligent service from the intelligent service SCP, said method further comprising: the intelligent service SCP returning its processing result to the ring back tone SCP.

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| **对偶主权项** | 专利度:20特征度:10 |  |  |
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A method for providing ring back tones in a communication network which at least includes a Service Control Point (SCP), an originating switching device and a terminating switching device, said method comprising:a. establishing a ring back tone device for storing and playing ring back tones in the communication network, and storing ring back tone service register information of subscribers in said SCP, wherein said ring back tone service register information at least includes identification information indicating whether a subscriber is a ring back tone service registered subscriber and routing information of the ring back tone device;b. after receiving a call request, the originating switching device submitting call information to the SCP, the SCP judging whether a certain subscriber relating to the call is a ring back tone service registered subscriber according to said identification information, if so, the SCP returning the routing information of the ring back tone device to the originating switching device, and then going to s~~tep~~ectionc, else going to s~~tep~~ectiond; andc. establishing a connection between the originating switching device and the terminating switching device, and establishing a connection between~~a~~the originatingswitching device and the ring back tone device according to the routing information of the ring back tone device,determining whether the called terminal is idle,the ring back tone device playing a ring back tone pre-customized by said certain subscriber to the calling subscriberonlywhen the called terminal is idle; ord. establishing a connection between the originating switching device and the terminating switching device; wherein said establishing a connection between the originating switching device and the terminating switching device, and establishing a connection between the originating switching device and the ring back tone device according to the routing information of the ring back tone device in section c comprise: said originating switching device establishing a connection to the ring back tone device according to the routing information of the ring back tone device; and said ring back tone device obtaining a roaming number of the called subscriber, and establishing a connection to the terminating switching device according to said roaming number; wherein the information that the SCP returns to the originating switching device includes a called number and an original called number, wherein said called number is a roaming number of the called subscriber with a routing prefix which is a routing number of the ring back tone device; wherein the originating switching device establishing a connection to the ring back tone device according to the routing information of the ring back tone device comprises: the originating switching device establishing a connection to the ring back tone device according to the routing prefix in the called number, and sending an Initial Address Message (IAM) simultaneously to the ring back tone device, wherein the called number included in said IAM is the roaming number of the called subscriber with a routing prefix; and wherein the ring back tone device obtaining a roaming number of the called subscriber is removing the routing prefix from the called number so as to obtain the roaming number of the called subscriber; wherein said ring back tone service register information is stored in a ring back tone SCP in the communication network, and the communication network further comprises an intelligent service SCP which stores intelligent service contract information of the subscriber except ring back tone service register information; the method further comprising triggering intelligent service from the intelligent service SCP, wherein the SCP in section b is the ring back tone SCP; wherein said communication network is a Code Division Multiple Access (CDMA) network, the method further comprising changing SCP address of a Called Route Address Available (CDRAA) trigger to address of the ring back tone SCP in advance, while SCP address of other triggers still is address of the intelligent service SCP; the originating switching device submitting the call information to the SCP in section b is implemented through triggering the CDRAA trigger and sending analysis message ANLYZD to the ring back tone SCP; before triggering intelligent service from the intelligent service SCP, said method further comprising: the ring back tone SCP obtaining address information of the intelligent service SCP from the Home Location Register (HLR) to which the called terminal is attached, then forwarding analysis message ANLYZD received from the originating switching device to the intelligent service SCP according to said address information; after triggering intelligent service from the intelligent service SCP, said method further comprising: the intelligent service SCP returning its processing result to the ring back tone SCP.

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| **被引用** | 8 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 1.18 |

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| **同族数** | 23 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for establishing diameter session for packet flow based charging**

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| **公开号** | [US7889650](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7889650&sv=c1ecbae19e337d80b3e65280daba77c5) | **公开日** | 2011/02/15 |
| **申请号** | 11/702,520 | **申请日** | 2007/02/06 |
| **授权日** | 2011/02/15 | **优先日** | 2004/08/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin |
| **国际 主分类** | H04M 11/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for establishing a Diameter session for packet flow based charging with multiple ways for establishing the Diameter session between a TPF and a CRF. The Diameter session can be established for each bearer of each subscriber, which means that for GPRS the Diameter session is established for each PDP Context State Model of each subscriber. The Diameter session can also be established for the bearers with a same APN of each subscriber. The Diameter session can further be established for all the bearers of each subscriber. The invention improves the mechanism for establishing Diameter sessions and makes the implementation of the charging flow more integrated. Moreover, the multiple ways for establishing Diameter sessions between the TPF and the CRF provided in the present invention can be flexibly selected according to the practical charging applications. |

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| **主权项** | 专利度:18特征度:20 |  |  |
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A method for establishing a Diameter session for packet flow based charging, comprising: using a processor, establishing, for each bearer of each subscriber, a Diameter session between a Traffic Plane Function (TPF) and a Charging Rule Function (CRF); and providing, modifying or deleting charging rules based on the established Diameter session for each bearer of each subscriber, or providing an Event Trigger based on the established Diameter session for each bearer of each subscriber, wherein the step of establishing the Diameter session comprises: when the bearer is established, the TPF establishing a TPF/CRF Diameter Session State Model, allocating a TPF-part Diameter session identifier to the Diameter session and providing the CRF with the TPF-part Diameter session identifier; and the CRF establishing its TPF/CRF Diameter Session State Model, allocating a CRF-part Diameter session identifier to the Diameter session and combining the TPF-part Diameter session identifier and the CRF-part Diameter session identifier to form an integrated Diameter session identifier of the TPF/CRF Diameter session, the method further comprising: the CRF providing the TPF with the integrated Diameter session identifier; and the TPF acquiring its established TPF/CRF Diameter Session State Model according to the TPF-part Diameter session identifier of the integrated Diameter session identifier, and updating the TPF-part Diameter session identifier to the integrated Diameter session identifier.

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| **对偶主权项** | 专利度:26特征度:10 |  |  |
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A method for establishing a Diameter session for packet flow based charging, comprising:~~establishing a Diameter session for each bearer of each subscriber between a Traffic Plane Function (TPF) and a Charging Rule Function (CRF)~~using a processor, establishing, for each bearer of each subscriber, a Diameter session between a Traffic Plane Function (TPF) and a Charging Rule Function (CRF); and providing, modifying or deleting charging rules based on the established Diameter session for each bearer of each subscriber, or providing an Event Trigger based on the established Diameter session for each bearer of each subscriber, wherein the step of establishing the Diameter session comprises: when the bearer is established, the TPF establishing a TPF/CRF Diameter Session State Model, allocating a TPF-part Diameter session identifier to the Diameter session and providing the CRF with the TPF-part Diameter session identifier; and the CRF establishing its TPF/CRF Diameter Session State Model, allocating a CRF-part Diameter session identifier to the Diameter session and combining the TPF-part Diameter session identifier and the CRF-part Diameter session identifier to form an integrated Diameter session identifier of the TPF/CRF Diameter session, the method further comprising: the CRF providing the TPF with the integrated Diameter session identifier; and the TPF acquiring its established TPF/CRF Diameter Session State Model according to the TPF-part Diameter session identifier of the integrated Diameter session identifier, and updating the TPF-part Diameter session identifier to the integrated Diameter session identifier.

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| **被引用** | 13 | **自引用** | 2 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.82 |

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| **同族数** | 17 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Resource revoking method based on resource admission control subsystem and network device**

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| **公开号** | [US7889648](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7889648&sv=840fa3843a7800ea42c9908fad2d8a76) | **公开日** | 2011/02/15 |
| **申请号** | 11/514,670 | **申请日** | 2006/09/01 |
| **授权日** | 2011/02/15 | **优先日** | 2005/09/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zheng; Zhenjian |
| **国际 主分类** | H04L 12/26 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A resource admission control subsystem based resource revoking method is provided. The method includes: receiving by a service-based policy decision function a Revoke Reservation notification; and when determining service resources have been allocated by border gateway function for the session, notifying, by the service-based policy decision function, the border gateway function to release and revoke the service resources allocated for the session. A network device is also provided. The network device includes: a processing unit for receiving a Revoke Reservation indication; a determining unit for determining whether it is necessary to request a border gateway function to release and revoke service resources in accordance with the Revoke Reservation indication from the processing unit; and a second notifying unit for notifying the border gateway function when the determining unit determines to request the border gateway function to release and revoke the service resources. |

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| **主权项** | 专利度:10特征度:23 |  |  |
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A resource revoking method based on a resource admission control subsystem, comprising: when a service-based policy decision function selects a border gateway function to allocate service resources according to a policy, recording corresponding information including border gateway function information in a context related to resources at an access-resource and admission control function; receiving, by a service-based policy decision function, a Revoke Reservation notification containing the context including the border gateway function information related to resources from the access-resource and admission control function, parsing the context in the Revoke Reservation notification; determining, by the service-based policy decision function, whether service resources have been allocated by a border gateway function for a session in accordance with the context parsed from the Revoke Reservation notification; and if determining that the service resources have been allocated by the border gateway function for the session in accordance with the context including border gateway function information, notifying, by the service-based policy decision function, the border gateway function to release and revoke the service resources allocated for the session; if determining that the service resources have not been allocated by the border gateway function for the session in accordance with the context including border gateway function information, terminating, by the service-based policy decision function, the processing flow of resource revoking.

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| **对偶主权项** | 专利度:14特征度:3 |  |  |
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A resource revoking method based onaresource admission control subsystem, comprising:~~receiving~~when a service-based policy decision function selects a border gateway function to allocate service resources according to a policy, recording corresponding information including border gateway function information in a context related to resources at an access-resource and admission control function; receiving,by a service-based policy decision function,a Revoke Reservation notification~~; and when~~containing the context including the border gateway function information related to resources from the access-resource and admission control function, parsing the context in the Revoke Reservation notification; determining, by the service-based policy decision function, whether service resources have been allocated by a border gateway function for a session in accordance with the context parsed from the Revoke Reservation notification; and ifdeterminingthat theservice resources have been allocated bytheborder gateway function for the sessionin accordance with the context including border gateway function information, notifying, by the service-based policy decision function, the border gateway function to release and revoke the service resources allocated for the session; if determining that the service resources have not been allocated by the border gateway function for the session in accordance with the context including border gateway function information, terminating, by the service-based policy decision function, the processing flow of resource revoking.

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| **被引用** | 3 | **自引用** | 1 | **公司数** | 2 | **国家数** | 1 | **影响力** | 0.26 |

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| **同族数** | 13 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for connecting a media stream, and method and system for detecting a connectivity**

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| **公开号** | [US7885278](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7885278&sv=f9c76e8034e66832e63f73a26823345b) | **公开日** | 2011/02/08 |
| **申请号** | 12/362,270 | **申请日** | 2009/01/29 |
| **授权日** | 2011/02/08 | **优先日** | 2006/08/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhu; Ning |
| **国际 主分类** | H04B 7/005 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| This invention discloses a method for connecting a media stream, which includes: transmitting, by a media gateway in a private network, a connecting message to an external network device through a network address translation device; the connecting message is used for generating a new address mapping, which is used for a subsequent media stream to pass through the network address translation device, in the network address translation device when there is no address mapping available in the network address translation device; and the connecting message is used for keeping alive an address mapping when the address mapping is already available in the network address translation device. The invention further discloses a system for connecting a media stream, two methods for detecting connectivity, and a system for detecting connectivity. |

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| **主权项** | 专利度:23特征度:11 |  |  |
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A method for connecting a media stream, comprising: transmitting, by a media gateway in a private network, a connecting message to an external network device through a network address translation device according to an instruction from a media gateway controller, wherein the instruction is used for specifying local media address being required to transmit the connecting message; and receiving, by the network address translation device, the connecting message, wherein the connecting message is used for generating a new address mapping, the new address mapping is used for a subsequent media stream passing through the network address translation device, when there is no address mapping available in the network address translation device, and is used for keeping alive the address mapping when the address mapping is already available in the network address translation device.

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| **对偶主权项** | 专利度:20特征度:13 |  |  |
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A method for connecting a media stream, comprising:transmitting, by a media gateway in a private network, a connecting message to an external network device through a network address translation deviceaccording to an instruction from a media gateway controller, wherein the instruction is used for specifying local media address being required to transmit the connecting message; andreceiving, by the network address translation device, the connecting message, wherein the connecting message is used for generating a new address mapping, the new address mapping is used for a subsequent media stream passing through the network address translation device, when there is no address mapping available in the network address translation device, and is used for keeping alive~~an~~theaddress mapping when the address mapping is already available in the network address translation device.

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| **被引用** | 1 | **自引用** | 0 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.1 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and an apparatus for resource admission control process**

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| **公开号** | [US7885262](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7885262&sv=c56189f2546171b7d41093e1ebfc03df) | **公开日** | 2011/02/08 |
| **申请号** | 11/515,564 | **申请日** | 2006/09/05 |
| **授权日** | 2011/02/08 | **优先日** | 2005/09/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Chen; Yuepeng | Fan; Lingyuan | Huang; Fuqing |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for resource admission control process, an Access-Resource and Admission Control Function entity and a Service-based Policy Decision Function entity, wherein the method includes: sending an Admission Request message, which carries the current media stream address information, to an Access-Resource and Admission Control Function entity (A-RACF) in an originating home network from a Service-based Policy Decision Function entity (SPDF) when the SPDF successfully configures an IP Multimedia Subsystem (IMS) connection for a Core Border Gateway Function entity (C-BGF) in the originating home network; and performing a resource admission control process for a corresponding media stream by the A-RACF according to the received Admission Request message. With the method of the present invention, the resource admission control process performed by the A-RACF on the media stream may become meaningful. |

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| **主权项** | 专利度:19特征度:25 |  |  |
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A method for a resource admission control process in an originating home network, comprising: performing, by a Service-based Policy Decision Function entity (SPDF) located in the originating home network, a process of configuring an IP Multimedia Subsystem (IMS) connection for a Core-Border Gateway Function entity (C-BGF) located in the originating home network upon receiving an Authentication Authorization Request (AAR-Request) message; performing, by the C-BGF, a network address and/or port number translation (NA(P)T) binding process for a media stream; obtaining, by the SPDF, current media stream address information after the NA(P)T binding process from the C-BGF; sending, by the SPDF, an Admission Request message containing the current media stream address information obtained from the C-BGF, to an Access-Resource and Admission Control Function entity (A-RACF) located in the originating home network; and performing, by the A-RACF, a resource admission control process for the media stream according to the Admission Request message.

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| **对偶主权项** | 专利度:24特征度:13 |  |  |
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A method foraresource admission control processin an originating home network, comprising:~~send~~performing, by a Service-based Policy Decision Function entity (SPDF)~~, an Admission Request message containing the current media stream address information, to an Access-Resource and Admission Control~~located in the originating home network, a process of configuring an IP Multimedia Subsystem (IMS) connection for a Core-Border GatewayFunction entity (~~A-RA~~C-BGF) locat~~ing~~edin~~an~~theoriginating home network~~when the SPDF successfully performs a process of configuring an IP Multimedia Subsystem (IMS) connection for a Core-Border Gateway~~upon receiving an Authentication Authorization Request (AAR-Request) message; performing, by the C-BGF, a network address and/or port number translation (NA(P)T) binding process for a media stream; obtaining, by the SPDF, current media stream address information after the NA(P)T binding process from the C-BGF; sending, by the SPDF, an Admission Request message containing the current media stream address information obtained from the C-BGF, to an Access-Resource and Admission ControlFunction entity (~~C-BG~~A-RACF) locat~~ing~~edin the originating home network; andperforming, by the A-RACF, a resource admission control process for~~a corresponding~~themedia stream according to the Admission Request message.

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| **被引用** | 1 | **自引用** | 0 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.5 |

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| **同族数** | 13 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Statistic reporting method and media gateway**

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| **公开号** | [US7869449](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7869449&sv=1d46bb0f6f84c25d374d745da6053562) | **公开日** | 2011/01/11 |
| **申请号** | 12/358,714 | **申请日** | 2009/01/23 |
| **授权日** | 2011/01/11 | **优先日** | 2006/12/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Lin; Yangbo |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Brinks Hofer Gilson & Lione |

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| **摘要** |  |
| A statistic reporting method includes: obtaining the current time information after an MG determines that the statistic parameter value needs to be reported if the reporting of a statistic parameter value needs to be bound to the time information, when associating the current time with the current value of the statistic parameter to be reported, and reporting such information to an MGC. In the present disclosure, the MG associates the current time information with the current value of the statistic parameter to be reported, and reports such information to the MGC, thus enabling the MGC to obtain the correct time of triggering the reporting of the statistic parameter value, reducing errors and improving the accuracy of subsequent analysis and prediction based on the reported statistic parameter value. |

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| **主权项** | 专利度:15特征度:16 |  |  |
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A method for statistic reporting, comprising: obtaining, by an Media Gateway (MG), current time information upon determining that it is necessary to report a current value of a statistic parameter and that it is necessary to bind time information for reporting of the current value of the statistic parameter; associating the current time information with the current value of the statistic parameter that needs to be reported; reporting the associated current time information and statistic parameter value to a Media Gateway Controller (MGC); wherein the determining that it is necessary to bind time information for reporting of the current value of the statistic parameter, comprises: determining, by the MG, whether it is necessary to bind the time information for reporting of the current value of the statistic parameter according to a set time binding request parameter; and wherein before determining, by the MG, whether it is necessary to bind the time information for reporting of the current value of the statistic parameter value according to the set time binding request parameter, the method further comprises: setting, by the MGC, the time binding request parameter and sending the time binding request parameter to the MG.

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| **对偶主权项** | 专利度:14特征度:27 |  |  |
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A method for statistic reporting, comprising:obtaining, by an Media Gateway (MG), current time information upon determining that it is necessary to report a current value of a statistic parameter and that it is necessary to bind time information for reporting of the current value of the statistic parameter;associating the current time information with the current value of the statistic parameter that needs to be reported;~~and~~reporting the associated current time information and statistic parameter value to a Media Gateway Controller (MGC); wherein the determining that it is necessary to bind time information for reporting of the current value of the statistic parameter, comprises: determining, by the MG, whether it is necessary to bind the time information for reporting of the current value of the statistic parameter according to a set time binding request parameter; and wherein before determining, by the MG, whether it is necessary to bind the time information for reporting of the current value of the statistic parameter value according to the set time binding request parameter, the method further comprises: setting, by the MGC, the time binding request parameter and sending the time binding request parameter to the MG.

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.2 |

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| **同族数** | 5 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and device for information transfer**

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| **公开号** | [US7864699](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7864699&sv=3301c64fa4b48f7fde80f9a8371a463a) | **公开日** | 2011/01/04 |
| **申请号** | 12/840,608 | **申请日** | 2010/07/21 |
| **授权日** | 2011/01/04 | **优先日** | 2007/08/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. odolph; Grant |

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| **摘要** |  |
| A method for information transfer includes: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN), version number of GPRS Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE. The embodiment of the invention also provides a device for information transfer. With the embodiment of present invention, corresponding user information transfer may be realized. |

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| **主权项** | 专利度:14特征度:11 |  |  |
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A method, comprising: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN), a version number of a General Radio Packet Service (GPRS) Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE, wherein when the GTP version number is GTPV2, the user information corresponding to the version number of the GTP is user information corresponding to a higher version AN.

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| **对偶主权项** | 专利度:15特征度:9 |  |  |
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A method, comprising: determining, by a source Mobility Management Network Element (MMNE) of a source Access Network (AN), a version number of a General Radio Packet Service (GPRS) Tunneling Protocol (GTP) used between the source MMNE and a destination MMNE of a destination AN; and transmitting, by the source MMNE, user information corresponding to the version number of the GTP used between the source MMNE and the destination MMNE to the destination MMNE, wherein when the GTP version number is GTPV2, the user information corresponding to the version number of the GTP is user information corresponding to a higher version AN.

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| **被引用** | 14 | **自引用** | 1 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.2 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of informing a network of change of user equipment capability**

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| **公开号** | [US7860501](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7860501&sv=53c095d75ca2234b89664adb95fba0da) | **公开日** | 2010/12/28 |
| **申请号** | 11/630,427 | **申请日** | 2005/07/07 |
| **授权日** | 2010/12/28 | **优先日** | 2004/07/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Yajuan |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Ladas & Parry, LLP |

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| **摘要** |  |
| A method of informing a network of a change of user equipment capability includes: stopping a registration timer on the user side set currently when the user equipment capability changes; sending a register request message carrying information of new user equipment capability to the network; analyzing, by the network, the register request message, and storing the information of new user equipment capability for reference by subsequent establishment of a session; stopping a current registration timer on the server side set for the user equipment; initiating a new registration timer on the server side for the user equipment; sending a response message carrying information of the new registration timer on the server side to the user equipment; resetting the registration timer on the user side based on information of the new registration timer on the server side in the response message. The capability change is informed to the network in time. |

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| **主权项** | 专利度:6特征度:15 |  |  |
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A method of informing a network of a change of user equipment capability, comprising: stopping a registration timer on the user side set currently by a user equipment when the user equipment capability changes; sending a register request message carrying information of new user equipment capability to the network; analyzing, by the network, the register request message, and storing the information of new user equipment capability for reference by subsequent establishment of a session; stopping a current registration timer on the server side set for the user equipment; initiating a new registration timer on the server side for the user equipment; sending a response message carrying information of the new registration timer on the server side to the user equipment; resetting the registration timer on the user side based on information of the new registration timer on the server side in the response message.

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| **对偶主权项** | 专利度:6特征度:11 |  |  |
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A method of informing a network of a change of user equipment capability, comprising:stopping a registration timer on the user side set currently by a user equipment when the user equipment capability changes;sending a register request message carrying information of new user equipment capability to the network;analyzing, by the network, the register request message, and storing the information of new user equipment capability for reference by subsequent establishment of a session;stopping a current registration timer on the server side set for the user equipment;initiating a new registration timer on the server side for the user equipment;sending a response message carrying information of the new registration timer on the server side to the user equipment;resetting the registration timer on the user side based on information of the new registration timer on the server side in the response message.

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| **被引用** | 9 | **自引用** | 2 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.24 |

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| **同族数** | 18 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method, apparatus, and system for implementing policy and charging control**

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| **公开号** | [US7860483](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7860483&sv=ecaf1b1f1a442c89b11d93b51dc62ac3) | **公开日** | 2010/12/28 |
| **申请号** | 12/847,776 | **申请日** | 2010/07/30 |
| **授权日** | 2010/12/28 | **优先日** | 2007/07/24 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Yan | Ni; Hui |
| **国际 主分类** | H04M 11/00 | **优先 国家** | CN |
| **代理** | Conley Rose, P.C. Rodolph; Grant |

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| **摘要** |  |
| A method for implementing a policy and charging control (PCC) is provided. The method includes: acquiring user location information; and determining a PCC rule of a user according to the acquired user location information. The PCC rule is for a policy and charging enforcement function (PCEF) to perform the corresponding PCC. Corresponding PCEF, policy control and charging rules function (PCRF), gateway, and system for implementing a PCC are also provided. Thus, the PCC based on fine-granularity location information is implemented. |

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| **主权项** | 专利度:11特征度:19 |  |  |
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A method for implementing a Policy and Charging Control (PCC), comprising: acquiring, by a Policy and Charging Rules Function (PCRF), user location acquisition ability information carried in a Credit-Control-Request (CCR) message sent by a Policy and Charging Enforcement Function (PCEF), wherein the user location acquisition ability information denotes that the PCEF does not have the ability of acquiring user location information; and determining, by the PCRF, a PCC rule of a user according to the user location acquisition ability information, wherein the PCC rule determined according to the user location acquisition ability information is for the PCEF to perform a corresponding PCC, wherein the location acquisition ability information carried in the CCR message sent by the PCEF comprises: a user location information attribute value pair whose attribute values are specific values denoting that the PCEF does not have the ability of acquiring corresponding user location information.

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| **对偶主权项** | 专利度:14特征度:15 |  |  |
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A method for implementing a Policy and Charging Control (PCC), comprising:acquiring, by a Policy and Charging Rules Function (PCRF), user location acquisition ability information carried in a Credit-Control-Request (CCR) message sent by a Policy and Charging Enforcement Function (PCEF), wherein the user location acquisition ability information denotes that the PCEF does not have the ability of acquiring user location information; anddetermining, by the PCRF, a PCC rule of a user according to the user location acquisition ability information, wherein the PCC rule determined according to the user location acquisition ability information is for the PCEF to perform a corresponding PCC, wherein the location acquisition ability information carried in the CCR message sent by the PCEF comprises: a user location information attribute value pair whose attribute values are specific values denoting that the PCEF does not have the ability of acquiring corresponding user location information.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 11 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for intercommunicating between private network user and network with QoS guarantee**

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| **公开号** | [US7856025](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7856025&sv=3fca38b76076133b30d2e9fe37d68c89) | **公开日** | 2010/12/21 |
| **申请号** | 11/780,612 | **申请日** | 2007/07/20 |
| **授权日** | 2010/12/21 | **优先日** | 2005/04/25 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | He; Yungu |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| A method and a system for intercommunicating between a private network user and a network with QoS guarantee are provided. The bearer control layer entity and the application layer entity obtain the address (port) translation information in the network with independent bearer control layer, and then allocate the resources for the private network user based on the address (port) translation information. According to the present invention, the various function entities may process transmission and translation of the private addresses correctly and hence accomplish a correct addressing and resource allocation. Thus, the problems that the end-to-end QoS resource allocation cannot be accomplished and the end-to-end QoS cannot be guaranteed when the user uses a private address are solved. |

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| **主权项** | 专利度:7特征度:22 |  |  |
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A method for intercommunicating between a private network user and a network with QoS guarantee, comprising: carrying identity information of the private network user in a request message transmitted from the private network user to a relevant function entity of the network with QoS guarantee; translating, by the relevant function entity, the identity information of the private network user to a public address, and establishing a correspondence between the identity information and the public address; establishing a connection with an opposite end using the public address, and implementing information interaction between the private network user and the opposite end of the network with QoS guarantee based on the connection; wherein, the relevant function entity is one of an Application Function entity and a Service Boundary Control Function entity; wherein, according to the request message transmitted from the private network user, the Application Function entity or the Service Boundary Control Function entity initiates a request message for applying public address to a Policy Decision Function or Bearer Control Function; the Policy Decision Function or the Bearer Control Function applies the public address for the private network user to an address translation gateway, and the address translation gateway allocates the corresponding public address for the private network user and returns the corresponding public address to the Policy Decision Function or the Bearer Control Function; and the Policy Decision Function or the Bearer Control Function returns the public address to the Application Function entity or the Service Boundary Control Function entity for saving, or saves the public network address on the Policy Decision Function or the Bearer Control Function.

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| **对偶主权项** | 专利度:12特征度:10 |  |  |
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A method for intercommunicating between a private network user and a network with QoS guarantee, comprising: carrying identity information of the private network user in a~~service~~requestmessage transmitted from the private network user to a relevant function entity of the network with QoS guarantee; translating, by the relevant function entity, the identity information of the private network user to a public address, and establishing a correspondence between the identity information and the public address; establishing a connection with an opposite end using the public address, and implementing information interaction between the private network user and the opposite end of the network with QoS guarantee based on the connection; wherein, the relevant function entity is one of an Application Function entity and a Service Boundary Control Function entity; wherein, according to the request message transmitted from the private network user, the Application Function entity or the Service Boundary Control Function entity initiates a request message for applying public address to a Policy Decision Function or Bearer Control Function; the Policy Decision Function or the Bearer Control Function applies the public address for the private network user to an address translation gateway, and the address translation gateway allocates the corresponding public address for the private network user and returns the corresponding public address to the Policy Decision Function or the Bearer Control Function; and the Policy Decision Function or the Bearer Control Function returns the public address to the Application Function entity or the Service Boundary Control Function entity for saving, or saves the public network address on the Policy Decision Function or the Bearer Control Function.

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| **被引用** | 1 | **自引用** | 1 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.3 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for idle mode signaling reduction**

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| **公开号** | [US7855991](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7855991&sv=ce95cfbaa37b00aff90d88be6ecfd112) | **公开日** | 2010/12/21 |
| **申请号** | 12/837,160 | **申请日** | 2010/07/15 |
| **授权日** | 2010/12/21 | **优先日** | 2008/01/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Weihua |
| **国际 主分类** | H04W 36/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method and a system for idle mode signaling reduction (ISR) are provided. The method includes obtaining ISR activation information of a source network, and setting an ISR status of a user equipment (UE) in a target network according to the obtained ISR activation information of the source network. Thus, the ISR status of the UE can be processed when the UE is handed over between networks. |

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| **主权项** | 专利度:20特征度:18 |  |  |
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A method for idle mode signaling reduction (ISR), the method comprising:obtaining, by a mobility management network element of a target network, ISR activation information of a source network from a forward handover request message sent from a mobility management network element of the source network, wherein the ISR activation information of the source network comprises indication information indicating that the source network has an ISR capability, wherein the forward handover request message requests to start a handover;setting an ISR status of a user equipment (UE) in the target network according to the obtained ISR activation information of the source network, the ISR status of the UE in the target network being set by the target network; andreturning a forward handover response message from the mobility management network element of the target network to the mobility management network element of the source network.

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| **对偶主权项** | 专利度:20特征度:10 |  |  |
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A method for idle mode signaling reduction (ISR), the method comprising: obtaining, by a mobility management network element of a target network, ISR activation information of a source network from a forward handover request message sent from a mobility management network element of the source network, wherein the ISR activation information of the source network comprises indication information indicating that the source network has an ISR capability, wherein the forward handover request message requests to start a handover; setting an ISR status of a user equipment (UE) in the target network according to the obtained ISR activation information of the source network, the ISR status of the UE in the target network being set by the target network; and returning a forward handover response message from the mobility management network element of the target network to the mobility management network element of the source network.

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| **被引用** | 12 | **自引用** | 1 | **公司数** | 5 | **国家数** | 3 | **影响力** | 1.96 |

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| **同族数** | 18 | **国家数** | 7 |

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**Method, system and equipment for processing SIP requests in IMS network**

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| **公开号** | [US7835352](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7835352&sv=a368205b8d0812e1691718e34d760f1a) | **公开日** | 2010/11/16 |
| **申请号** | 11/506,581 | **申请日** | 2006/08/18 |
| **授权日** | 2010/11/16 | **优先日** | 2005/08/19 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | inventergy | **发明人** | Zhu; Fenqin | Wu; Yajuan |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| A method for processing SIP requests in an IMS network includes: an AS in the IMS network receiving a first SIP request forwarded by a S-CSCF entity, generating a second SIP request and deciding whether it is needed to associate the second SIP request with the first SIP request in terms of service logic at the S-CSCF entity, if it is needed to associate two requests, removing the URI of the AS from the Route header of the first SIP request; otherwise, regenerating the Route header of the second SIP request in the originating UA behavior mode and sending the second SIP request to the S-CSCF entity. Also disclosed is a system for processing SIP requests in an IMS network, including an AS and a S-CSCF entity. Also disclosed is an AS for processing SIP requests in an IMS network and a network entity for service control. |

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| **主权项** | 专利度:12特征度:24 |  |  |
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A method for processing Session Initiation Protocol (SIP) requests in an IP Multimedia Subsystem (IMS) network, comprising: an Application Server (AS) in the IMS network receiving a first SIP request forwarded by a Serving Call Session Control Function (S-CSCF) entity and generating a second SIP request according to the first SIP request; the AS deciding whether it is needed to associate the second SIP request with the first SIP request in the S-CSCF entity according to an execution result of a selected service logic, if it is needed to associate the two SIP requests, removing an Uniform Resource Identifier (URI) of the AS from a Route header of the first SIP request and taking the rest of the Route header as a Route header of the second SIP request; otherwise, the AS constructing the Route header of the second SIP request in an originating User Agent (UA) behavior mode; the AS sending the second SIP request to the S-CSCF entity; and wherein the AS deciding whether to associate the first SIP request with the second SIP request according to the execution result of the selected service logic further comprises: deciding whether to associate the first SIP request with the second SIP request by comparing user related information that is generated by the service logic for the second SIP request and user related information of the first SIP request.

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| **对偶主权项** | 专利度:26特征度:12 |  |  |
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A method for processing Session Initiation Protocol (SIP) requests in an IP Multimedia Subsystem (IMS) network, comprising: an Application Server (AS) in the IMS network receiving a first SIP request forwarded by a Serving Call Session Control Function (S-CSCF) entity and generating a second SIP request according to the first SIP request; the AS deciding whether it is needed to associate the second SIP request with the first SIP request in the S-CSCFentity according to an execution result of a selected service logic, if it is needed to associate the twoSIPrequests, removing~~the~~anUniform Resource Identifier (URI) of the AS from~~the~~aRoute header of the first SIP request and taking the rest of the Route header as~~the~~aRoute header of the second SIP request; otherwise, the AS constructing the Route header of the second SIP request in~~the~~anoriginating User Agent (UA) behavior mode; the AS sending the second SIP request to the S-CSCF entity; and wherein the AS deciding whether to associate the first SIP request with the second SIP request according to the execution result of the selected service logic further comprises: deciding whether to associate the first SIP request with the second SIP request by comparing user related information that is generated by the service logic for the second SIP request and user related information of the first SIP request.

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| **被引用** | 10 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.35 |

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| **同族数** | 11 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for selecting the authentication manner at the network side**

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| **公开号** | [US7822407](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7822407&sv=657b32fa272d08af922014549bb41692) | **公开日** | 2010/10/26 |
| **申请号** | 11/473,666 | **申请日** | 2006/06/23 |
| **授权日** | 2010/10/26 | **优先日** | 2004/09/23 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 高通 | **发明人** | Huang; Yingxin | Wu; Yajuan | Zhang; Wenlin |
| **国际 主分类** | H04M 1/66 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| The present invention discloses a method for a network to choose an authentication mode, wherein the key lies in that, according to the received authentication information in the authentication vector request message from S-CSCF as well as according to type of the requesting subscriber, HSS returns authentication information of the Early-IMS-based authentication vector to S-CSCF, or returns authentication information of the Full-IMS-based authentication mode to S-CSCF, or directly returns failure information to S-CSCF. If it is under the former two situations, the subscriber will be authenticated by adopting the corresponding authentication mode, and then S-CSCF will return access-allowed or access-rejected information to the subscriber according to authentication result. If it is in the latter situation, S-CSCF will directly send access-rejected information to the subscriber. By applying the present invention, the network can choose a proper authentication mode to authenticate the subscriber according to the subscriber's requirements, so that processing ability of the network is enhanced and the network is compatible with original security protocols to the fullest extent. |

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| **主权项** | 专利度:16特征度:27 |  |  |
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A method for a network to choose an authentication mode, comprising the steps of: a Serving-Call Session Control Function (S-CSCF) entity receiving a Message of register request from a subscriber and sending an authentication vector request carrying an authentication mode identifier to a Home Subscriber Server (HSS); and the HSS determining whether the S-CSCF requests authentication information of an Early-IMS-based authentication vector according to the authentication mode identifier; if yes, the HSS returning authentication information of the Early-IMS-based authentication vector to the S-CSCF; otherwise, the HSS determining type of the subscriber that requests access, if the subscriber supports a Full-IMS-based authentication mode, returning authentication information of the Full-IMS-based authentication mode, if the subscriber is 2G based, the HSS returning authentication information of the Early-IMS-based authentication vector to the S-CSCF or returning unsuccessful information to the S-CSCF; wherein the authentication vector request with the authentication mode identifier sent to HSS by S-CSCF further comprises information of access network type; wherein the subscriber that supports the Full-IMS-based authentication mode is 3G based; and wherein after the HSS determining that the S-CSCF requires authentication information of the Early-IMS-based authentication vector further comprises the HSS judging the access network type of the subscriber; if the access network is a 2G network, continuing with the process of returning authentication information of the Early-IMS-based authentication vector to the S-CSCF; if the access network is a 3G network and the subscriber requesting access is 3G based, returning authentication information that supports Full-IMS-based authentication mode to the S-CSCF; the S-CSCF receiving the authentication information, authenticating the subscriber that supports the Full-IMS-based authentication mode by adopting the Full-IMS-based authentication mode or returning access-rejected information to the subscriber.

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| **对偶主权项** | 专利度:10特征度:18 |  |  |
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A method for a network to choose an authentication mode, comprising the steps of:~~a.~~a Serving-Call Session Control Function (S-CSCF) entity receiving a Message of register request from a subscriber~~;~~and sending an authentication vector request~~with a required~~carrying anauthentication mode identifier to a Home Subscriber Server (HSS);~~b.~~andthe HSS~~judg~~determining whether the S-CSCF requests~~for the~~authentication information of an Early-IMS-based authentication vector according to the~~required~~authentication mode identifier; if yes,~~executing step d~~the HSS returning authentication information of the Early-IMS-based authentication vector to the S-CSCF; otherwise,the HSSdetermining type of the subscriber that requests access, if the subscriber supports a Full-IMS-based authentication mode, returning authentication information of the Full-IMS-based authentication mode~~and executing step c;~~,if the subscriber is 2G based,~~executing alterative step d and step e; c. the S-CSCF authenticating the subscriber that requests access and supports Full-IMS-based authentication mode by adopting the Full-IMS-based~~the HSS returning authentication information of the Early-IMS-based authentication vector to the S-CSCF or returning unsuccessful information to the S-CSCF; wherein the authentication vector request with theauthentication mode~~;~~i~~f the subscriber passes the authentication, returning access-allowed information to the subscriber and ending the process; if the authentication is unsuccessful and cause of the unsuccessful authentication is that the authentication mode is not supported,~~dentifier sent to HSS by S-CSCF further comprises information of access network type; wherein the subscriber that supports the Full-IMS-based authentication mode is 3G based; and wherein after the HSS determining thatthe S-CSCF~~sending the~~requiresauthentication~~vector request with the requested~~information of theEarly-IMS-based authentication vector~~identifier to HSS, and executing step b; d. HSS~~further comprises the HSS judging the access network type of the subscriber; if the access network is a 2G network, continuing with the process ofreturning authentication information of the Early-IMS-based authentication vector to the S-CSCF~~,~~; ifthe~~S-CSCF returning access-allowed information~~access network is a 3G networka~~ccess-rejected information to the 2G-based subscriber according to the authentication result obtained by adopting Early-IMS-based authentication vector, and ending the process; e. HSS returning unsuccessful information to the S-CSCF, which indicates that the authentication mode is not supported; the S-CSCF notifying the 2G-based subscriber of access rejection after receiving the unsuccessful information, and ending the process~~nd the subscriber requesting access is 3G based, returning authentication information that supports Full-IMS-based authentication mode to the S-CSCF; the S-CSCF receiving the authentication information, authenticating the subscriber that supports the Full-IMS-based authentication mode by adopting the Full-IMS-based authentication mode or returning access-rejected information to the subscriber.

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| **被引用** | 4 | **自引用** | 1 | **公司数** | 4 | **国家数** | 1 | **影响力** | 0.34 |

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| **同族数** | 11 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for reducing feedback information overhead in precoded MIMO-OFDM systems**

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| **公开号** | [US7817739](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7817739&sv=353c99e3b35915bf05c725537957ff52) | **公开日** | 2010/10/19 |
| **申请号** | 12/341,362 | **申请日** | 2008/12/22 |
| **授权日** | 2010/10/19 | **优先日** | 2006/06/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wennstrom; Mattias | Van De Beek; Jaap |
| **国际 主分类** | H04K 1/00 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| An improved method for reducing an amount of precoding feedback information in a multi-carrier Multiple-Input Multiple-Output (MIMO) communication system using precoding is disclosed. At the receiving end, the method jointly selects, while considering transmission quality for each relevant combination of sub-bands and matrices, a limited number of P codebook indices and a limited number of K' sub-bands to be included in a subset ω (m1, . . . , mK') of a set Ω of allowed sub-bands. K' is here set to a value K'< and P is set to a value P≤K'. The P codebook indices and information identifying the subset ω is then conveyed to the transmitting end. |

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| **主权项** | 专利度:26特征度:18 |  |  |
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A method for reducing an amount of precoding feedback information in a multi-carrier Multiple-Input Multiple-Output (MIMO) communication system, characterized by comprising: carrying, at a receiving end of the system, information on a number of streams Ns using multiple sub-carriers being grouped together into a set Ω of K allowed sub-bands (n1, . . . , nK), jointly selecting, while considering transmission quality for each relevant combination of sub-bands and matrices, a limited number of P codebook indices and a limited number of K' sub-bands to be included in a subset ω (m1, . . . , mK') of the set Ω, wherein K' is set to a value K'<K and P is set to a value P≤K', and conveying the P codebook indices and information identifying the subset ω to the transmitting end.

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| **对偶主权项** | 专利度:26特征度:14 |  |  |
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A method for reducing an amount of precoding feedback information in a multi-carrier Multiple-Input Multiple-Output (MIMO) communication system, characterized by comprising:carrying, at a receiving end of the system, information on a number of streams Ns using multiple sub-carriers being grouped together into a set Ω of K allowed sub-bands (n1, . . . , nK),jointly selecting, while considering transmission quality for each relevant combination of sub-bands and matrices, a limited number of P codebook indices and a limited number of K' sub-bands to be included in a subset ω (m1, . . . , mK') of the set Ω, wherein K' is set to a value K'<K and P is set to a value P≤K', andconveying the P codebook indices and information identifying the subset ω to the transmitting end.

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| **被引用** | 21 | **自引用** | 0 | **公司数** | 8 | **国家数** | 3 | **影响力** | 3.3 |

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| **同族数** | 21 | **国家数** | 11 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**System and method for processing packet domain signal**

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| **公开号** | [US7804820](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7804820&sv=48be8af6f705597c9e97aad399430e7f) | **公开日** | 2010/09/28 |
| **申请号** | 11/682,392 | **申请日** | 2007/03/06 |
| **授权日** | 2010/09/28 | **优先日** | 2004/09/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Shi; Youzhu | Zhu; Dongming |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |
| Embodiments of the present invention disclose a system and a method for processing a packet domain service signal, which enable a terminal that does not support an access control protocol of an Internet Protocol Multimedia Subsystem (IMS) to access the IMS and acquire the services in the IMS. An AGCF is added for shielding the differences of the users on the basis of the IMS defined in the 3GPP R5/R6 standard, specifically, a PSTN/ISDN user accesses an AGF first, accesses the IMS through an agent function of the AGCF, and the AGCF also manages and controls the AGF. Control of the PSTN/ISDN services may be implemented in the AGCF, or in an AS added to the IMS, or the control of basic services and supplementary services may be implemented in the AGCF while the control of value-added services may be implemented in the AS. |

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| **主权项** | 专利度:1特征度:41 |  |  |
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A method for processing a packet domain service signal, when a user makes an incoming call, the method comprising: upon receiving a Session Initiation Protocol (SIP) request message, triggering, by a Call Session Control Function (CSCF) in a home domain of a called user, a service according to user subscription information, and sending a first message to a first application server; upon receiving the first message, implementing, by the first application server, service control of a Public Switched Telephone Network (PSTN)/Integrated Services Digital Network (ISDN), and sending a second message to the CSCF; upon receiving the second message, implementing, by the CSCF, connection control and routing, and sending a Session Initiation Protocol (SIP) request message to an access gateway control function; upon receiving the SIP request message, locating, by the access gateway control function, an access gateway function that a called user accesses and a user port according to a called user identity, converting the SIP request message to a third message, and notifying the access gateway function to send an incoming call signal to a user equipment processing a service signal of the PSTN/ISDN; wherein the service control of the PSTN/ISDN implemented by the first application server comprises control of an extended value-added service; wherein, upon receiving the SIP request message, the access gateway control function determines whether a basic service and a supplementary service of the PSTN/ISDN are triggered; wherein, if the basic service and the supplementary service are triggered, the access gateway control function controls the basic service and the supplementary service that are triggered, and determines whether to carry out the session control again for the incoming call; wherein, if determining to carry out the session control again for the incoming call, the access gateway control function sends an SIP request message to the CSCF, and the CSCF continues to implement the session control again; wherein, if determining not to carry out the session control again for the incoming call, the incoming call is terminated; and wherein, if the basic service and the supplementary service are not triggered, the access gateway control function locates an access gateway function that a called user accesses and a user port according to the called user identity, converts the SIP request message to the third message, and notifies the access gateway function to send an incoming call signal to a user equipment processing the service signal of the PSTN/ISDN.

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| **对偶主权项** | 专利度:19特征度:22 |  |  |
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A~~syste~~methodfor processing a packet domain service signal,~~comprising: an Internet Protocol Multimedia Subsystem (IMS); at least one access gateway function for implementing a function of conversion between a narrowband voice in a circuit domain and an Internet~~when a user makes an incoming call, the method comprising: upon receiving a Session Initiation Protocol (SIP) request message, triggering, by a Call Session Control Function (CSCF) in a home domain of a called user, a service according to user subscription information, and sending a first message to a first application server; upon receiving the first message, implementing, by the first application server, service control of a Public Switched Telephone Network (PSTN)/Integrated Services Digital Network (ISDN), and sending a second message to the CSCF; upon receiving the second message, implementing, by the CSCF, connection control and routing, and sending a Session InitiationProtocol (SIP)~~media flow in a packet domai~~request message to an access gateway control function; upon receiving the SIP request message, locating, by the access gateway control function, an~~d~~a~~function of conversion between user interface signalling in~~ccess gateway function that a called user accesses and a user port according to a called user identity, converting the SIP request message to a third message, and notifying the access gateway function to send an incoming call signal to a user equipment processing a service signal of the PSTN/ISDN; wherein the service control of the PSTN/ISDN implemented bythe~~c~~fir~~cuit domain an~~st application server comprises control of an extended~~c~~val~~l control signalling in the packet domain; and at least one access gateway control function for implementing access management and call~~ue-added service; wherein, upon receiving the SIP request message, the access gateway control function determines whether a basic service and a supplementary service of the PSTN/ISDN are triggered; wherein, if the basic service and the supplementary service are triggered, the access gateway control function controls the basic service and the supplementary service that are triggered, and determines whether to carry out the session control again for the incoming call; wherein, if determining to carry out the sessioncontrolagainfor the~~access gateway function, and enabling the user equipment which accesses~~incoming call, the access gateway control function sends an SIP request message to the CSCF, and the CSCF continues to implement the session control again; wherein, if determining not to carry out the session control again for the incoming call, the incoming call is terminated; and wherein, if the basic service and the supplementary service are not triggered,the access gateway control function~~through the~~locates anaccess gateway function t~~o access a Call Session Control Function (CSCF) in the IMS~~hat a called user accesses and a user port according to the called user identity, converts the SIP request message to the third message, and notifies the access gateway function to send an incoming call signal to a user equipment processing the service signal of the PSTN/ISDN.

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| **被引用** | 6 | **自引用** | 1 | **公司数** | 5 | **国家数** | 1 | **影响力** | 0.45 |

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| **同族数** | 8 | **国家数** | 4 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Encoding method and apparatus for frame synchronization signal**

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| **公开号** | [US7801089](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7801089&sv=7adbe0805c5a9279cbb9d56aba873bab) | **公开日** | 2010/09/21 |
| **申请号** | 12/757,844 | **申请日** | 2010/04/09 |
| **授权日** | 2010/09/21 | **优先日** | 2007/10/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Berggren; Fredrik | Popovic; Branislav |
| **国际 主分类** | H04B 7/216 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| An encoding method for a frame synchronization signal includes: encoding a predetermined intermediate variable corresponding to a cell ID or cell group ID to obtain short codes corresponding to the cell ID or cell group ID; and generating SCH codewords according to the said short codes, instead of directly encoding the cell ID or cell group ID, thereby ensuring that a first short code in each generated S-SCH codeword is larger than a second short code, or a first short code in each generated S-SCH codeword is smaller than a second short code, and a short code distance thereof is relatively small, so as to enhance the reliability of the frame synchronization. An encoding apparatus for a frame synchronization signal is further provided. |

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| **主权项** | 专利度:18特征度:16 |  |  |
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An encoding method for a frame synchronization signal in a communication system, comprising: encoding a predefined intermediate variable corresponding to a cell identifier (ID) or cell group ID so as to obtain short codes corresponding to the cell ID or cell group ID; generating secondary synchronization channel (S-SCH) codewords according to the short codes, wherein, in each generated S-SCH codeword, a first short code is larger than a second short code, or, in each generated S-SCH codeword, a first short code is smaller than a second short code, and a short code distance thereof is all smaller than or equal to a predefined threshold value; and utilizing the S-SCH codewords in the communication system, the S-SCH codewords representing S-SCH signals.

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| **对偶主权项** | 专利度:18特征度:6 |  |  |
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An encoding method for a frame synchronization signal in a communication system, comprising:encoding a predefined intermediate variable corresponding to a cell identifier (ID) or cell group ID so as to obtain short codes corresponding to the cell ID or cell group ID;~~and~~generating secondary synchronization channel (S-SCH) codewords according to the short codes, wherein, in each generated S-SCH codeword, a first short code is larger than a second short code, or, in each generated S-SCH codeword, a first short code is smaller than a second short code, and a short code distance thereof is all smaller than or equal to a predefined threshold value; and utilizing the S-SCH codewords in the communication system, the S-SCH codewords representing S-SCH signals.

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| **被引用** | 14 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 20 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Communication system, mobility management network element and method for processing resource**

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| **公开号** | [US7801083](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7801083&sv=b3a25aaac67dc85ff563f09b357a17ab) | **公开日** | 2010/09/21 |
| **申请号** | 12/430,409 | **申请日** | 2009/04/27 |
| **授权日** | 2010/09/21 | **优先日** | 2008/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for processing resource, a communication system, and a mobility management network element are provided. The method includes: receiving, by a mobility management network element in a packet switched (PS) network, a Release Request message sent by an access network of the PS network or a Handoff Complete message sent by a circuit switched (CS) network when a user equipment (UE) is handed over from the PS network to the CS network; and processing, by the mobility management network element of the PS network, resources of the UE in the PS network. Thus, the processing of resources of the UE in the PS network is achieved when the UE is handed over from the PS network to the CS network. A communication system and a mobility management network element are also provided. |

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| **主权项** | 专利度:13特征度:24 |  |  |
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A method for processing resources comprising: receiving, by a mobility management network element of a packet switched (PS) network, one of (a) a Release Request message sent by an access network of the PS network and (b) a Handoff Complete message sent by a circuit switched (CS) network when a user equipment (UE) is handed over from the PS network to the CS network, and processing resources of the UE in the PS network; wherein the receiving, by the mobility management network element of the PS network, the Handoff Complete message sent by the CS network specifically comprises at least one of: if an interworking solution function (IWS) network element between the CS network and the PS network is integrated with an access network element of the CS network, sending, by the access network element of the CS network, the Handoff Complete message to the mobility management network element of the PS network after receiving the Handoff Complete message sent by the UE; if the IWS network element between the CS network and the PS network is integrated with the mobility management network element of the PS network, sending, by a mobility management network element of the CS network, a Clear Command message to the mobility management network element of the PS network after receiving the Handoff Complete message sent by an access network element of the CS network; if the IWS between the CS network and the PS network is an independent network element, sending, by a mobility management network element of the CS network, a Clear Command message to the IWS network element after receiving the Handoff Complete message sent by an access network element of the CS network; and sending, by the IWS network element, the Handoff Complete message to the mobility management network element of the PS network; and if the IWS network element between the CS network and the PS network is integrated with a mobility management network element of the CS network, sending, by the mobility management network element of the CS network, the Handoff Complete message to the mobility management network element of the PS network after receiving the Handoff Complete message sent by an access network element of the CS network.

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| **对偶主权项** | 专利度:19特征度:12 |  |  |
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A method for processing resources comprising:receiving, by a mobility management network element of a packet switched (PS) network, one of (a) a Release Request message sent by an access network of the PS network and (b) a Handoff Complete message sent by a circuit switched (CS) network when a user equipment (UE) is handed over from the PS network to the CS network, andprocessing resources of the UE in the PSnetwork; wherein the receiving, by the mobility management network element of the PS network, the Handoff Complete message sent by the CS network specifically comprises at least one of: if an interworking solution function (IWS) network element between the CS network and the PS network is integrated with an access network element of the CS network, sending, by the access network element of the CS network, the Handoff Complete message to the mobility management network element of the PS network after receiving the Handoff Complete message sent by the UE; if the IWS network element between the CS network and the PS network is integrated with the mobility management network element of the PS network, sending, by a mobility management network element of the CS network, a Clear Command message to the mobility management network element of the PS network after receiving the Handoff Complete message sent by an access network element of the CS network; if the IWS between the CS network and the PS network is an independent network element, sending, by a mobility management network element of the CS network, a Clear Command message to the IWS network element after receiving the Handoff Complete message sent by an access network element of the CS network; and sending, by the IWS network element, the Handoff Complete message to the mobility management network element of the PS network; and if the IWS network element between the CS network and the PS network is integrated with a mobility management network element of the CS network, sending, by the mobility management network element of the CS network, the Handoff Complete message to the mobility management network element of the PS network after receiving the Handoff Complete message sent by an access network element of the CSnetwork.

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| **被引用** | 14 | **自引用** | 2 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.9 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for binding redundancy versions with a system frame number and subframe numbers**

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| **公开号** | [US7801037](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7801037&sv=e5d83e3b51d6f26e753d630d889e6f58) | **公开日** | 2010/09/21 |
| **申请号** | 12/771,972 | **申请日** | 2010/04/30 |
| **授权日** | 2010/09/21 | **优先日** | 2008/09/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wang; Fan |
| **国际 主分类** | H04L 12/56 | **优先 国家** | CN |
| **代理** | Leydig, Voit & Mayer, Ltd. |

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| **摘要** |  |
| A method and apparatus for binding Redundancy Versions (RVs) with a System Frame Number (SFN) and subframe numbers are disclosed. The method includes: choosing any five (5) continuous subframes within a transmission window of a System Information (SI-x) message according to the subframe numbers of an SFN; and binding the SFN and subframe numbers of the five (5) continuous subframes with RVs of the SI-x message. Because RVs are bound with an SFN and subframe numbers, when a transmission window of an SI-x message is longer than or equal to 5 ms, system frames and subframes are bound with RVs of the SI-x message so that the RV retransmission of the SI-x message is guaranteed. |

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| **主权项** | 专利度:13特征度:11 |  |  |
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A method for binding redundancy versions (RVs) with a system frame number (SFN) and subframe numbers, comprising:choosing five continuous subframes within a transmission window of a system information (SI-x) message according to subframe numbers of an SFN; andbinding RVs of the SI-x message with the SFN and subframe numbers of the five continuous subframes.

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| **对偶主权项** | 专利度:13特征度:12 |  |  |
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A method for binding redundancy versions (RVs) with a system frame number (SFN) and subframe numbers, comprising: choosing five continuous subframes within a transmission window of a system information (SI-x) message according to subframe numbers of an SFN; and binding RVs of the SI-x message with the SFN and subframe numbers of the five continuous subframes.

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| **被引用** | 10 | **自引用** | 2 | **公司数** | 3 | **国家数** | 2 | **影响力** | 2.38 |

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| **同族数** | 15 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for user terminal accessing home network quickly in wireless local area network**

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| **公开号** | [US7778637](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7778637&sv=14900d0e1bb65889a6c3dad5637c13c5) | **公开日** | 2010/08/17 |
| **申请号** | 11/262,510 | **申请日** | 2005/10/28 |
| **授权日** | 2010/08/17 | **优先日** | 2003/08/14 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** |  |

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| **摘要** |  |
| The present invention discloses a method for a user terminal in a Wireless Local Area Network (WLAN) quickly accessing its home network. Pre-store in each user terminal, respectively, the identifications of all the WLANs with direct connections to the home network of the corresponding user terminal. For a user terminal that is in an area covered by more than one WLAN, compare the identification of each of the detected WLANs with the WLAN identifications stored in the current user terminal. A successful matching between the identification of a detected WLAN and a pre-stored WLAN identification then means that the home network of the current user terminal is connected with the corresponding WLAN access network and can be accessed via this WLAN. If a plurality of detected WLAN identifications match the stored identifications, select in accordance with a pre-defined selecting rule one of the corresponding WLANs and get accessed via the selected WLAN. This method enables a user terminal covered by more than one WLAN to find quickly a WLAN access network directly connected with its home network and to access the home network via this WLAN. |

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| **主权项** | 专利度:18特征度:14 |  |  |
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A method for~~a~~user terminal accessing~~a Home Public Land Mobile Network (HPLMN) of the user terminal via a Wireless Local Area Network (WLAN), the method comprises: obtaining identifications of WLANs detected by the user terminal, wherein~~thehome network quickly in Wireless Local Area Network (WLAN), comprising: pre-storing in each user terminal the identification information of the WLANs directly connecting with the home network of the user terminal, respectively, the method comprises as well the steps of: a. The current WLANuser terminal~~is~~covered by more than one WLAN~~, the more than one WLAN is inter-working with a 3GPP system which comprises a plurality of Public Land Mobile Networks, one of the plurality of Public Land Mobil~~obtaining the identifications of all the~~N~~det~~works functions as the HPLMN of the user terminal, and the other of the plurality of Public Land Mobile Networks function as Visited Public Land Mobile Networks (VPLMN) of the user terminal; selecting an~~ected WLANs, selecting one from all WLAN identifications which have not been compared, and then comparing the selected WLANidentification~~from~~withthe~~identifications of the detected WLANs; comparing~~pre-stored WLAN identifications; b. Determining whetherthe selectedWLANidentification~~with~~matches one of thepre-storedWLANidentifications~~of the WLANs directly connecting with the HPLMN of the user terminal; and the user terminal accessing its HPLMN via t~~, if yes, the selected WLAN is a matched WLAN, the current WLAN user terminal will access its own home network via the access network of the matchedWLAN~~identified by the selected identification that matc~~, and then end the current process of access with selection; otherwise go to step c; c. Determining whethe~~s~~rthe~~pre-stored identifications of the WLANs directly connecting with the HPLMN of the user terminal~~re is at least one detected WLAN identification which has not been compared, if yes, return to step a; otherwise, end the current process of access with selection.

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| **对偶主权项** | 专利度:15特征度:7 |  |  |
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A method for user terminal accessing the home network quickly in Wireless Local Area Network (WLAN), comprising: pre-storing in each user terminal the identification information of the WLANs directly connecting with the home network of the user terminal, respectively, the method comprises as well the steps of: a. The current WLAN user terminal covered by more than one WLAN obtaining the identifications of all the detected WLANs, selecting one from all WLAN identifications which have not been compared, and then comparing the selected WLAN identification with the pre-stored WLAN identifications; b. Determining whether the selected WLAN identification matches one of the pre-stored WLAN identifications, if yes, the selected WLAN is a matched WLAN, the current WLAN user terminal will access its own home network via the access network of the matched WLAN, and then end the current process of access with selection; otherwise go to step c; c. Determining whether there is at least one detected WLAN identification which has not been compared, if yes, return to step a; otherwise, end the current process of access with selection.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.17 |

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| **同族数** | 12 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Communication system, mobility management network element and method for processing resources**

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| **公开号** | [US7764652](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7764652&sv=a485e6ffe60868f67f6b85a4e2f2b2e7) | **公开日** | 2010/07/27 |
| **申请号** | 12/684,625 | **申请日** | 2010/01/08 |
| **授权日** | 2010/07/27 | **优先日** | 2008/04/30 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Wu; Wenfu |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method for processing a resource receiving, by a mobility management network element of a packet switched (PS) network, a Release Request message sent by an access network of the PS network when a user equipment (UE) is handed over from the PS network to a CS network. After receiving the Release Request message, resources of the UE are processed in the PS network. |

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| **主权项** | 专利度:13特征度:24 |  |  |
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A method for processing a resource, the method comprising: receiving, by a mobility management network element of a packet switched (PS) network, a Release Request message sent by an access network of the PS network when a user equipment (UE) is handed over from the PS network to a circuit switched (CS) network; and after receiving the Release Request message, processing resources of the UE in a core network of the PS network, wherein the processing comprises deleting, by the mobility management network element of the PS network, one part of bearers and suspending another part of bearers according to different bearer types; wherein the Release Request message further comprises indication information indicating that the Release Request message is caused by handing over the UE to the CS network, and wherein the mobility management network element of the PS network processes the resources of the UE in the PS network according to the indication information.

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| **对偶主权项** | 专利度:17特征度:19 |  |  |
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A method for processing a resource, the method comprising:receiving, by a mobility management network element of a packet switched (PS) network, a Release Request message sent by an access network of the PS network when a user equipment (UE) is handed over from the PS network to acircuit switched (CS)network; andafter receiving the Release Request message, processing resources of the UE in~~the PS network~~a core network of the PS network, wherein the processing comprises deleting, by the mobility management network element of the PS network, one part of bearers and suspending another part of bearers according to different bearer types; wherein the Release Request message further comprises indication information indicating that the Release Request message is caused by handing over the UE to the CS network, and wherein the mobility management network element of the PS network processes the resources of the UE in the PS network according to the indication information.

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| **被引用** | 13 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.7 |

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| **同族数** | 12 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus of establishing a synchronization signal in a communication system**

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| **公开号** | [US7751490](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7751490&sv=cf24f136b0b518fb3e0baa5c388b7c2e) | **公开日** | 2010/07/06 |
| **申请号** | 12/607,790 | **申请日** | 2009/10/28 |
| **授权日** | 2010/07/06 | **优先日** | 2007/05/02 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Popovic; Branislav M. |
| **国际 主分类** | H04K 1/10 | **优先 国家** | SE |
| **代理** | Slater & Matsil, L.L.P. |

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| **摘要** |  |
| A method of establishing a synchronization signal in a communication system is disclosed. A set of discrete Fourier frequency coefficients is defined and transformed into a discrete time representation, the discrete time representation being particularly useful as a synchronization signal. According to example embodiments of the invention, signal symmetry is exploited. Preferably, the center frequency, also referred to as DC subcarrier, is not used for transmission. The invention also concerns a transmitter and receiver of a communication system. |

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| **主权项** | 专利度:15特征度:17 |  |  |
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A method of establishing a synchronization signal for transmission in a communication system, the method comprising: defining a set of discrete Fourier frequency coefficients, transforming the set of discrete Fourier frequency coefficients into a discrete time representation, and using the discrete time representation as the synchronization signal in the communication system, wherein the set of discrete Fourier frequency coefficients represents a mapping of a centrally symmetric number sequence onto discrete Fourier frequency coefficients, and the centrally symmetric number sequence, du[n], is obtained by puncturing a central element of a Zadoff-Chu sequence of odd length L+1, so that du[n] is given by ff×f×× ##EQU00012## where WN=exp(-j2π/N), for positive integer N.

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| **对偶主权项** | 专利度:19特征度:10 |  |  |
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A method of establishing a synchronization signal for transmission in a communication system, the method comprising:defining a set of discrete Fourier frequency coefficients,transforming the set of discrete Fourier frequency coefficients into a discrete time representation, andusing the discrete time representation as the synchronization signal in the communication system,wherein the set of discrete Fourier frequency coefficients represents a mapping of a centrally symmetric number sequence onto discrete Fourier frequency coefficients, and the centrally symmetric number sequence, du[n], is obtained by puncturing a central element of a Zadoff-Chu sequence of odd length L+1, so that du[n] is given by ff×f××

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| **被引用** | 11 | **自引用** | 9 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.12 |

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| **同族数** | 19 | **国家数** | 12 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and apparatus for controlling power of uplink physical channel**

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| **公开号** | [US7729717](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7729717&sv=34fb3a5383788395f4728ca5aa5afca6) | **公开日** | 2010/06/01 |
| **申请号** | 11/776,608 | **申请日** | 2007/07/12 |
| **授权日** | 2010/06/01 | **优先日** | 2006/08/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Xu; Liang |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Ladas & Parry LLP |

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| **摘要** |  |
| A method for controlling power of an uplink physical channel includes: computing a relative gain factor in a compressed mode; correcting the relative gain factor to obtain a corrected relative gain factor; generating a gain factor in the compressed mode according to the corrected relative gain factor; controlling power of the uplink physical channel according to the gain factor in the compressed mode generated. In embodiments of the present invention, after being computed, the relative gain factor in the compressed mode is corrected, then the gain factor in the compressed mode is generated according to the corrected relative gain factor. Thus, an accurate gain factor may be acquired for controlling the power of the uplink physical channel. |

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| **主权项** | 专利度:25特征度:8 |  |  |
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A method for controlling power of an uplink physical channel, comprising: computing a relative gain factor in a compressed mode; correcting the relative gain factor to obtain a corrected relative gain factor; generating a gain factor in the compressed mode according to the corrected relative gain factor; and controlling power of the uplink physical channel according to the generated gain factor in the compressed mode.

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| **对偶主权项** | 专利度:25特征度:7 |  |  |
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A method for controlling power of an uplink physical channel, comprising:computing a relative gain factor in a compressed mode;correcting the relative gain factor to obtain a corrected relative gain factor;generating a gain factor in the compressed mode according to the corrected relative gain factor; andcontrolling power of the uplink physical channel according to the generated gain factor in the compressed mode.

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| **被引用** | 23 | **自引用** | 10 | **公司数** | 2 | **国家数** | 2 | **影响力** | 3.48 |

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| **同族数** | 19 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Optimized interaction method of user terminal selecting access mobile network in wireless local area network**

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| **公开号** | [US7706793](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7706793&sv=567a6f2c04ef12de59f3911d489e5f12) | **公开日** | 2010/04/27 |
| **申请号** | 10/566,436 | **申请日** | 2004/07/23 |
| **授权日** | 2010/04/27 | **优先日** | 2003/07/31 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Finnegan, Henderson, Farabow, Garrett & Dunner LLP |

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| **摘要** |  |
| The present invention relates to an optimized interaction method of a WLAN user terminal selecting an access mobile communication network. In this method, after a wireless connection between the WLAN user terminal and a WLAN access network is established, the WLAN access network or the WLAN user terminal initiates an access authentication procedure, and the WLAN access network sends a user identity request message to the WLAN user terminal. After receiving the user identity request message, the WLAN user terminal determines network selection information to be currently carried according to a detecting result of whether the WLAN access network is changed or according to user selection information, and returning a message containing the determined network selection information to the WLAN access network. The WLAN access network then judges whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected; if so, sends an access authentication request from the WLAN user terminal to a mobile communication operation network indicated in the network selection information, otherwise, the network sends a notification signaling to the WLAN user terminal, the WLAN user terminal completes subsequent operations according to contents in the notification signaling. With the present invention, when being accessed to a WLAN that is connected to multiple mobile communication operation networks, the WLAN user terminal is capable of selecting an optimal mobile communication operation network to access according to the requirements. |

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| **主权项** | 专利度:29特征度:20 |  |  |
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An optimized interaction method of a Wireless Local Area Network (WLAN) WLAN user terminal selecting an access mobile communication network, comprising the steps of: a. after a wireless connection between the WLAN user terminal and a WLAN access network is established, the WLAN access network or the WLAN user terminal initiating an access authentication procedure, and the WLAN access network sending a user identity request message to the WLAN user terminal; b. after receiving the user identity request message, the WLAN user terminal determining network selection information to be currently carried according to a detecting result of whether the WLAN access network is changed or according to user selection information, and returning a message containing the determined network selection information to the WLAN access network; and c. the WLAN access network judging whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected; if so, the WLAN access network sending an access authentication request from the WLAN user terminal to a mobile communication operation network indicated in the network selection information, otherwise, the WLAN access network sending a notification signaling to the WLAN user terminal, the WLAN user terminal completing subsequent operations according to contents in the notification signaling.

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| **对偶主权项** | 专利度:29特征度:12 |  |  |
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An optimized interaction method of a Wireless Local Area Network (WLAN) WLAN user terminal selecting an access mobile communication network, comprising the steps of: a. after a wireless connection between the WLAN user terminal and a WLAN access network is established, the WLAN access network or the WLAN user terminal initiating an access authentication procedure, and the WLAN access network sending a user identity request message to the WLAN user terminal; b. after receiving the user identity request message, the WLAN user terminal determining network selection information to be currently carried according to a detecting result of whether the WLAN access network is changed or according to user selection information, and returning a message containing the determined network selection information to the WLAN access network; and c. the WLAN access network judging whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected; if so,the WLAN access networksending an access authentication request from the WLAN user terminal to a mobile communication operation network indicated in the network selection information, otherwise, theWLAN accessnetwork sending a notification signaling to the WLAN user terminal, the WLAN user terminal completing subsequent operations according to contents in the notification signaling.

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| **被引用** | 12 | **自引用** | 0 | **公司数** | 4 | **国家数** | 3 | **影响力** | 0.81 |

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| **同族数** | 12 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for channel estimation in orthogonal frequency division multiplexing system and device thereof**

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| **公开号** | [US7688907](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7688907&sv=f953bd13021285f582763b5170cdb1d8) | **公开日** | 2010/03/30 |
| **申请号** | 11/652,758 | **申请日** | 2007/01/12 |
| **授权日** | 2010/03/30 | **优先日** | 2004/06/01 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Dang; Shujun |
| **国际 主分类** | H04L 27/28 | **优先 国家** | CN |
| **代理** | Darby & Darby |

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| **摘要** |  |
| A method for channel estimation in an Orthogonal Frequency Division Multiplexing (OFDM) system, including: a transmitter determining a distribution density of pilot OFDM symbols according to the maximum Doppler frequency shift supported by the system, and transmitting pilot OFDM symbols and data OFDM symbols based on the distribution density of the pilot OFDM symbols; a receiver estimating frequency-domain channel information of the data OFDM symbols according to the received pilot OFDM symbols. The invention solves the problem of a large performance loss at a high-delay channel and a system with rapidly varying channel. The invention offers a better performance of channel estimation while the channel environment is varying rapidly, enhances the performance of a high-delay channel, makes a data communication system more suitable to a changing environment and makes better performance to the practical channel estimation, so that the data transmission efficiency of the system is increased. |

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| **主权项** | 专利度:17特征度:12 |  |  |
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A method for channel estimation in an Orthogonal Frequency Division Multiplexing (OFDM) system, comprising: determining a distribution density of pilot OFDM symbols according to the maximum Doppler frequency shift supported by the system, setting a relation between the length of data part of a pilot OFDM symbol Np,data and the length of data part of a data OFDM symbol Nd,data as the following formula: ××××× ##EQU00009## and transmitting pilot OFDM symbols and data OFDM symbols based on the distribution density of the pilot OFDM symbols by a transmitter; and estimating frequency-domain channel information of the data OFDM symbols according to the received pilot OFDM symbols by a receiver.

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| **对偶主权项** | 专利度:21特征度:9 |  |  |
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A method for channel estimation in an Orthogonal Frequency Division Multiplexing (OFDM) system, comprising: determining a distribution density of pilot OFDM symbols according to the maximum Doppler frequency shift supported by the system,setting a relation between the length of data part of a pilot OFDM symbol Np,data and the length of data part of a data OFDM symbol Nd,data as the following formula: ×××××

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| **被引用** | 8 | **自引用** | 0 | **公司数** | 2 | **国家数** | 1 | **影响力** | 0.16 |

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| **同族数** | 8 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method and system for a traditional terminal user to access an IMS domain**

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| **公开号** | [US7643474](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7643474&sv=82379c5515b9ab02a8a957ce1f9c37fc) | **公开日** | 2010/01/05 |
| **申请号** | 11/481,241 | **申请日** | 2006/07/05 |
| **授权日** | 2010/01/05 | **优先日** | 2005/07/05 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Huang; Shibi |
| **国际 主分类** | H04L 12/66 | **优先 国家** | CN |
| **代理** | Rose, P.C.; Conley Rodolph; Grant |

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| **摘要** |  |
| Provided are an implementing method and a communication system for a traditional terminal user accessing an IMS domain. The method allocates an IMS domain user identification including a public identification and a private identification to a traditional terminal user on an AGF entity controlled by an AGCF entity, and establishes a mapping relation between the IMS domain user identification and the line identification of the user. When receiving a command or message for a certain user terminal sent from the AGF entity, the AGCF entity determines the IMS domain user identification of the user according to the mapping relation and sends a corresponding SIP message to the IMS domain. |

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| **主权项** | 专利度:29特征度:25 |  |  |
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A method for a traditional terminal user to access an IP multimedia subsystem domain, comprising the steps of: an access gateway control function entity allocating an IP multimedia subsystem domain user identification comprising a public identification and a private identification to a traditional terminal user on an access gateway function entity controlled by the access gateway control function entity, and establishing a mapping relation between the IP multimedia subsystem domain user identification and a line identification of the user, the line identification being used for determining the access gateway function entity and port corresponding to the user; and when receiving at least one of a command and a message for a certain user terminal sent from the access gateway function entity, the access gateway control function entity determining the IP multimedia subsystem domain user identification of the user according to the mapping relation and sending a corresponding SIP message to a call session control function entity in the IP multimedia subsystem domain; or when receiving a SIP message sent from the call session control function entity in the IP multimedia subsystem domain, the access gateway control function entity determining the line identification of the user according to the mapping relation and sending a corresponding at least one of a command and a message to the access gateway function entity based on the control protocol of the access gateway function entity, and the at least one of a command and a message being converted into an analog line signaling by the access gateway function entity and being transmitted to the user terminal.

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| **对偶主权项** | 专利度:27特征度:31 |  |  |
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A method for a traditional terminal user to access an I~~MS~~P multimedia subsystemdomain, comprising the steps of: a~~llocating an IMS~~n access gateway control function entity allocating an IP multimedia subsystemdomain user identification comprising a public identification and a private identification to a traditional terminal user on an~~AGF entity controlled by an AGCF~~access gateway function entity controlled by the access gateway control functionentity, and establishing a mapping relation between the I~~MS~~P multimedia subsystemdomain user identification and~~the~~aline identification of the user, the line identification being used for determining the~~AGF~~access gateway functionentity and port corresponding to the user; and when receivingat least one ofa command~~or~~and amessage for a certain user terminal sent from the~~AGF entity, the AGCF~~access gateway function entity, the access gateway control functionentity determining the I~~MS~~P multimedia subsystemdomain user identification of the user according to the mapping relation and sending a corresponding SIP message to~~the IMS domain; or when receiving a SIP message sent from the IMS domain, the AGCF~~a call session control function entity in the IP multimedia subsystem domain; or when receiving a SIP message sent from the call session control function entity in the IP multimedia subsystem domain, the access gateway control functionentity determining the line identification of the user according to the mapping relation and sending a correspondingat least one of acommand~~or~~and amessage to the~~AGF~~access gateway functionentity based on the control protocol of the~~AGF entity, and the~~access gateway function entity, and the at least one of acommand~~or~~and amessage being converted into an analog line signaling by the~~AGF~~access gateway functionentity and being transmitted to the user terminal.

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| **被引用** | 5 | **自引用** | 1 | **公司数** | 3 | **国家数** | 1 | **影响力** | 0.25 |

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| **同族数** | 10 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for releasing a service tunnel in a wireless local area network**

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| **公开号** | [US7633918](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7633918&sv=4482e7ef1a922090c9936fd328dcc986) | **公开日** | 2009/12/15 |
| **申请号** | 11/481,057 | **申请日** | 2006/07/06 |
| **授权日** | 2009/12/15 | **优先日** | 2004/01/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Darby & Darby P.C. |

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| **摘要** |  |
| The present invention discloses a method for releasing a service tunnel in WLAN. This method comprises: an originating end point that desires to release a service tunnel in a WLAN sending a release tunnel request to a corresponding end point of the service tunnel; the corresponding end point returning a release acknowledgement to the originating end point, and releasing resources of the service tunnel, a Packet Data Gateway (PDG) sends a tunnel disconnection report to a service authentication and authorization unit, and upon receiving the tunnel disconnection report, the service authentication and authorization unit updates self-stored information related to the released service tunnel. The method in accordance with the present invention makes it possible to implement the release of a designated service tunnel and release or update the related resources and information in time. |

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| **主权项** | 专利度:23特征度:22 |  |  |
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A method for releasing a service tunnel in a wireless local area network (WLAN), comprising: an originating end point in the form of user equipment (UE), which desires to release a service tunnel in the WLAN, sending a release tunnel request to a corresponding end point in the form of a Packet Data Gateway (PDG) of the service tunnel to be released; the corresponding end point returning a release acknowledgement to the originating end point and releasing resources of the service tunnel; the PDG sending a tunnel disconnection report to a service authentication and authorization unit; and upon receiving the tunnel disconnection report, the service authentication and authorization unit updating self-stored related service information and/or status of the subscriber.

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| **对偶主权项** | 专利度:22特征度:8 |  |  |
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A method for releasing a service tunnel in awireless local area network (WLAN), comprising: an originating end pointin the form of user equipment (UE),which desires to release a service tunnel in the WLAN,sending a release tunnel request to a corresponding end pointin the form of a Packet Data Gateway (PDG)of the service tunnel to be released; the corresponding end point returning a release acknowledgement to the originating end point and releasing resources of the service tunnel; the PDG sending a tunnel disconnection report to a service authentication and authorization unit; and upon receiving the tunnel disconnection report, the service authentication and authorization unit updating self-stored related service information and/or status of the subscriber.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.7 |

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| **同族数** | 8 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for processing requests for location**

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| **公开号** | [US7623874](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7623874&sv=6456c1c26b1b5a0def30a6ea4c19caa8) | **公开日** | 2009/11/24 |
| **申请号** | 11/488,444 | **申请日** | 2006/07/17 |
| **授权日** | 2009/11/24 | **优先日** | 2004/02/11 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Darby & Darby PC |

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| **摘要** |  |
| The present invention discloses a method for processing requests for location, which comprises: A target UE sending a request for location to the Location Service (LCS) system and asking the LCS system to provide a requestor with the location information of the target UE; the LCS system positioning the target UE, acquiring the location estimate of the target UE, and deciding whether it is needed to hide the real identity of the target UE, and if yes, the LCS system sending the pseudonym and location information of the target UE to the requestor; otherwise, the LCS system sending the real identity and location information of the target UE to the requestor. The invention makes it possible for the LCS system to decide whether to hide the real identity of the target UE according to the user's requirement, improving the flexibility of the location service. As the LCS system is able to hide the real identity of the target UE, the security of using the location service is enhanced. |

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| **主权项** | 专利度:20特征度:14 |  |  |
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A method for processing requests for location, the method comprises: a location service (LCS) system receiving a request for location from a target user's equipment (UE), and to being requested to provide a requestor with the location information of the target UE; the LCS system positioning the target UE and obtaining the location information of the target UE; and the LCS system determining whether the real identity of the target UE should be concealed by (a) determining whether the request for location sent by the target UE carries a pseudonym designated by the target UE, if yes, sending the location information and a pseudonym of the target UE to the requestor; and (b) otherwise, send the requestor the real identity and location information of the target UE.

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| **对偶主权项** | 专利度:21特征度:10 |  |  |
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A method for processing requests for location, the method comprises: a~~target user's equipment (UE) sending a request for location to a location service (LCS) system, and asking the LCS sy~~location service (LCS) system receiving a request for location from a target user's equipment (UE), and to being requeste~~m~~dto provide a request~~e~~or with the location information of~~a~~thetarget UE; the LCS system positioning the target UE and obtaining the location information of the target UE;andthe LCS system determining whether the real identity of the target UE should be concealed~~, if yes, sending the location information and a pseudonym of the target UE to a requester~~by (a) determining whether the request for location sent by the target UE carries a pseudonym designated by the target UE, if yes, sending the location information and a pseudonym of the target UE to the requestor; and (b) otherwise, send the requestor the real identity and location information of the target UE.

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.26 |

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| **同族数** | 14 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of processing a periodic location request**

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| **公开号** | [US7599701](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7599701&sv=e2ccfe14ccf9ff039f7ddbb174821f31) | **公开日** | 2009/10/06 |
| **申请号** | 11/266,635 | **申请日** | 2005/11/03 |
| **授权日** | 2009/10/06 | **优先日** | 2003/11/20 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| Disclosed is a method of processing a periodic location request when a location service system receives the periodic location request sent by a location service (LCS) client in relation to target user equipment and confirms the periodic location request as a periodic location request. The location service system allocates a reference number for the periodic location request based on a predefined rule. After locating the target user equipment, location service system returns a location result of the target user equipment, which carries the reference number, to the LCS client. According to the reference numbers allocated by the location service system, the LCS client can associate a location result of the target user equipment returned by the location service system with the periodic location request initiated by this LCS client, so as to guarantee processing normality of the periodic location request. In addition, with the reference number, the LCS client can explicitly identify which periodic location request should be cancelled when the LCS client initiates a cancellation procedure. |

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| **主权项** | 专利度:11特征度:17 |  |  |
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A method of processing a location request received and confirmed by a location service system to be a periodic location request, the periodic location request having been initiated by a location service (LCS) client in relation to target user equipment (UE), the method comprising: (A) the location service system allocating a reference number that identifies the periodic location request based on a predefined rule; (B) after locating the target UE, the location service system returning a location result of the target UE to the LCS client, the location result carrying the reference number; the LCS client transmitting a cancellation request for the periodic location request to the location service system; and the location service system canceling the periodic location request corresponding to the reference number.

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| **对偶主权项** | 专利度:11特征度:22 |  |  |
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A method of processing a location request received and confirmed by a location service system to be a periodic location request, the periodic location request having been initiated by a location service (LCS) client in relation to target user equipment (UE), the method comprising~~the steps of~~: (A) the location service system allocating a reference number~~for~~that identifiesthe periodic location request based on a predefined rule;~~and~~(B) after locating the target UE, the location service system returning a location result of the target UE to the LCS client, the location result carrying~~said~~the reference number; the LCS client transmitting a cancellation request for the periodic location request to the location service system; and the location service system canceling the periodic location request corresponding to thereference number.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 13 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of providing location service for WLAN user**

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| **公开号** | [US7529550](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7529550&sv=eb9298a742c8a7c46eee84ff4162c2ff) | **公开日** | 2009/05/05 |
| **申请号** | 11/178,083 | **申请日** | 2005/07/08 |
| **授权日** | 2009/05/05 | **优先日** | 2003/01/10 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Li; Zhiming |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| A method of providing location service for Wireless Local Area Network (WLAN) subscribers. With a location subsystem preset in the WLAN and the WLAN subscribers accessing to a 3G network, the method comprises at least the steps of the WLAN location subsystem detecting whether it has received a location request from an LCS client in the 3G network, if yes, locating the target UE based on the received location request and returning the location result to the Gateway Mobile Location Center (GMLC), which will forward the location result to the LCS client; otherwise, continuing to detect whether it receives the location request. The solution provided by the method makes it possible for LCS clients to apply via the 3G network the LCS in the WLAN inter-working with the 3G network. |

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| **主权项** | 专利度:14特征度:36 |  |  |
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A method of providing location service for Wireless Local Area Network (WLAN) subscribers with a location subsystem preset in a WLAN and the WLAN subscribers having access to a 3rd Generation (3G) network via the WLAN location subsystem, the method comprising: a) the WLAN location subsystem detecting whether a location request is received from a Location Service (LCS) client in the 3G network, if yes, going to b), otherwise repeating a); b) the WLAN location subsystem locating a target User Equipment (UE) in the WLAN based on the received location request and returning a location result of the target UE in the WLAN to a Gateway Mobile Location Center (GMLC); c) the GMLC forwarding the locating result to the LCS client; wherein the WLAN location subsystem and the GMLC are connected with an Authentication, Authorization, Accounting (AAA) Server, respectively, the method further comprising before a): a1) the LCS client sending the location request to the AAA Server; a2) the AAA Server obtaining a subscription LCS information of the target UE, and detecting whether the target UE is permitted to be located based on the subscription LCS information; if yes, going to a3), otherwise returning to the LCS client the location result with error information, and ending; a3) the AAA Server detecting whether the target UE is in an idle state, if not, sending the location request to the WLAN location subsystem and going to a), otherwise going to a4); a4) the AAA Server further detecting whether there has been the location result corresponding to the target UE in the WLAN location subsystem, if yes, going to a5), otherwise sending the location request to the WLAN location subsystem and going to a); a5) the AAA Server detecting whether the AAA Server is permitted to return the location result of the target UE in the WLAN location subsystem, if yes, returning the location result to the LCS client via the GMLC and then ending, otherwise returning to the LCS client the location result with error information, and ending; and, further comprising in b) before the WLAN location subsystem locates the target UE based on the received location request, the WLAN location subsystem detecting whether there has been the location result of the target UE in the WLAN, if not, locating the target UE, storing the location result obtained, then returning the location result to the GMLC, otherwise obtaining the location result existing already in the WLAN location subsystem and returning the location result to the GMLC; wherein the WLAN location subsystem returning the location result to the GMLC comprises the WLAN location subsystem sending via the AAA Server the location result corresponding to the target UE to the GMLC.

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| **对偶主权项** | 专利度:14特征度:17 |  |  |
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A method of providing location service for Wireless Local Area Network (WLAN) subscribers with a location subsystem preset in a WLAN and the WLAN subscribers havingaccessto a 3rd Generation (3G) networkvia the WLAN location subsystem, the method comprising~~the steps of of~~: a) the WLAN location subsystem detecting whether a location request is received from a Location Service (LCS) client in the 3G network, if yes, going to~~Step~~b), otherwise repeating~~Step~~a); b) the WLAN location subsystem locating a target User Equipment (UE)in the WLANbased on the received location request and returning a location resultof the target UE in the WLANto a Gateway Mobile Location Center (GMLC);~~and~~c) the GMLC forwarding the locating result to the LCS client; wherein the WLAN location subsystem and the GMLC are connected with an Authentication, Authorization, Accounting (AAA) Server, respectively, the method further comprising before a): a1) the LCS client sending the location request to the AAA Server; a2) the AAA Server obtaining a subscription LCS information of the target UE, and detecting whether the target UE is permitted to be located based on the subscription LCS information; if yes, going to a3), otherwise returning to the LCS client the location result with error information, and ending; a3) the AAA Server detecting whether the target UE is in an idle state, if not, sending the location request to the WLAN location subsystem and going to a), otherwise going to a4); a4) the AAA Server further detecting whether there has been the location result corresponding to the target UE in the WLAN location subsystem, if yes, going to a5), otherwise sending the location request to the WLAN location subsystem and going to a); a5) the AAA Server detecting whether the AAA Server is permitted to return the location result of the target UE in the WLAN location subsystem, if yes, returning the location result to the LCS client via the GMLC and then ending, otherwise returning to the LCS client the location result with error information, and ending; and, further comprising in b) before the WLAN location subsystem locates the target UE based on the received location request, the WLAN location subsystem detecting whether there has been the location result of the target UE in the WLAN, if not, locating the target UE, storing the location result obtained, then returning the location result to the GMLC, otherwise obtaining the location result existing already in the WLAN location subsystem and returning the location result to the GMLC; wherein the WLAN location subsystem returning the location result to the GMLC comprises the WLAN location subsystem sending via the AAA Server the location result corresponding to the target UE to the GMLC.

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| **被引用** | 2 | **自引用** | 2 | **公司数** | 1 | **国家数** | 1 | **影响力** | 0.1 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of user access authorization in wireless local area network**

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| **公开号** | [US7519036](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7519036&sv=9599a07c6de5ac91560704262a4b4873) | **公开日** | 2009/04/14 |
| **申请号** | 11/260,865 | **申请日** | 2005/10/27 |
| **授权日** | 2009/04/14 | **优先日** | 2003/06/06 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04W 4/00 | **优先 国家** | CN |
| **代理** | Townsend and Townsend and Crew LLP |

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| **摘要** |  |
| The present invention discloses a method of user access authorization in wireless local area networks. The method comprises: when a Wireless Local Area Network (WLAN) user terminal is accessing a WLAN operational network, the WLAN operational network, while authenticating this WLAN user terminal, judging whether to allow this WLAN user terminal to access according to authorization conditions having an impact on the access of this WLAN user terminal, if yes, the WLAN operational network will determine the access rules of this WLAN user terminal according to the said authorization conditions; otherwise, the WLAN operational network will notify the WLAN user terminal about the failure. By adopting the method of the present invention, different users can be controlled to access the network according to different authorization conditions, and be restricted by different access rules after getting accessed. As a result, the access control capability of a wireless local area network is enhanced and the working efficiency of the network is improved. |

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| **主权项** | 专利度:24特征度:24 |  |  |
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A method of user access authorization in a wireless local area network, comprising: when a Wireless Local Area Network (WLAN) user terminal is accessing a WLAN operational network, an authentication procedure including authenticating the WLAN user terminal; an authorization procedure to access the WLAN operational network before a service authorization including: verifying whether to allow the WLAN user terminal to access the WLAN operational network according to authorization conditions, and determining access rules of the WLAN user terminal according to the authorization conditions if the WLAN user terminal is allowed to access the WLAN operational network, wherein the access rules including a limitation rule on the access of the WLAN user terminal to the WLAN operational network, wherein the service authorization determines whether the WLAN terminal user has access to a service; implementing restriction on the access to the WLAN operational network of the WLAN user terminal according to the access rules; sending the determined access rules to one or more than one related entity implementing the access rules so as to implement the restriction on the access of the WLAN user terminal; after the WLAN user terminal sends an access request to the WLAN operational network, the WLAN operational network first performing the legality authentication of the currently accessing WLAN user terminal, if the WLAN user terminal passes the legality authentication, judging whether the WLAN user terminal is allowed to access according to the authorization conditions; and otherwise, sending the information of the access failure to the WLAN user terminal.

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| **对偶主权项** | 专利度:13特征度:5 |  |  |
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A method of user access authorization in a wireless local area network, comprising:~~W~~when a Wireless Local Area Network (WLAN) user terminal is accessing a WLAN operational network,~~the WLAN operational network, while~~an authentication procedure includingauthenticating the WLAN user terminal~~, judging whether to allow the WLAN user terminal to access according to the authorization conditions having an impact on the access of the WLAN user terminal, if yes, determining the access rules of the WLAN user terminal according to the said authorization conditions; otherwise, notifying the WLAN user terminal of the failure~~; an authorization procedure to access the WLAN operational network before a service authorization including: verifying whether to allow the WLAN user terminal to access the WLAN operational network according to authorization conditions, and determining access rules of the WLAN user terminal according to the authorization conditions if the WLAN user terminal is allowed to access the WLAN operational network, wherein the access rules including a limitation rule on the access of the WLAN user terminal to the WLAN operational network, wherein the service authorization determines whether the WLAN terminal user has access to a service; implementing restriction on the access to the WLAN operational network of the WLAN user terminal according to the access rules; sending the determined access rules to one or more than one related entity implementing the access rules so as to implement the restriction on the access of the WLAN user terminal; after the WLAN user terminal sends an access request to the WLAN operational network, the WLAN operational network first performing the legality authentication of the currently accessing WLAN user terminal, if the WLAN user terminal passes the legality authentication, judging whether the WLAN user terminal is allowed to access according to the authorization conditions; and otherwise, sending the information of the access failure to the WLAN user terminal.

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| **被引用** | 12 | **自引用** | 4 | **公司数** | 2 | **国家数** | 2 | **影响力** | 1.75 |

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| **同族数** | 11 | **国家数** | 7 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Method of sending a location report from target user equipment**

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| **公开号** | [US7509132](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7509132&sv=0c9d49f4860a9a8284e0c4dbcdaa8ad9) | **公开日** | 2009/03/24 |
| **申请号** | 11/267,454 | **申请日** | 2005/11/04 |
| **授权日** | 2009/03/24 | **优先日** | 2003/12/22 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Duan; Xiaoqin | Zhang; Wenlin |
| **国际 主分类** | H04W 24/00 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| Disclosed herein is a method useful for target user equipment (UE) sending a location report. When the target UE is located in a first central network (CN) of a location service (LCS) system, the target UE reports the location report to the LCS system. If the target UE does not receive a location report response from the LCS system, when being located in a second CN of LCS system, target UE will continue to report the location report to LCS system. In accordance with one aspect of the disclosed method, the waste of location service system resource is avoided as well as the execution efficiency of location service is increased. In addition, during procedure of change of area event location request, the consequent processing of request thereof is guaranteed to be normal, so that execution efficiency of location service is increased. Moreover, message interaction between the function entities is saved for the exception cases. Accordingly, the waste of public land mobile communication network resource caused by generation of excessive useless messages is avoided. |

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| **主权项** | 专利度:19特征度:11 |  |  |
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A method of sending a location report, the method comprising: (A) sending a first location report to a first central network (CN) of a location service (LCS) system when a target user equipment (UE) is located in the first CN of the LCS system, and if the target UE does not receive a first location report response from the first CN of the LCS system, executing (B); and (B) the target UE recording a failure flag to indicate that the first location report has been sent unsuccessfully, and sending a second location report to a second CN of the LCS system in accordance with the recorded failure flag when the target UE is located in the second CN of the LCS system.

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| **对偶主权项** | 专利度:20特征度:8 |  |  |
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A method of sending a location report, the method comprising~~the steps of~~: (A) sending~~the~~a firstlocation report to~~th~~a first central network (CN) of a location service(LCS)system whenatarget user equipment (UE) is located in~~a~~thefirst~~central network (~~CN~~)~~of~~a location servic~~the~~(~~LCS~~)~~system, and if the target UE does not receive afirstlocation report response from thefirst CN of theLCS system, executing~~step~~(B); and (B)~~continuing to send said location report to the LCS system~~the target UE recording a failure flag to indicate that the first location report has been sent unsuccessfully, and sending a second location report to a second CN of the LCS system in accordance with the recorded failure flagwhen the target UE is located in~~a~~thesecond CN of the LCS system.

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| **被引用** | 6 | **自引用** | 0 | **公司数** | 0 | **国家数** | 1 | **影响力** | 0.0 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method for establishment of a service tunnel in a WLAN**

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| **公开号** | [US7450554](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7450554&sv=f8aae71d4593d12576251be6ee1a6fb4) | **公开日** | 2008/11/11 |
| **申请号** | 11/261,375 | **申请日** | 2005/10/28 |
| **授权日** | 2008/11/11 | **优先日** | 2003/12/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04Q 7/24 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| Disclosed herein is a method for the establishment of a service tunnel in a wireless local area network (WLAN). The method includes a service authentication authorization unit making authentication and authorization to a WLAN user terminal currently requesting a service, and judging whether the authentication and authorization is successful. If successful, the method includes generating service authorization information that includes a shared communication key used for communication between the WLAN user terminal and a destination packet data gateway (PDG), and otherwise ending the procedure. The method further includes the service authentication authorization unit sending to the destination PDG the generated service authorization information including the shared communication key, and the destination PDG, according to the shared communication key, establishing a trust relation with the WLAN user terminal through negotiation with the WLAN user terminal. If the establishment of the trust relation is successful, the destination PDG allocates tunnel resources for the WLAN user terminal, negotiates parameters and then establishes a tunnel with the WLAN user terminal, and otherwise, ends the procedure. As a result, a secured service data tunnel may be established between the user terminal and the PDG. |

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| **主权项** | 专利度:22特征度:27 |  |  |
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A method for establishment of a service tunnel in a Wireless Local Area Network (WLAN), comprisingthe following steps: (A) a service authentication authorization unit making authentication and authorization to a WLAN user terminal which requests a service and then judging whether the authentication and authorization is successful, and if successful, generating service authorization information including a shared communication key used for communication between the WLAN user terminal and a destination Packet Data Gateway (PDG), and otherwise, ending the current procedure of tunnel establishment; (B) the service authentication authorization unit sending to the PDG the service authorization information that includes the shared communication key; and, (C) the PDG, based on the shared communication key in the service authorization information, establishing a trust relation with the WLAN user terminal through negotiation, and if establishment of the trust relation is successful, the destination PDG allocating tunnel resources for the WLAN user terminal, negotiating parameters and completing the establishment of the tunnel, and otherwise, ending the current tunnel establishment procedure.

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| **对偶主权项** | 专利度:20特征度:15 |  |  |
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A method for establishment of a service tunnel in a Wireless Local Area Network (WLAN), comprising the following steps: (A) a service authentication authorization unit making authentication and authorization to a WLAN user terminal which requests a service and then judging whether the authentication and authorization is successful, and if successful, generating service authorization information including a shared communication key used for communication between the WLAN user terminal and a destination Packet Data Gateway (PDG), and otherwise, ending the current procedure of tunnel establishment; (B) the service authentication authorization unit sending to the PDG the service authorization information that includes the shared communication key; and, (C) the PDG, based on the shared communication key in the service authorization information, establishing a trust relation with the WLAN user terminal through negotiation, and if establishment of the trust relation is successful, the destination PDG allocating tunnel resources for the WLAN user terminal, negotiating parameters and completing the establishment of the tunnel, and otherwise, ending the current tunnel establishment procedure.

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| **被引用** | 14 | **自引用** | 5 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.61 |

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| **同族数** | 7 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Transmission method of several services combination**

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| **公开号** | [US7418010](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7418010&sv=a7fca7b91318530c1b9a8a53c9098e9f) | **公开日** | 2008/08/26 |
| **申请号** | 10/459,580 | **申请日** | 2003/06/12 |
| **授权日** | 2008/08/26 | **优先日** | 2000/12/14 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Cai; Zhaohui | Li; Zexian |
| **国际 主分类** | H04J 3/02 | **优先 国家** | CN |
| **代理** | Bacon & Thomas, PLLC |

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| **摘要** |
| A transmission method of multiple services combination is as follow. During service initialization of both communication sides, an identical TFCS (Transport Format Combination Set), containing all TFC (Transport Format Combination), is created in both sides. When a data is transmitted according to specific TFC at the transmitting end, a corresponding TFCI (Transport Format Combination Indicator) of the TFC is transmitted simultaneously. At the receiving end, the TFCI is used to look for the TFC in the TFCS. The TFCS is divided into no less than one sub-sets according to the specific channel characteristics of the service. TFCI is only used for looking for TFC in a sub-set, but not used to indicate the sub-set where the TFC is located. When data of services are transmitted with TFC at the transmitting end, the service specific channel characteristics are used to define a sub-set where the TFC is located at the receiving end, and the TFCI is used to look for the TFC in the sub-set. |

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| **主权项** | 专利度:21特征度:13 |  |  |
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A transmission method of multiple services combination, comprising the steps of: during services initialization of communication, creating an identical transport format combination set (TFCS) which contains all transport format combinations (TFCs) at both a transmitting end and a receiving end; dividing the TFCS into no less than one sub-sets according to a first specific channel characteristics of multiple services combination, and using a transport format combination indicator (TFCI) to indicate the TFCs in the sub-set; transmitting, by the transmitting end, the multiple services combination according to a specific TFC in one sub-set, and transmitting the corresponding TFCI of the TFC simultaneously; determining, by the receiving end, the sub-set where the TFC is located according to a second specific channel characteristics of the multiple services combination, looking for the TFC in the sub-set according to the TFCI, and receiving the multiple services combination according to the TFC.

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| **对偶主权项** | 专利度:7特征度:8 |  |  |
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A transmission method of multiple services combination, comprisingthe steps of: during services initialization of communication, creating an identical transport format combination set (TFCS) which contains all transport format combinations(TFCs) at bothatransmitting end andareceiving end; dividing the TFCS into no less than one sub-sets according toa firstspecific channel characteristics of~~services~~multiple services combination, and usingatransport format combination indicator (TFCI) to indicatetheTFCsin~~a~~thesub-set~~where the TFC is located; transmitting services~~; transmitting, by the transmitting end, the multiple services combinationaccording to~~the~~aspecific TFC in~~th~~one sub-set, and transmitting the corresponding TFCI of the TFC simultaneously; de~~f~~termining, by the receiving end,the sub-set where the TFC is located according t~~he services~~o a secondspecific channel characteristics of th~~is tim~~emultiple services combination, looking for the TFC in the sub-set~~by~~according to theTFCI, and receiving~~services~~the multiple services combinationaccording to the~~found~~TFC.

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| **被引用** | 21 | **自引用** | 0 | **公司数** | 3 | **国家数** | 2 | **影响力** | 0.31 |

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| **同族数** | 9 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

**Method for generation of training sequence in channel estimation**

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| **公开号** | [US7376115](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7376115&sv=2ab780aa2dae51af22510131f8f3d600) | **公开日** | 2008/05/20 |
| **申请号** | 10/297,530 | **申请日** | 2001/05/24 |
| **授权日** | 2008/05/20 | **优先日** | 2000/06/07 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Tang; Wei | Cai; Zhaohui | Li; Zexian |
| **国际 主分类** | H04B 7/216 | **优先 国家** | CN |
| **代理** | Marshall, Gerstein & Borun LLP |

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| **摘要** |  |
| The embodiments of the present invention discloses a method for generating training sequence in channel estimation, including dynamically determining the length of the channel impulse response of each subscriber respectively according to a real number of subscribers at a specific time burst and/or a channel estimation state of each subscriber prior to a specific time burst; generating a training sequence for each subscriber respectively from a basic code according to the length of the channel impulse response of each subscriber; and allocating the training sequence to each subscriber at the specific time burst. The embodiments of the invention can obtain better effect of channel estimation, thereby decreasing code error rate, enhancing quality of receiving signal in the system and improving communication performance. |

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| **主权项** | 专利度:7特征度:7 |  |  |
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A method for generating training sequence in channel estimation, comprising: dynamically determining offsets of training sequences from a basic code for each of a plurality of subscribers respectively, according to at least one of (1) a number of subscribers at a specific time burst or (2) a real-time channel estimation state of each subscriber; generating training sequences for each of the plurality of subscribers respectively from a basic code according to the determined offset of each subscriber; and allocating the training sequences to each subscriber at the specific time burst or directly allocating the offsets to each subscriber at the specific time burst.

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| **对偶主权项** | 专利度:7特征度:45 |  |  |
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A method for generating training sequence in channel estimation, compris~~es the steps of: according to a system real w~~ing: dynamically determining offsets of training sequences from a basic code for each of a plurality of subscribers respectively, accor~~k~~ding~~state at a specific time burst, dynamically determining offsets of training sequences selected from a basic code; generating user training sequences by the offsets~~to at least one of (1) a number of subscribers at a specific time burst or (2) a real-time channel estimation state of each subscriber; generating training sequences for each of the plurality of subscribers respectively from a basic code according to the determined offset of each subscriber; and allocating the~~user~~training sequences to each subscriber at the specific time burst or directly allocating the offsets to each subscriber at the specific time burst.

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| **被引用** | 15 | **自引用** | 0 | **公司数** | 4 | **国家数** | 2 | **影响力** | 0.87 |

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| **同族数** | 8 | **国家数** | 6 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Method of counting the number of multimedia broadcasting multicast service subscribers**

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| **公开号** | [US7349711](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7349711&sv=2c537831139e6278ca920fafa8d9c895) | **公开日** | 2008/03/25 |
| **申请号** | 11/248,168 | **申请日** | 2005/10/13 |
| **授权日** | 2008/03/25 | **优先日** | 2004/04/15 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Hu; Hao | Zhang; Wenlin | Zhang; Hai | Qu; Bingyu |
| **国际 主分类** | H04B 7/00 | **优先 国家** | CN |
| **代理** | Townsend and Townsend and Crew LLP |

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| **摘要** |  |
| The present invention discloses a method of counting the number of MBMS subscribers, comprising: setting different types of notifications, each of which is designed to instruct UEs in at least one mode to respond said counting number of subscribers; the network side issuing different types of notifications, so as to monitor the activation of UEs in at least one mode in the MBMS with said notifications, and thereby achieving counting the number of subscribers of each MBMS. The method of counting the number of MBMS subscribers provided in the present invention can be used to perform counting the number of subscribers of each MBMS more accurately, so as to take fuller advantage of the precious air interface resource. |

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| **主权项** | 专利度:11特征度:26 |  |  |
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A method of counting the number of MBMS subscribers, wherein a UE is in one of a plurality of modes, the method comprising the following steps of: setting different types of notifications according to the plurality of modes, each of which is designed to instruct UEs in different sets of modes respectively, each of the different sets of modes including at least one of the plurality of modes to respond to counting of the number of subscribers; a network side issuing notifications to UEs, so as to monitor an activation of UEs in the different sets of modes to a MBMS with said notifications and implement counting the number of subscribers of the MBMS; wherein: said notifications are designed to instruct UEs in a Connected mode and UEs in an Idle mode to respond to the counting the number of subscribers; or said notifications are designed to instruct the UEs in the Idle mode to respond to the counting the number of subscribers; or said notifications are designed to instruct UEs in a Discontinuous Reception mode to respond to the counting the number of subscribers; or said notifications are designed to instruct the UEs in the Idle mode and the UEs in the Discontinuous Reception mode to respond to the counting the number of subscribers; wherein a process of counting the number of subscribers of each MBMS service further comprises: the network side issuing the notifications to the UEs to instruct at least one of the UEs in the Connected mode or the UEs in the Idle mode to respond to the counting the number of subscribers; and through monitoring an activation of at least one of the UEs in the Connected mode or the UEs in the Idle mode to an MBMS service, the network side achieving the counting the number of subscribers of each MBMS service; wherein said method also comprises the following steps after said process of counting the number of subscribers of each MBMS service is completed: a Core Network transmitting MBMS session information to the network side; the network side performing recounting the number of subscribers of each MBMS through reissuing different types of notifications to UEs according to a predefined decision condition; wherein said process that the network side performing recounting the number of subscribers through reissuing different types of notifications to UEs according to the decision condition further comprises: setting a threshold for switching between a PTP bearer mode and a PTM bearer mode; supposing the number of UEs which receive MBMS data and whose detail cell location information is known by an RNC in each cell is n (a natural number); when the network side finds the number of UEs accessing the MBMS in a URA\_PCH state is less than or equal to a value (Threshold-Max(n)), the network side performing recounting the number of subscribers of each MBMS through reissuing notifications to the UEs to instruct the UEs in the Idle mode to respond to the counting of the number of subscribers; said UEs in the URA\_PCH state being UEs in the Discontinuous Reception mode.

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| **对偶主权项** | 专利度:18特征度:14 |  |  |
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A method of counting the number of MBMS subscribers,wherein a UE is in one of a plurality of modes, the methodcomprising the following steps of: setting different types of notificationsaccording to the plurality of modes, each of which is designed to instruct UEs in~~at least one~~different sets of modes respectively, each of the different sets of modes including at least one of the plurality ofmodesto respon~~se to the counting of the number of subscribers; the network side issuing notifications to UEs, so as to monitor the activation of UEs in at least one mode to a MBMS with said notifications and implement counting on~~d to counting of the number of subscribers; a network side issuing notifications to UEs, so as to monitor an activation of UEs in the different sets of modes to a MBMS with said notifications and implement counting the number of subscribers of the MBMS; wherein: said notifications are designed to instruct UEs in a Connected mode and UEs in an Idle mode to respond to the counting the number of subscribers; or said notifications are designed to instruct the UEs in the Idle mode to respond to the counting the number of subscribers; or said notifications are designed to instruct UEs in a Discontinuous Reception mode to respond to the counting the number of subscribers; or said notifications are designed to instruct the UEs in the Idle mode and the UEs in the Discontinuous Reception mode to respond to the counting the number of subscribers; wherein a process of counting the number of subscribers of each MBMS service further comprises: the network side issuing the notifications to the UEs to instruct at least one of the UEs in the Connected mode or the UEs in the Idle mode to respond to the counting the number of subscribers; and through monitoring an activation of at least one of the UEs in the Connected mode or the UEs in the Idle mode to an MBMS service, the network side achieving the counting the number of subscribers of each MBMS service; wherein said method also comprises the following steps after said process of counting the number of subscribers of each MBMS service is completed: a Core Network transmitting MBMS session information to the network side; the network side performing recounting the number of subscribers of each MBMS through reissuing different types of notifications to UEs according to a predefined decision condition; wherein said process that the network side performing recounting the number of subscribers through reissuing different types of notifications to UEs according to the decision condition further comprises: setting a threshold for switching between a PTP bearer mode and a PTM bearer mode; supposing the number of UEs which receive MBMS data and whose detail cell location information is known by an RNC in each cell is n (a natural number); when the network side finds the number of UEs accessing the MBMS in a URA\_PCH state is less than or equal to a value (Threshold-Max(n)), the network side performing recountingthe number of subscribers of~~th~~eachMBMSthrough reissuing notifications to the UEs to instruct the UEs in the Idle mode to respond to the counting of the number of subscribers; said UEs in the URA\_PCH state being UEs in the Discontinuous Reception mode.

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| **被引用** | 23 | **自引用** | 1 | **公司数** | 10 | **国家数** | 2 | **影响力** | 1.55 |

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| **同族数** | 14 | **国家数** | 8 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Process method about the service connection between the wireless local area network and user terminal**

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| **公开号** | [US7298726](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7298726&sv=6f80707abfd0b894a88d74d7c507039b) | **公开日** | 2007/11/20 |
| **申请号** | 11/146,288 | **申请日** | 2005/06/06 |
| **授权日** | 2007/11/20 | **优先日** | 2002/12/12 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin | Duan; Xiaoqin |
| **国际 主分类** | H04Q 7/24 | **优先 国家** | CN |
| **代理** | Townsend and Townsend and Crew LLP |

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| **摘要** |  |
| Disclosed is a method for processing the service connection between a user terminal and a Wireless Local Area Network (WLAN) applicable to a WLAN interactive network that at least comprises: a WLAN user terminal, a WLAN access unit, a service control unit and a user information storage unit. The method comprises: setting flags that represent the attached or detached status of the service connection between the user terminal and the WLAN in the WLAN user terminal and the service control unit respectively; establishing or canceling the connection between the user terminal and the network through the interaction between the WLAN user terminal and the WLAN, meanwhile modifying the corresponding flags. |

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| **主权项** | 专利度:24特征度:31 |  |  |
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A method for processing a service connection between a WLAN and a WLAN user terminal, applicable to a WLAN interactive network at least including the WLAN user terminal, a WLAN access unit, a service control unit and a user information storage unit, comprising: setting a first flag and a second flag representing either an attached status or a detached status for the service connection between the user terminal and the WLAN respectively in the WLAN user terminal and the service control unit; and establishing or canceling the service connection between the user terminal and the WLAN based on at least an interaction between the WLAN user terminal and the WLAN, and modifying the first flag and the second flag; wherein the process for establishing the service connection between the user terminal and the WLAN includes attaching the WLAN user terminal to the WLAN, the process for attaching the WLAN user terminal to the WLAN further comprising: a11. when the WLAN user terminal accesses the WLAN, the WLAN user terminal sending an attach request to the service control unit via the WLAN access unit; a12. upon receiving the attach request, the service control unit determining whether to allow the WLAN user terminal to establish the service connection; if not, the service control unit denying the attach request sent by the user terminal, and ending the process for attaching the WLAN user terminal to the WLAN; otherwise, the service control unit recording a service connection status of the WLAN user terminal as WLAN attached, and returning an access response to the WLAN user terminal; wherein said attach request includes a permanent or temporary identification of the WLAN user terminal; on receiving the attach request, the service control unit determining whether the permanent or temporary identification of the user terminal in the attach request is valid; if not, the service control unit initiating a request procedure to the user terminal to fetch a valid flag of the user terminal; otherwise, the service control unit determining whether itself has stored user information of the user terminal sending the attach request; if there is no such information, the service control unit sending a request for the user information of the user terminal to the user information storage unit; otherwise, performing the process a12 directly.

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| **对偶主权项** | 专利度:27特征度:11 |  |  |
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A~~process method about the~~method for processing aservice connection between a WLAN and aWLANuser terminal, applicable to a WLAN interactive network at least~~consisting of a~~including theWLAN user terminal, a WLAN access unit, a service control unit and a user information storage unit, comprising: setting afirst flag and a secondflag representing either an attached status or a detached status for the service connection between the user terminal and the WLAN respectively in the WLAN user terminal and the service control unit; and establishing or canceling the service connection between the user terminal and the~~network by means of interaction between the WLAN user terminal and the WLAN, and modifying the corresponding flags~~WLAN based on at least an interaction between the WLAN user terminal and the WLAN, and modifying the first flag and the second flag; wherein the process for establishing the service connection between the user terminal and the WLAN includes attaching the WLAN user terminal to the WLAN, the process for attaching the WLAN user terminal to the WLAN further comprising: a11. when the WLAN user terminal accesses the WLAN, the WLAN user terminal sending an attach request to the service control unit via the WLAN access unit; a12. upon receiving the attach request, the service control unit determining whether to allow the WLAN user terminal to establish the service connection; if not, the service control unit denying the attach request sent by the user terminal, and ending the process for attaching the WLAN user terminal to the WLAN; otherwise, the service control unit recording a service connection status of the WLAN user terminal as WLAN attached, and returning an access response to the WLAN user terminal; wherein said attach request includes a permanent or temporary identification of the WLAN user terminal; on receiving the attach request, the service control unit determining whether the permanent or temporary identification of the user terminal in the attach request is valid; if not, the service control unit initiating a request procedure to the user terminal to fetch a valid flag of the user terminal; otherwise, the service control unit determining whether itself has stored user information of the user terminal sending the attach request; if there is no such information, the service control unit sending a request for the user information of the user terminal to the user information storage unit; otherwise, performing the process a12 directly.

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| **被引用** | 14 | **自引用** | 3 | **公司数** | 1 | **国家数** | 2 | **影响力** | 0.62 |

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| **同族数** | 19 | **国家数** | 9 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**Wireless local area network access gateway and method for ensuring network security therewith**

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| **公开号** | [US7224699](http://113.31.18.23/invokexml.do?sf=ShowPatent&spn=US7224699&sv=49e0f13eef709310066fae9d832884a5) | **公开日** | 2007/05/29 |
| **申请号** | 11/261,373 | **申请日** | 2005/10/28 |
| **授权日** | 2007/05/29 | **优先日** | 2003/12/08 |
| **申请人** | 华为 | **标准 申请人** | 华为 |
| **专利权人** | 华为 | **发明人** | Zhang; Wenlin |
| **国际 主分类** | H04L 12/28 | **优先 国家** | CN |
| **代理** | Marshall. Gerstein & Borun LLP |

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| **摘要** |  |
| A wireless local area network access gateway (WAG) includes a routing enforcement module and a charging module. The data packets sent via the WAG are outputted to the service authentication and authorization unit or packet data gateway (PDG) of WLAN or the WLAN UE after the forced route processing and collection of charging information. The WAG further includes a message filtering module for acquiring and storing packet filtering rules as well as discriminating, filtering and screening the data packets currently passing the WAG. Also disclosed is a method for ensuring network security by utilizing the WAG. With the disclosed WAG and method, data packets can be discriminated, filtered, and screened so as to prevent as much as possible illegal messages from interfering and threatening the network operation, prevent the transmission of illegal messages, improve the security of the network, and reduce the load of the network. |

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| **主权项** | 专利度:10特征度:25 |  |  |
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A Wireless Local Area Network Access Gateway (WAG), comprising: a routing enforcement module for enforcing transmission routes of data packets received by the WAG; a message filtering module for obtaining and storing packet filtering rules for filtering the data packets, and for filtering both data packets sent to a Wireless Local Network (WLAN) and data packets received from the WLAN according to the packet filtering rules; and a charging module for collecting charging information for data packets passing through the WAG, wherein: the message filtering module connects to the routing enforcement module and the charging module, filters the data packets received by the WAG, drops the data packets matching at least one of the stored packet filtering rules and outputs the data packets matching none of the stored packet filtering rules; after the charging module collects the charging information for the data packets passing through the WAG, the data packets are outputted to a service authentication and authorization unit of the WLAN, or a Packet Data Gateway (PDG), or WLAN user equipment (UE).

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| **对偶主权项** | 专利度:10特征度:22 |  |  |
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A Wireless Local Area Network Access Gateway (WAG), comprising: a routing enforcement module for enforcing t~~he control of the transmission routing and a charging module for collecting the charging information, said routing enforcement module receives data packets sent via~~ransmission routes of data packets received bythe WAG;a~~nd performs a routing enforcement process, after the charging information collecting process performed by said charging module, said~~message filtering module for obtaining and storing packet filtering rules for filtering thedata packets,a~~re outputted to a service authentication and authorization unit of~~nd for filtering both data packets sent toa~~w~~Wireless~~l~~Local~~area n~~Network (WLAN)~~, or a Packet Data Gateway (PDG), or WLAN user equipment (UE), wherein said WAG further comprises: a message filtering module for acquiring and stor~~and data packets received from the WLAN according to the packet filtering rules; and a charging~~r~~module~~data and for discriminating, filtering and screening the data packets currently passing~~for collecting charging information for data packets passing throughthe WAG, wherein:the message filtering module connects to the routing enforcement module and the charging module,~~receives the data packets to be processed, and outputs the data packets after the filtering and the screening~~filters the data packets received by the WAG, drops the data packets matching at least one of the stored packet filtering rules and outputs the data packets matching none of the stored packet filtering rules; after the charging module collects the charging information for the data packets passing through the WAG, the data packets are outputted to a service authentication and authorization unit of the WLAN, or a Packet Data Gateway (PDG), or WLAN user equipment (UE).

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| **被引用** | 7 | **自引用** | 0 | **公司数** | 2 | **国家数** | 2 | **影响力** | 0.14 |

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| **同族数** | 6 | **国家数** | 5 |

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| **法律 状态** | 有效 | **法律 描述** |  | **诉讼 信息** |  |

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**主权项修订统计**

总计412篇；

无对比0篇

对比412篇

主权项修订402篇；

主权项插入2522处；

主权项删除2058处；

主权项保留3839处；

主权项无修订10篇。