

1) Family number: 49266027 (US2012269138A)

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Title: METHOD AND APPARATUS FOR TRANSMITTING CONTROL INFORMATION IN A WIRELESS COMMUNICATION SYSTEM

Abstract: The present invention relates to a wireless communication system. More particularly, the present invention relates to a method for transmitting a signal via physical uplink control channel (PUCCH) in a wireless communication system, and to an apparatus for the method, wherein the method is configured such that a terminal transmits a signal via the PUCCH and multiple antennas, and comprises the following steps: obtaining a first modulated symbol sequence from control information; performing a spreading process on modulated symbols corresponding to each of the slots in the PUCCH from among the first modulated symbol sequence, such that the modulated symbols corresponding to the respective single carrier frequency division multiplexing (SC-FDMA) symbols in the relevant slot, so as to obtain a plurality of spread second modulated symbol sequences corresponding to the respective SC-FDMA symbols in each slot; and transmitting, in the relevant SC-FDMA symbols in the PUCCH, the plurality of spread second modulated symbol sequences via multiple antennas, wherein resources used in the transmission via the PUCCH are orthogonal to one another between antenna ports.

Classifications:

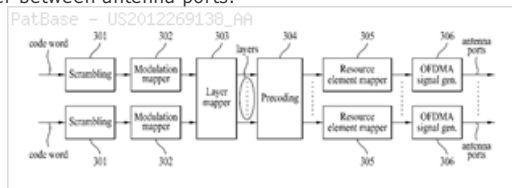
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H03M13/09 H03M13/13 H03M13/23 H03M13/37 H04B7/06 H04B7/26 H04J11/16 H04J11/00 H04J13/00 H04L1/00 H04L1/16 H04L1/18 H04L27/26 H04L5/00 H04W72/04 H04W72/12 H04W74/00 H04W88/02 (Advanced/Non-invention)

CPC: H04L1/007 H04L1/0072 H01W4/00 H03M13/6525 H03M13/09 H03M13/13 H03M13/136 H03M13/23 H04L1/08 H04L1/0028 H04L27/2634 H04W72/0473 H04W76/28 H04B1/7103 H04J1/00 H04W88/02 H04L1/001 H04L5/026 H04W4/00 H04L1/0031 H04L1/1896 H04W72/0466 H04W72/1284 H04W74/004 H04L1/0027 H04L5/0091 H04B7/2621 H04L1/1887 H04L5/22 H04W72/12 H04L5/14 H04W52/04 H04W72/04 H04W72/042 H04J11/005 H04J13/004 H04W72/0446 H04L5/0048 H04W36/0072 H04L1/1812 H04L5/0017 H04L27/2647 H04W72/1268 H04L1/1607 H04L1/1861 H04B7/2603 H04B7/068 H04J11/0069 H04L5/0094 H04W72/02 H04J13/0062 H04L5/0023 H04L5/0057 H04L27/2697 H04L27/2628 H04L5/0026 H04L5/0069 H04W72/0413 B44C5/0407 E06B3/02 E06B3/54 E06B7/00 A47F1/126 A47F7/285 A47F13/00 G09F23/06 H04L1/0026 H04L1/0057 H04L1/0059 H04L1/0073 H04L1/1671 H04L1/1819 H04L1/1854 H04L1/1893 H04L5/0007 H04L5/001 H04L5/0016 H04L5/0053 H04L5/0055 H04B7/0678 H04B7/0684 H04L5/0019 H04L27/2636 H04W72/0406 H04L1/1642

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Probable Assignee: LG ELECTRONICS

Assignee(s): (std): MOON SUNG HO ; MOON SEONG HO ; LG ELECTRONICS INC ; LEE MOON IL ; LEE MOON II ; KWON YEONG HYEON ; HAN SEUNG HEE ; CHUNG JAE HOON ; CHUNG JAEHOON ; HAN SEUNGHEE ; L G ELECTRONICS INC ; LEE HYUN WOO ; LEE HYUNWOO ; LG ELECTRONICS

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Inventor(s): JAE HOON CHUNG ; KWON YEONGHYEON ; SEUNG HEE HAN ; SEUNGHEE HAN ; SUNG HO MOON ; MOON IL LEE ; HYUN WOO LEE ; HYUNWOO LEE

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; SMART AND BIGGAR; WUESTHOFF AND WUESTHOFF PATENTANWAELTE PARTG MBB; CABINET PLASSERAUD; FRENKEL MATTHIAS ALEXANDER; Cabinet Plasseraud; Frenkel Matthias Alexander; URNER PETER; TER MEER STEINMEISTER AND PARTNER; PLASSERAUD IP; MAIKOWSKI AND NINNMANN PATENTANWAELTE PARTNERSCHAFT MBB; AOKI ATSUSHI; TSURUTA JUNICHI; LEE HONG DEGERMAN KANG AND WAIMEY; MCKENNA LONG AND ALDRIDGE LLP; BIRCH STEWART KOLASCH AND BIRCH LLP; DENTONS US LLP; LEE HONG DEGERMAN KANG WAIMEY; YANG MOON OCK; KIM YONG IN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 48876081 (US2011113244A)

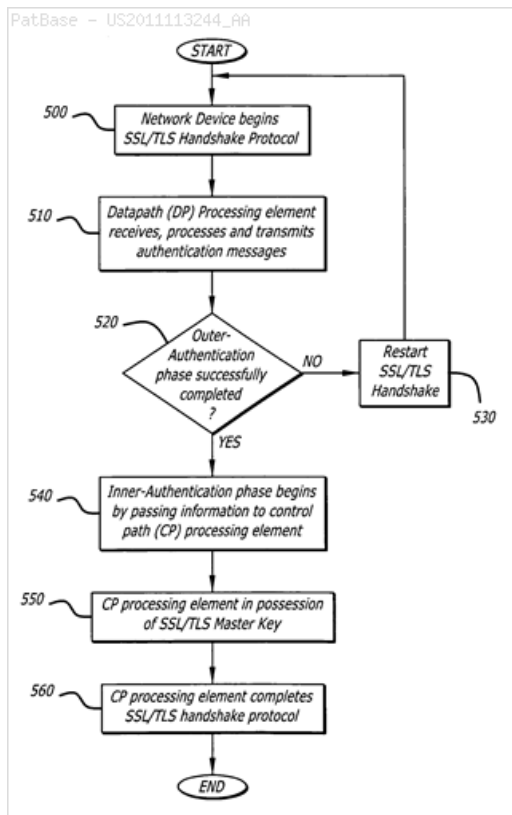
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Title: STATELESS CRYPTOGRAPHIC PROTOCOL-BASED HARDWARE ACCELERATION

Abstract: According to one embodiment of the invention, a network device comprises a first processing element and a second processing element. The first processing element is adapted to handle an authentication handshaking protocol, such as the SSL/TLS Handshake, and upon receipt of a Client Key Exchange message, passes control of the authentication handshaking protocol to the second processing element. The second processing element completes the authentication handshaking protocol.

Classifications:

International (IPC 8-9): G06F7/04 H04L29/06 H04L9/00 H04L9/08 H04L9/32 H04W52/14 H04W52/16 H04W52/28 H04W52/32 H04W52/34 H04W52/36 H04W52/38 H04W92/18 (Advanced/Invention)
CPC: H04L63/04 H04W52/146 H04W52/16 H04W52/325 H04W52/34 H04W52/346 H04W52/367 H04W52/383 H04W52/281 H04L9/0844 H04L9/3271 H04L63/061 H04L63/08 H04L63/166 H04L2209/122 H04L2209/80
European: H04L63/16D H04L9/08 H04L9/32 T04L63/06A T04L63/08
US: 455/450 713/150 713/150S 713/151 713/151P 713/168 713/168P 726/2



Family:

Publication number	Publication date	Application number	Application date
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US2011173439 AA	20110714	US20110069221	20110322
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WO14133703 A1	20140904	WO2014US13484	20140129

Priority:

US20060496659 20060731 US20110069221 20110322 US20130781490 20130228
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Probable Assignee: GOOGLE INC

Assignee(s): (std): ARUBA WIRELESS NETWORKS ; CHOU RANDY ; GOOGLE INC ; TOSHIBA KK ; NAMBIAR BRIJESH ; MOTOROLA MOBILITY LLC ; GOOGLE TECHNOLOGY HOLDINGS LLC ; ARUBA NETWORKS INC

Assignee(s): ARUBA WIRLESS NETWORKS ; HEWLETT PACKARD DEVELOPMENT CO LP ; GOOGLE TECHNOLOGY HOLDINGS LLC MOUNTAIN VIEW ; HEWLETT PACKARD ENTERPRISE DEVELOPMENT LP ; KABUSHIKI KAISHA TOSHIBA

Inventor(s): (std): CHOU RANDY ; JUNG HYEJUNG ; NAMBIAR BRIJESH ; NANGIA VIJAY ; JUNG HYE JUNG

Inventor(s): NANGIA VIJAY ALGONQUIN ; JUNG HYEJUNG PALATINE

Agent(s): BETTEN AND RESCH PATENT U RECHTSANWAELTE PARTGMBB; BETTEN AND RESCH; BLAKELY SOKOLOFF TAYLOR AND ZAFMAN LLP; VARUN A; BRETSCHER JOHN T ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 50906097 (US2013250925A)

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Title: TIMING ADVANCE CONFIGURATION FOR MULTIPLE UPLINK COMPONENT CARRIERS

Abstract: The invention relates methods for time aligning uplink transmissions by a mobile terminal in a mobile communication system, and to methods for performing a handover of a mobile terminal to a target aggregation access point. The invention is also providing apparatus and system for performing these methods, and computer readable media the instructions of which cause the apparatus and system to perform the methods described herein. In order to allow for aligning the timing of uplink transmissions on uplink component carriers, where different propagation delays are imposed on the transmissions on the uplink component carriers, the inventions suggests to time align the uplink component carriers based on a reference time alignment of a reference cell and a reception time difference or propagation delay difference between the downlink transmissions in the reference cell and the other radio cells, the uplink component carriers of which need to be time aligned.

Classifications:

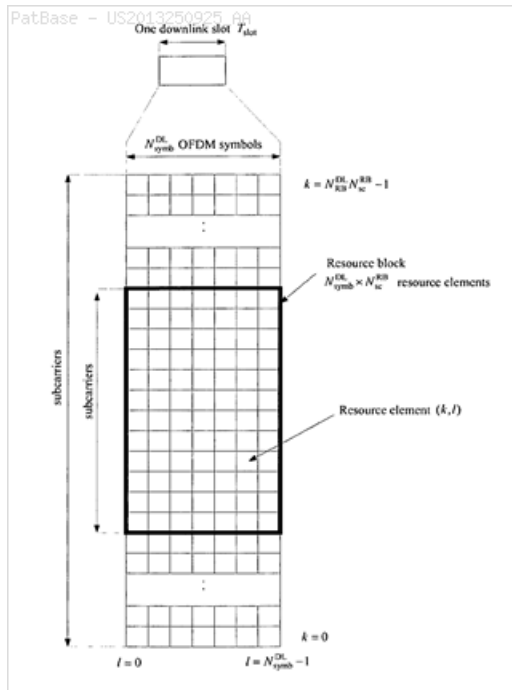
International (ipc 8-9): H04B3/36 H04B7/04 H04B7/0413 H04J11/00 H04L1/18 H04L29/08 H04L5/00 H04W24/10 H04W36/00 H04W36/04 H04W36/30 H04W56/00 H04W72/04 H04W74/08 (Advanced/Invention); H04W88/08 H04W88/12 (Advanced/Non-invention)

CPC: H04L5/001 H04L5/0053 H04L27/2656 H04W72/00 H04W56/00 H04W56/0065 H04W72/042 H04W72/0413 H04J11/00 H04L1/1812 H04L69/323 H04L69/324 H04L5/0055 H04B7/0413 H04B3/36 H04W88/12 H04W88/085 H04W36/30 H04W36/04 H04W56/0005 H04W56/0045 H04W72/0446

European: H04L5/00A2A11 H04L5/00C6 H04W56/00B

H04W56/00K2 T04L27/26M5C1 T04W72/00

US: 1/1 370/336 455/436



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: PANASONIC CORP

Assignee(s): (std): AOYAMA TAKAHISA ; FEUERSAENGER MARTIN ; LOEHR JOACHIM ; PANASONIC CORP ; SUZUKI HIDETOSHI ; TAMURA TAKASHI ; WENGERTER CHRISTIAN ; PANASONIC IP CORP AMERICA ; PANASONIC INTELLECTUAL PROPERTY CORP OF AMERICA

Assignee(s): PANASONIC INTELLECTUAL PROPERTY OF AMERICA CORP ; PANASONIC INTELLECTUAL PROPERTY OF AMERICA TORRANCE CORP

Inventor(s): (std): AOYAMA TAKAHISA ; CHRISTIAN WENGERTER ; FEUERSAENGER MARTIN ; LOEHR JOACHIM ; MARTIN FEUERSAENGER ; SUZUKI HIDETOSHI ; TAMURA HISASHI ; TAMURA TAKASHI ; WENGERTER CHRISTIAN ; FIRESANGER MARTIN

Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; SEED IP LAW GROUP PLLC; PEARNE AND GORDON LLP; SEED IP LAW GROUP LLP; KAYSER ANDREAS; OGURI SHOHEI ET AL; KUHLE DIETMAR

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 52592229 (US2014204854A)

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Title: METHODS, SYSTEMS AND APPARATUS FOR DEFINING AND USING PHICH RESOURCES FOR CARRIER AGGREGATION

Abstract: Systems, methods, and instrumentalities are disclosed to provide feedback to a user equipment (UE). A UE may transmit uplink data via a supplementary cell. A network device, such as a HeNB, eNB, etc., may receive the uplink data from the UE via the supplementary cell. The network device may send feedback associated with the uplink data to the UE via a physical downlink shared channel (PDSCH) when downlink data is available for transmission to the UE. The feedback may be physical hybrid ARQ indicator channel (PHICH) ACK/NACK information. The feedback sent via the PDSCH may be multiplexed with the downlink data. The network device may send the feedback associated with the uplink data to the UE via a physical downlink control channel (PDCCH) when downlink data is not available for transmission to the UE.

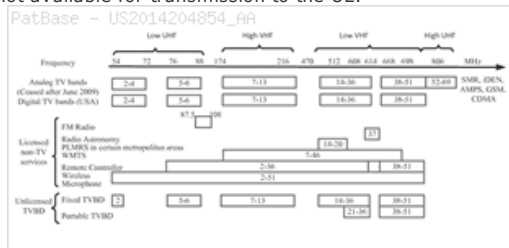
Classifications:

International (IPC 8-9): H04L1/12 H04L1/18 H04L5/00 H04W4/00 H04W72/04 (Advanced/Invention)

CPC: H04L1/18 H04L5/0055 H04L5/0092 H04W72/042

European: H04L1/18 H04L5/00C6A

US: 1/1 370/329



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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US20120125903 20120614 US20140125903 20140219 US20170783309 20171013

Probable Assignee: INTERDIGITAL PATENT HOLDINGS INC

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Inventor(s): GAUVREAU JEAN LOUIS LA PRAIRIE ; FRED A MARTINO LAVAL ; BELURI MIHAELA C JERICHO

Agent(s): BADEL XAVIER CLAUDE YVES; AWAPATENT AB; AWA SWEDEN AB; CONDO ROCCIA KOPTIW LLP; ROCCIA VINCENT J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

5) Family number: 44928322 (US2010098012A)

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Title: UPLINK CONTROL INFORMATION TRANSMISSION METHODS FOR CARRIER AGGREGATION

Abstract: A method and apparatus for transmitting uplink control information (UCI) for Long Term Evolution-Advanced (LTE-A) using carrier aggregation is disclosed. Methods for UCI transmission in the uplink control channel, uplink shared channel or uplink data channel are disclosed. The methods include transmitting channel quality indicators (CQI), precoding matrix indicators (PMI), rank indicators (RI), hybrid automatic repeat request (HARQ) acknowledgement/non-acknowledgement (ACK/NACK), channel status reports (CQI/PMI/RI), source routing (SR) and sounding reference signals (SRS). In addition, methods for providing flexible configuration in signaling UCI, efficient resource utilization, and support for high volume UCI overhead in LTE-A are disclosed.

Classifications:

International (IPC 8-9): H04B7/02 H04B7/024 H04B7/26 H04J11/00 H04J13/00 H04L1/00 H04L1/18 H04L12/26 H04L29/08 H04L5/00 H04W H04W4/00 H04W72/02 H04W72/04 H04W72/12

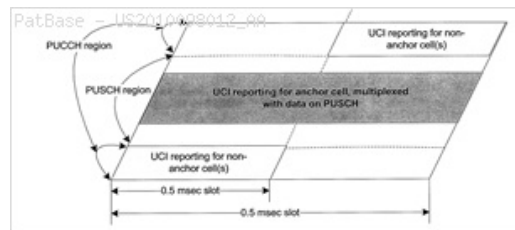
H04W88/02 (Advanced/Invention);
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H04W72/00 (Core/Invention);
H04W72/12 (Core/Non-invention);
H04W (Subclass/Invention)

International (IPC 1-7): H04B7/005

CPC: H04L1/1893 H04L1/1896 H04L5/0007 H04L1/1864 H04L1/1861 H04W72/02 H04B7/2612 H04J11/0023 H04J2211/005 H04L1/0026 H04W72/1284 H04B7/024 H04B7/0632 H04B7/0639 H04B7/066 H04L1/1607 H04L1/1812 H04L5/001 H04W72/042 H04W72/0446 H04L5/0053 H04W72/0413 H04L1/0028

European: H04L1/00A9F H04L1/18R11 H04L5/00A2A11 H04L5/00C6 H04W72/02 H04W72/04F2 T04W72/04F4

US: 1/1 370/252 370/252P 370/329 370/329P

**Family:**

Publication number	Publication date	Application number	Application date
AR073833 AA	20101201	AR2009P104022	20091020
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Priority:

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Probable Assignee: INTERDIGITAL PATENT HOLDINGS INC

Assignee(s): (std): ADJAKPLE PASCAL ; ADJAKPLE PASCAL M ; ADJAPLE PASCAL M ; BALA ERDEM ; HAIM JOHN ; HAIM JOHN W ; INTERDIDZHITAL PEHTENT KHOVDINGZ INK ; INTERDIGITAL PATENT HOLDINGS ; INTERDIGITAL PATENT HOLDINGS INC ; LEVY JOSEPH S ; OLESEN ROBERT L ; PAN KYLE JUNG LIN ; PIETRASKI PHILIP J ; ROY VINCENT ; SHIN SHUNG HYUNK H ; SHIN SUNG HYUK ; STERN BERKOWITZ JANET A ; TSAI ALLAN Y ; ZHANG GUODONG

Assignee(s): INTERDIGITAL PATENT HOLDINGS INC US ; INTERDIGITAL PATENT HOLDINGS INC WILMINGTON

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Inventor(s): TSAI ALLAN Y BOONTON ; ZHANG GUODONG SYOSSET ; SUNG HYUK SHIN ; SHIN, SUNG-HYUK ; STERN BERKOWITZ JANET A LITTLE NECK ; ROY VINCENT LONGUEUIL ; SHIN SUNG HYUK NORTVALE ; SHIN SUNG HYUK NORTVALE ; PIETRASKI PHILIP J HUNTINGTON STATION ; PAN KYLE JUNG LIN SMITHTOWN ; PAN, KYLE JUNG-LIN ; OLESEN ROBERT L HUNTINGTON ; LEVY JOSEPH S MERRICK ; HAIM JOHN W BALDWIN ; BALA ERDEM FARMINGDALE ; ADJAKPLE PASCAL M GREAT NECK ; ADJAKPLE PASCAL GREATNECK

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GRIFFITH HACK; HJALMARSSON MAGNUS AXEL; FORSBLOM MATTIAS HENRIK; AWAPATENT AB; AWA SWEDEN AB; ELZABURU SLP ELZABURU SLP; MARKS AND CLERK; TANI AND ABE PC; VOLPE AND KOENIG PC DEPT ICC; CONDO ROCCIA KOPTIW LLP; HUQ ABHIK A; ROCCIA VINCENT J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY NZ NA NE NG NI NL NO OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 49401372 (US2013010720A)

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Title: POWER HEADROOM REPORTING FOR NON-SCHEDULED UPLINK COMPONENT CARRIERS

Abstract: This invention relates to a proposal for power headroom reporting for uplink component carriers for which no uplink resource allocation is scheduled by the eNodeB. The user equipment (UE) calculates a virtual power headroom for the non-scheduled uplink component carrier, based on a virtual uplink resource assignment pre-configured by the UE and eNodeB. According to one embodiment the maximum transmit power of the UE is set to a pre-configured fixed value.

US2017093550 AA	20170330	US20160374195	20161209
US2017353284 AA	20171207	US20170687086	20170825
US2018254879 AA	20180906	US20180906725	20180227
US2019260560 AA	20190822	US20190401998	20190502
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Priority:

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JP20180227453	20181204	US20190401998	20190502	JP20190204801	20191112

Probable Assignee: SUN PATENT TRUST

Assignee(s): (std): FEUERSAENGER MARTIN ; GOLITSCHKE EDLER VON ELBWART ALEXANDER ; IWAI TAKASHI ; LOEHR JOACHIM ; MATSUSHITA ELECTRIC INDUSTRIAL CO LTD ; PANASONIC IP CORP AMERICA ; SUN PATENT TRUST ; SUZUKI HIDETOSHI ; PANASONIC INTELLECTUAL PROPERTY CORP OF AMERICA ; PANASONIC CORP ; LOHR JOACHIM ; FEUERSANGER MARTIN

Assignee(s): PANASONIC INTELLECTUAL PROPERTY OF AMERICA CORP ; SUN PATENT TRUST NEW YORK

Inventor(s): (std): ALEXANDER GOLITSCHKE EDLER VON ELBWART ; FEUERSANGER MARTIN ; JOACHIM LOEHR ; LOHR JOACHIM ; MARTIN FEUERSAENGER ; SUZUKI HIDETOSHI ; LOEHR JOACHIM ; IWAI TAKESHI ; IWAI TAKASHI ; GOLITSCHKE EDLER VON ELBWART ALEXANDER ; GOLITSCHKE EDLER VON EBERWART ALEXANDER ; FIRESANGER MARTIN ; FEUERSAENGER MARTIN

Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIELTET; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; FULYA SUEMERALP; SEED IP LAW GROUP PLLC; SEED IP LAW GROUP LLP; SEED INTELLECTUAL PROPERTY LAW GROUP LLP; KUHLM DIETMAR

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY NZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

7) Family number: 54821376 (US2015016317A)

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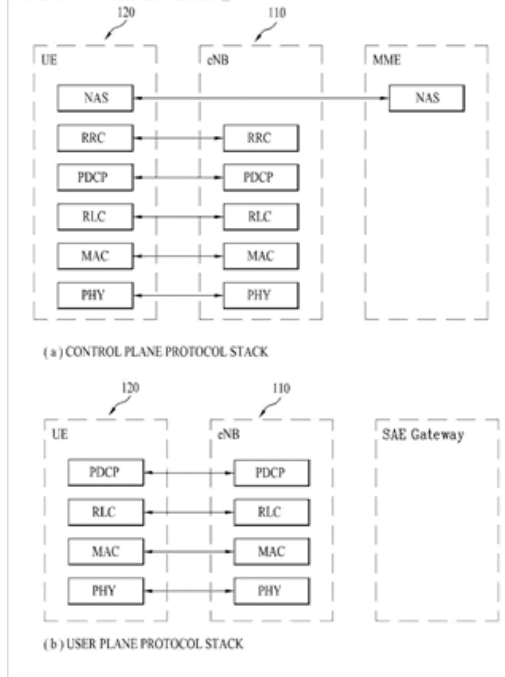
Title: METHOD FOR CONTROLLING TRANSMISSION POWER OF SOUNDING REFERENCE SIGNAL IN WIRELESS COMMUNICATION SYSTEM AND APPARATUS FOR SAME

Abstract: In the present invention, disclosed is a method for a terminal, which receives a downlink signal from a first base station and transmits an uplink signal to a second base station, transmitting a sounding reference signal (SRS) in a wireless communication system. More specifically, the method comprises the steps of: receiving from the first base station downlink control information including a triggering message of a first SRS; determining transmission power of the first SRS on the basis of the downlink control information; and transmitting the first SRS to the first base station with the transmission power that is determined, wherein a transmission power control command field, which is included in the downlink control information, is applied to a closed loop parameter for determining the transmission power of the first SRS.

Classifications:

International (IPC 8-9): H04B7/00 H04B7/26 H04J11/00 H04J3/00
H04L1/16 H04L1/18 H04L27/26 H04L5/00 H04L5/14 H04W24/10
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H04W52/36 H04W52/38 H04W52/48 H04W56/00 H04W72/04
H04W76/02 (Advanced/Invention);
H04L5/14 H04W52/14 H04W52/16 H04W52/40 (Advanced/Non-invention)

CPC: H04W52/143 H04W72/042 H04W72/0413 H04W52/48
H04W52/16 H04W52/247 H04W52/248 H04W52/325 H04W52/40
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H04B7/2643 H04L5/14 H04W24/10 H04L5/0051 H04L5/1469
H04W52/146 H04B7/2603 H04J11/0023 H04L5/0016 H04L5/0035
H04L5/0048 H04L5/0055 H04L5/0057 H04L27/261
US: 1/1 370/280 370/329

**Family:**

Publication number	Publication date	Application number	Application date
CN104321994 A	20150128	CN201380015723	20130320
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Priority:

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Probable Assignee: LG ELECTRONICS**Assignee(s):** (std): LG ELECTRONICS ; LG ELECTRONICS INC**Inventor(s):** (std): YANG SUCKCHEL ; YANG SUCK CHEL ; SEO HANBYUL ; SEO HAN BYUL ; PARK JONGHYUN ; PARK JONG HYUN ; KIM KIJUN ; KIM KI JUN ; KIM HAKSEONG ; KIM HAK SEONG ; KIM BYOUNGHOON ; KIM BYOUNG HOON**Agent(s):** BIRCH STEWART KOLASCH AND BIRCH LLP; LEE HONG DEGERMAN KANG WAIMEY; KIM YONG IN ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: LOGICAL CHANNEL PRIORITIZATION PROCEDURE FOR GENERATING MULTIPLE UPLINK TRANSPORT BLOCKS

Abstract: The invention relates to methods for scheduling of uplink transmission and generating transport blocks according to multiple received uplink assignments. Furthermore, the invention is also related to the implementation of these methods in hardware and software. To propose strategies for generating plural transport blocks within a given time constraint, the invention introduces prioritization of the uplink assignments, so that multiple uplink assignments can be ranked in the mobile terminal in a priority order. The prioritization of the uplink assignments is used to determine the order in which the individual transport blocks corresponding to the uplink assignments are filled, respectively how the data of different logical channels is multiplexed to the transport blocks for transmission in the uplink. Another aspect of the invention is to suggest joint logical channel procedures that operate on virtual transport blocks accumulated from the received uplink assignments. One or more such joint logical channel procedure can be performed in parallel.

Classifications:

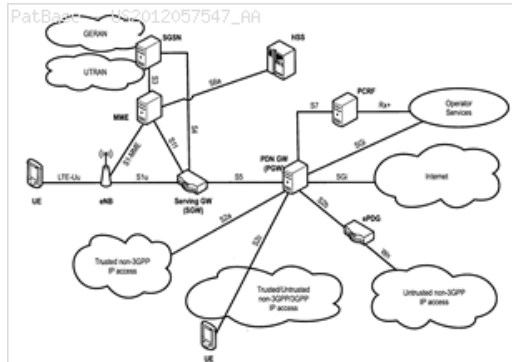
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H04W52/14 H04W52/30 H04W56/00 (Advanced/Non-invention);
H04W52/00 H04W56/00 (Core/Invention)

CPC: H04L5/0007 H04L5/0039 H04L5/0064 H04L5/0092 H04L5/0094 H04W72/1242 H04W72/1268 H04W72/04 H04W56/0045 H04W52/325 H04W72/0413 H04W74/006 H04W52/38 H04W52/50 H04W52/146 H04W52/281 H04W52/327 H04W52/34 H04W52/346 H04W74/004 H04W74/0833

European: H04L5/00A2A1 H04L5/00C2A H04L5/00C7C H04L5/00E1 H04L5/00E2 H04W52/28D H04W52/32M H04W52/34N H04W72/12B6 T04W52/14U T04W72/12D2

US: 1/1 370/318 370/329 370/329P 370/336 455/127.1 455/522

**Family:**

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HU039712 T2	20190228	HU20140166105T	20110401
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IN201938023771 A	20190823	IN201938023771	20190614
JP2012525030 T2	20121018	JP20120506362T	20100401
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JP2015008532 A2	20150115	JP20140190353	20140918
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LT2760241 T	20180910	LT20140166105T	20110401
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PT2760241 T	20181012	PT20140166105T	20110401

RS57612 B1	20181130	RS20180001004	20110401
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US10349361 BB	20190709	US20180141829	20180925
US10588093 BB	20200310	US20190390968	20190422
WO10121708 A1	20101028	WO2010EP02119	20100401
WO11120716 A1	20111006	WO2011EP01658	20110401
ZA201207271 A	20131223	ZA20120007271	20120928

Priority:

EP20090005727	20090423	EP20090013642	20091029	EP20100712364	20100401
EP20130174017	20100401	WO2010EP02119	20100401	CN201180027312	20110401
EP20110712183	20110401	EP20140166105	20110401	JP20130501697	20110401
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JP20170114668	20110401	US20110265468	20111115	IN2012KN02766	20120921
US20120637607	20121116	US20140179340	20140212	EP20140166105	20140425
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JP20160188518	20160927	JP20170114668	20170609	US20180141829	20180925
JP20180182685	20180927	US20190390968	20190422	US20200773209	20200127

Probable Assignee: SUN PATENT TRUST

Assignee(s): (std): AOYAMA TAKAHISA ; FEUERSAENGER MARTIN ; LOEHR JOACHIM ; MATSUSHITA ELECTRIC INDUSTRIAL CO LTD ; PANASONIC CORP ; PANASONIC IP CORP AMERICA ; PANASONIK INTELLEKCHUAL PROPERTI KORPOREHJSHN OF AMERIKA ; SUN PATENT TRUST

Assignee(s): SUN PATENT TRUST NEW YORK ; PANASONIC CORP1006, OAZA KADOMAKADOMA-SHI571-8501OSAKAJP ; PANASONIC INTELLECTUAL OF AMERICA CORP200 - 20000 MARINER AVENUETORRANCECA90503US ; PANASONIC INTELLECTUAL PROPERTY CORP OF AMERICA ; PANASONIC INTELLECTUAL PROPERTY OF AMERICA CORP ; PANASONIC INTELLECTUAL PROPERTY OF AMERICA TORRANCE CORP

Inventor(s): (std): AOJAMA TAKAKHISA ; AOYAMA TAKAHISA ; FIRESANGER MARTIN ; FOJERZENER MARTIN ; JOACHIM LOEHR ; LER JOAKHIM ; LOEHR JOACHIM ; MARTIN FEUERSAENGER ; TAKAHISA AOYAMA ; LOHR JOACHIM ; FEUERSANGER MARTIN ; FEUERSAENGER MARTIN

Inventor(s): FEUERSAENGER MARTINDE ; LOEHR JOACHIMDE ; AOYAMA TAKAHISA CHUO KU ; AOYAMA TAKAHISAJP

Agent(s): GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER ANWALTSSOZIETAET; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER; ELZABURU SLP ELZABURU SLP; FULYA SUEMERALP; SEED IP LAW GROUP PLLC; SEED IP LAW GROUP LLP; HERMANN FELIX; KUHLE DIETMAR

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 61183537 (US2017142666A)

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Title: TERMINAL DEVICE, BASE STATION APPARATUS, AND COMMUNICATION METHOD

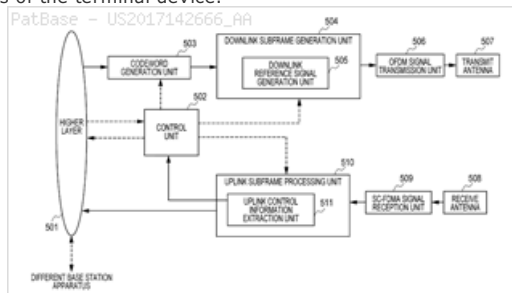
Abstract: A terminal device that communicates with a base station apparatus includes a transmission unit that transmits a channel and/or a signal based on a maximum output power in a first cell group in a certain subframe. The maximum output power in the first cell group is a sum of a power that is determined based on uplink transmission in the first cell group in a certain subframe and a power that is allocated to the first cell group, of a residual power. The residual power is given by subtracting the power that is determined based on the uplink transmission in the first cell group in the certain subframe and a power for a second cell group from a sum of maximum output powers of the terminal device.

Classifications:

International (IPC 8-9): H04L1/18 H04L5/00 H04W16/32 H04W52/14 H04W52/16 H04W52/30 H04W52/32 H04W52/34 H04W52/36 H04W52/38 H04W72/04 H04W92/20 (Advanced/Invention)

CPC: H04W52/146 H04W52/16 H04W52/34 H04W52/367 H04W16/32 H04W72/04 H04W92/20 H04L1/1893 H04L5/0055 H04W52/325 H04W52/346 H04W72/0413

US: 1/1 455/522



Family:

Publication number	Publication date	Application number	Application date
■ CN106416390 A	20170215	CN201580026925	20150618
■ CN106416390 B	20200214	CN201580026925	20150618
■ EP3160195 A1	20170426	EP20150809436	20150618
■ EP3160195 A4	20171220	EP20150809436	20150618
■ EP3160195 B1	20191113	EP20150809436	20150618
■ JP2015194634 A1	20170420	JP20160529514T	20150618
■ JP6587612 B1	20191009	JP20160529514T	20150618
■ US2017142666 AA	20170518	US20150319713	20150618
■ US9807707 BB	20171031	US20150319713	20150618
■ WO15194634 A1	20151223	WO2015JP67607	20150618

Priority:

JP20140126933 20140620 WO2015JP67607 20150618

Probable Assignee: SHARP KK

Assignee(s): (std): SHARP KK ; SHARP CORP

Inventor(s): (std): KUSASHIMA NAOKI ; NOGAMI TOSHIZO ; OUCHI WATARU ; RUIZ DELGADO ALVARO ; SHIMEZAWA KAZUYUKI

Agent(s): MUELLER HOFFMANN AND PARTNER; HARAKENZO WORLD PATENT AND TRADEMARK; BIRCH STEWART KOLASCH AND BIRCH LLP; NISHIZAWA KAZUYOSHI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 62659602 (US2017318575A)

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Title: METHOD FOR TRANSMITTING UPLINK CONTROL INFORMATION AND DEVICE THEREFOR

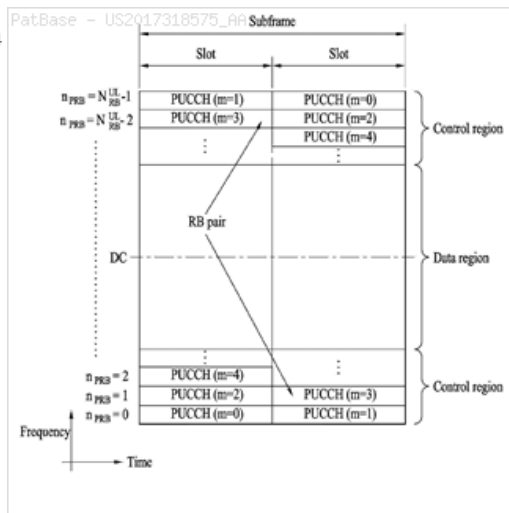
Abstract: A method for transmitting uplink control information in a wireless communication system according to an embodiment of the present invention, which is performed by a terminal, may comprise the steps of: determining the number of coded symbols according to the payload size of uplink control information to be transmitted; and mapping the uplink control information to an uplink resource according to the determined number of the coded symbols, wherein the number of the coded symbols is determined using a parameter selected according to the payload size of the uplink control information to be transmitted.

Classifications:

International (IPC 8-9): A61M5/142 A61M5/145 F04B43/00 F15C3/04 H04L1/16 H04L1/18 H04L27/26 H04L5/00 H04W24/10 H04W28/04 H04W72/04 H04W72/12 H04W80/00 (Advanced/Invention)

CPC: H04L1/1664 H04L1/1671 H04L1/1861 H04L1/1864 H04L1/1896 H04L5/00 A61M5/142 A61M5/14224 A61M5/145 A61M5/14593 A61M2205/12 F04B17/00 F04B19/006 F04B43/02 F04B43/043 F15C3/04 H04L1/1806 H04L5/0044 H04W24/10 H04W72/1226 H04W72/1284 H04L1/1812 H04L5/0007 H04L5/0053 H04L5/001 H04L5/0055 H04W72/0413 H04W72/0446 H04W72/0453

US: 1/1 370/330



Family:

Publication number	Publication date	Application number	Application date
■ CA2967281 AA	20170510	CA20152967281	20151208
■ CN107005374 A	20170801	CN201580066325	20151208
■ EP3232595 A1	20171018	EP20150868113	20151208
■ EP3232595 A4	20180808	EP20150868113	20151208
■ JP2017539124 T2	20171228	JP20170522818T	20151208
■ JP2019134430 A2	20190808	JP20190031559	20151208
■ JP6543341 B2	20190710	JP20170522818T	20151208
■ KR20170093107 A	20170814	KR20177010792	20151208
■ US2017318575 AA	20171102	US20150523640	20151208
■ US10638462 BB	20200428	US20150523640	20151208
■ WO16093600 A1	20160616	WO2015KR13404	20151208
■ WO16149697 A1	20160922	WO2016US23375	20160321

Priority:

US20140089176P 20141208 US20140096903P 20141226 US20150112669P 20150206
US20150132519P 20150313 US20150204487P 20150813 US20150207917P 20150821
US20150222176P 20150922 JP20170522818T 20151208 JP20170522818TT 20151208
WO2015KR13404 20151208 US20150523640 20151208 JP20190031559 20190225

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): LG ELECTRONICS INC ; SFC FLUIDICS INC ; LG ELECTRONICS

Assignee(s): PARK HANJUN ; YANG SUCKCHEL ; AHN JOONKUI ; HWANG DAESUNG ; LEE HYUNHO ; LEE SEUNGMIN

Inventor(s): (std): AHN JOONKUI ; HWANG DAESUNG ; LEE HYUNHO ; LEE SEUNGMIN ; PARK HANJUN ; YANG SUCKCHEL ; YANG SUCK CHEL ; AHN JONG KI ; WASHBURN ANNA ; PAYNE FORREST ; LAMPS GREG

Agent(s): SMART AND BIGGAR; FRENKEL MATTHIAS ALEXANDER; LEE HONG DEGERMAN KANG WAIMEY; KIM YONG IN ET AL; DOUGHERTY J CHARLES

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 62659613 (US2017359745A) © PatBase

Title: METHOD FOR TERMINAL FOR REPORTING CHANNEL STATUS INFORMATION AND APPARATUS FOR THE METHOD IN WIRELESS COMMUNICATION SYSTEM SUPPORTING CARRIER AGGREGATION

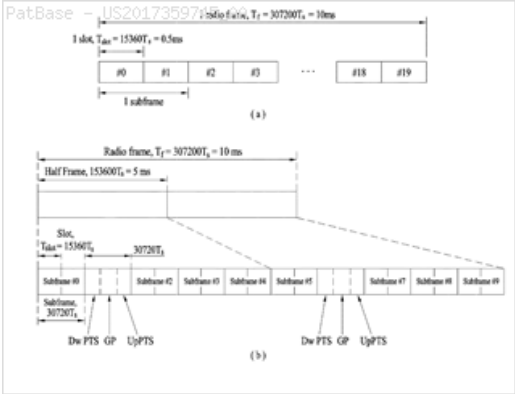
Abstract: A method for a user equipment for reporting aperiodic channel status information in a carrier aggregation system according to one embodiment of the present invention is carried out by the user equipment and may comprise the steps of: receiving DCI, comprising a CSI request field, for approving a downlink from a base station; generating aperiodic CSI for a CSI measurement target included in a particular triggering set corresponding to the particular bit value of the CSI request field; and transmitting the generated aperiodic CSI to the base station.

Classifications:

International (IPC 8-9): H04B17/24 H04B17/309 H04B7/0417 H04B7/0452 H04B7/0456 H04B7/06 H04L1/00 H04L1/16 H04L1/18 H04L25/02 H04L27/26 H04L5/00 H04W24/10 H04W72/04 H04W72/12 H04W72/14 H04W8/22 (Advanced/Invention); H04B7/024 H04W72/04 H04W88/02 H04W88/08 (Advanced/Non-invention)

CPC: H04L1/1664 H04L1/1812 H04B7/0647 H04L1/004 H04L5/0053 H04L5/0005 H04B7/0613 H04L5/0044 H04W72/1289 H04B17/24 H04B17/309 H04L5/0094 H04L5/14 H04L1/00 H04L1/18 H04L5/0055 H04W72/0406 H04W72/044 H04W72/14 H04W88/02 H04W88/08 H04B7/024 H04B7/0456 H04B7/0643 H04B7/065 H04L1/0026 H04L5/0023 H04L5/0035 H04L5/0057 H04L5/0091 H04L1/1887 H04W72/0413 H04L5/0048 H04B7/0452 H04B7/0632 H04B7/0626 H04B7/0417 H04B7/06 H04L5/00 H04L25/0204 H04W8/22 H04L1/0027 H04L1/0031 H04L1/1671 H04L1/1854 H04L5/001 H04W24/10

US: 1/1 370/252 370/329 370/395.4



Family:

Publication number	Publication date	Application number	Application date
■ CN107113045 A	20170829	CN201580070823	20151223
■ EP3240202 A1	20171101	EP20150873648	20151223
■ EP3240202 A4	20180919	EP20150873648	20151223
■ EP3270532 A1	20180117	EP20160765206	20160311
■ EP3270532 A4	20181205	EP20160765206	20160311
■ KR102034592 B1	20191021	KR20177019653	20151223
■ KR20170097702 A	20170828	KR20177019653	20151223
■ KR20170128214 A	20171122	KR20177019652	20160311
■ US2017359745 AA	20171214	US20150529962	20151209
■ US2017359746 AA	20171214	US20150532991	20151209
■ US2017366998 AA	20171221	US20150533600	20151223
■ US2018034526 AA	20180201	US20160550003	20160311
■ US2018097603 AA	20180405	US20160567554	20160512
■ US2018219599 AA	20180802	US20160748387	20160705
■ US10257737 BB	20190409	US20150529962	20151209
■ US10306501 BB	20190528	US20150533600	20151223
■ US10341000 BB	20190702	US20160550003	20160311
■ US10433200 BB	20191001	US20150532991	20151209
■ US10439698 BB	20191008	US20160748387	20160705
■ US10469236 BB	20191105	US20160567554	20160512
■ WO16093618 A1	20160616	WO2015KR13459	20151209
■ WO16093621 A1	20160616	WO2015KR13462	20151209
■ WO16105121 A1	20160630	WO2015KR14183	20151223
■ WO16148450 A1	20160922	WO2016KR02472	20160311
■ WO16182363 A1	20161117	WO2016KR05001	20160512
■ WO17034147 A1	20170302	WO2016KR07227	20160705

Priority:

US20140089258P 20141209	US20140096543P 20141224	US20140098336P 20141231
US20150109638P 20150130	US20150132516P 20150313	US20150144979P 20150409
US20150160568P 20150512	US20150204455P 20150813	US20150207919P 20150821
US20150221103P 20150921	US20150238075P 20151006	US20150246134P 20151026
US20150251623P 20151105	US20150529962 20151209	WO2015KR13459 20151209
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US20150533600 20151223	WO2016KR02472 20160311	US20160550003 20160311
WO2016KR05001 20160512	US20160567554 20160512	WO2016KR07227 20160705
US20160748387 20160705		

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): LG ELECTRONICS ; LG ELECTRONICS INC

Inventor(s): (std): HWANG DAESUNG ; KIM KIJUN ; LEE HYUNHO ; LEE SEUNGMIN ; PARK HANJUN ; YANG SUCKCHEL ; YI YUNJUNG ; KIM SEONWOOK ; AHN JOONKUI

Agent(s): CABINET PLASSERAUD; FRENKEL MATTHIAS ALEXANDER; LEE HONG DEGERMAN KANG AND WAIMEY; DENTONS US LLP; BIRCH STEWART KOLASCH AND BIRCH LLP; KIM YONG IN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

12) Family number: 59955631 (US2016330693A)

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Title: METHOD FOR PERFORMING POWER CONTROL, AND USER EQUIPMENT

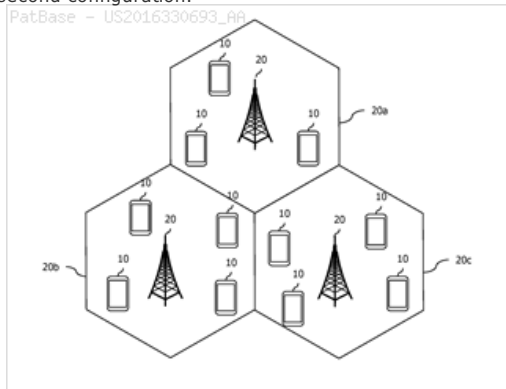
Abstract: A disclosure of the present specification provides a power control method. The method may comprise a step of receiving an upper layer signal by a user equipment (UE) in which dual connectivity between a first cell and a second cell is configured. Here, the upper layer signal may comprise configuration information to be used for the dual connectivity. The configuration information may comprise one of a first configuration and a second configuration. The user equipment (UE) in which the dual connectivity is configured can be connected to a first cell group including the first cell and a second cell group including the second cell, respectively. Here, each cell group may belong to an individual base station (eNodeB). The method may comprise a step of performing power control with regard to an uplink transmission to one or more of the first cell and the second cell, on the basis of one of the first configuration and the second configuration.

Classifications:

International (IPC 8-9): H04W16/32 H04W52/06 H04W52/14 H04W52/28 H04W52/30 H04W52/34 H04W52/36 H04W52/38 H04W52/50 H04W72/04 H04W76/02 H04W76/15 (Advanced/Invention)

CPC: H04W52/146 H04W52/288 H04W52/34 H04W52/367 H04W76/15

US: 1/1 455/522



Family:

Publication number	Publication date	Application number	Application date
■ CN106416387 A	20170215	CN201580005654	20150121
■ CN106416387 B	20190628	CN201580005654	20150121
■ CN110381575 A	20191025	CN201910521225	20150121
■ DE602015031836 D1	20190704	DE201560031836T	20150121
■ EP3099118 A1	20161130	EP20150740045	20150121
■ EP3099118 A4	20170823	EP20150740045	20150121
■ EP3099118 B1	20190612	EP20150740045	20150121
■ EP3496471 A1	20190612	EP20190154337	20150121
■ ES2739887 T3	20200204	ES20150740045T	20150121
■ JP2017504270 T2	20170202	JP20160547886T	20150121
■ JP2020022197 A2	20200206	JP20190196209	20150121
■ JP6611723 B2	20191127	JP20160547886T	20150121
■ KR20160110942 A	20160923	KR20167016296	20150121
■ US2016330693 AA	20161110	US20150111677	20150121
■ US2017325176 AA	20171109	US20170658754	20170725
■ US2018160376 AA	20180607	US20180887236	20180202
■ US2018295585 AA	20181011	US20180007337	20180613
■ US2019215779 AA	20190711	US20190353553	20190314
■ US9749963 BB	20170829	US20150111677	20150121
■ US9924469 BB	20180320	US20170658754	20170725
■ US10028232 BB	20180717	US20170658754	20170725
■ US10165519 BB	20181225	US20180887236	20180202
■ US10595277 BB	20200317	US20180007337	20180613
■ WO15111915 A1	20150730	WO2015KR00631	20150121

Priority:

US20140930468P	20140122	US20140980576P	20140417	US20140003527P	20140527
US20140045535P	20140903	CN201580005654	20150121	EP20150740045	20150121
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US20180007337	20180613	US20190353553	20190314	JP20190196209	20191029

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): LG ELECTRONICS ; LG ELECTRONICS INC

Inventor(s): (std): YI YUNJUNG ; YANG SUCKCHEL ; HWANG DAESUNG ; AHN JOONKUI ; YI YUN JUNG ; YANG SUCK CHEL ; HWANG DAE SUNG ; AHN JOON KUI

Agent(s): CABINET PLASSERAUD; ELZABURU SLP ELZABURU SLP; AOKI ATSUSHI; TSURUTA JUNICHI; BIRCH STEWART KOLASCH AND BIRCH LLP; FISH AND RICHARDSON PC; S AND IP PATENT AND LAW FIRM

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD FOR EXECUTING POWER CONTROL AND USER EQUIPMENT

Abstract: A disclosure of the present specification provides a method for executing power control by a user equipment (UE). The method may include the steps of: determining a first amount of power for transmitting a first uplink control information (UCI) by a user equipment (UE) set to have a dual connectivity with a first cell group and a second cell group; and determining a second amount of power for transmitting a second UCI. Herein, when the first UCI includes HARQ-ACK but the second UCI does not include HARQ-ACK, the determination of the first amount of power may have a priority over the determination of the second amount of power.

Classifications:

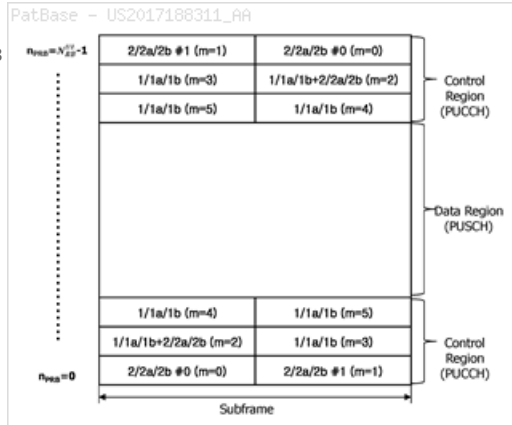
International (IPC 8-9): H04B7/00 H04J99/00 H04L1/18 H04L27/26 H04L5/00 H04W16/32 H04W28/04 H04W4/00 H04W52/14 H04W52/18 H04W52/28 H04W52/30 H04W52/34 H04W52/38 H04W72/04

H04W76/15 (Advanced/Invention);

H04W52/28 (Advanced/Non-invention)

CPC: H04W52/38 H04W52/146 H04W52/281 H04W52/34 H04L1/1893 H04L5/0048 H04L5/0055 H04W72/0413

US: 1/1 455/522



Family:

Publication number	Publication date	Application number	Application date
CN106165504 A	20161123	CN201580018826	20150202
EP3131351 A1	20170215	EP20150776874	20150202
EP3131351 A4	20180221	EP20150776874	20150202
EP3573382 A1	20191127	EP20190185418	20150202
JP2017516362 T2	20170615	JP20160559852T	20150202
JP2020080564 A2	20200528	JP20200024992	20150202
KR20160144986 A	20161219	KR20167027168	20150202
US2017188311 AA	20170629	US20150300671	20150202
US2018295586 AA	20181011	US20180007379	20180613
US2019349865 AA	20191114	US20190523271	20190726
US10028230 BB	20180717	US20150300671	20150202
US10420035 BB	20190917	US20180007379	20180613
WO15156486 A1	20151015	WO2015KR01075	20150202

Priority:

US20140977109P 20140409	US20140984003P 20140424	US20140004222P 20140529
US20140055633P 20140925	US20140060589P 20141007	EP20150776874 20150202
JP20160559852T 20150202	US20150300671 20150202	WO2015KR01075 20150202
US20160300671 20160929	US20180007379 20180613	US20190523271 20190726

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): LG ELECTRONICS INC ; LG ELECTRONICS

Inventor(s): (std): AHN JOON KUI ; AHN JOONKUI ; HWANG DAE SUNG ; HWANG DAESUNG ; YANG SUCK CHEL ; YANG SUCKCHEL ; YI YUN JUNG ; YI YUNJUNG

Agent(s): KATERLE AXEL; LEE HONG DEGERMAN KANG WAIMEY; FISH AND RICHARDSON PC; S AND IP PATENT AND LAW FIRM

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: TERMINAL DEVICE, BASE STATION DEVICE, AND METHOD

Abstract: Provided is a terminal device configured to communicate with a base station device. The device includes a transmission unit that, upon transmission of a PRACH in a primary cell in a subframe i_1 of a first CG (transmission of a first PRACH) overlapping transmission of a PRACH in a subframe i_2 of a second CG (transmission of a second PRACH) and the first PRACH being ready to be transmitted in a subframe at least one before the subframe i_1 , transmits the first PRACH.

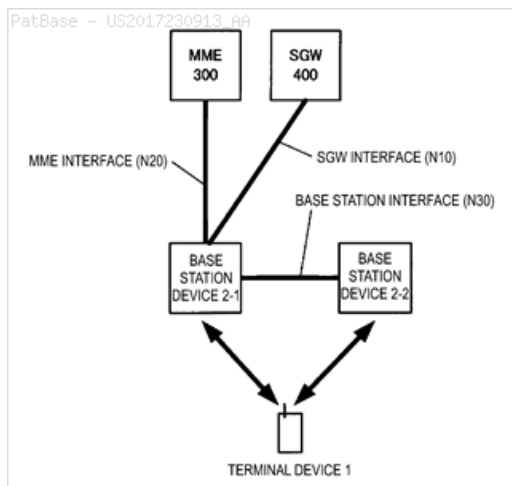
Classifications:

International (IPC 8-9): H04J11/00 H04W16/32 H04W52/30 H04W52/34 H04W56/00 H04W72/04 H04W74/08 (Advanced/Invention)

CPC: H04W52/34 H04W52/30 H04W74/0833 H04W56/0045

H04W84/045 H04W52/50 H04J11/0023

US: 1/1 370/328



Family:

Publication number	Publication date	Application number	Application date
JP2016021597 A1	20170608	JP20160540247T	20150804
US2017230913 AA	20170810	US20150502103	20150804
WO16021597 A1	20160211	WO2015JP72095	20150804

Priority:

JP20140160982 20140807 WO2015JP72095 20150804

Probable Assignee: SHARP KK

Assignee(s): (std): SHARP KK

Inventor(s): (std): HAYASHI TAKASHI ; IMAMURA KIMIHIKO ; KUSASHIMA NAOKI ; NOGAMI TOSHIZO ; OUCHI WATARU ; RUIZ DELGADO ALVARO ; SHIMEZAWA KAZUYUKI

Agent(s): NISHIZAWA KAZUYOSHI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

15) Family number: 63003683 (US2018006790A)

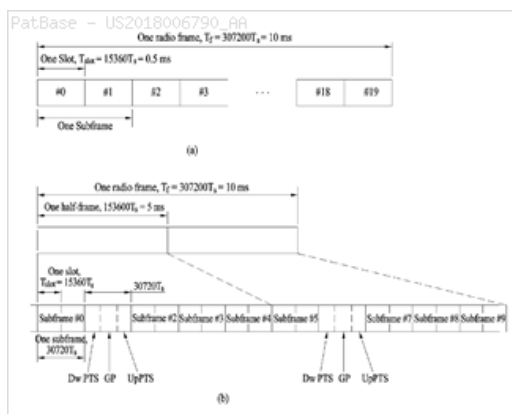
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Title: METHOD FOR TRANSMITTING UPLINK CONTROL INFORMATION AND APPARATUS THEREFOR

Abstract: A method for transmitting uplink control information and an apparatus therefor are disclosed. In a method for transmitting uplink control information using a physical uplink shared channel (PUSCH) in a wireless communication system, the method is performed by a terminal and includes receiving downlink control information including an accumulated number of physical downlink shared channels (PDSCH) transmissions associated with a cell group configured for the terminal, coding the uplink control information using the accumulated number of PDSCH transmissions, and transmitting the coded uplink control information using the PUSCH.

Classifications:

International (IPC 8-9): H04L1/16 H04L1/18 H04L5/00 H04L5/14 H04W28/04 H04W28/16 H04W72/04 (Advanced/Invention); H04L5/14 (Advanced/Non-invention)
CPC: H04L5/001 H04L5/0055 H04L5/1469 H04L1/1664 H04L1/1671 H04L1/1854 H04L1/1861 H04L1/18 H04L1/1812 H04L1/1887 H04W72/0413
US: 1/1 370/329



Family:

Publication number	Publication date	Application number	Application date
AU2016209801 AA	20170713	AU20160209801	20160120
AU2016209801 AA	20160728	AU20160209801	20160120
AU2016209801 BB	20190117	AU20160209801	20160120
AU2019202687 AA	20190509	AU20190202687	20190417
CN107210889 A	20170926	CN201680006345	20160120
EP3248320 A1	20171129	EP20160740402	20160120
EP3248320 A4	20180912	EP20160740402	20160120
EP3627750 A1	20200325	EP20190208910	20160120
JP2017539182 T2	20171228	JP20170533550T	20160120
JP2019041424 A2	20190314	JP20180235530	20160120
JP6454786 B2	20190116	JP20170533550T	20160120
KR20170107426 A	20170925	KR20177014689	20160120

US2018006790 AA	20180104	US20160545240	20160120
US2020112417 AA	20200409	US20190704785	20191205
US10523397 BB	20191231	US20160545240	20160120
WO16117929 A1	20160728	WO2016KR00593	20160120

Priority:

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US20150209314P	20150824	US20150216348P	20150909	AU20160209801	20160120
JP20170533550T	20160120	EP20160740402	20160120	JP20170533550TT	20160120
US20160545240	20160120	WO2016KR00593	20160120	US20170545240	20170720
JP20180235530	20181217	AU20190202687	20190417	US20190704785	20191205

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): LG ELECTRONICS ; LG ELECTRONICS INC

Inventor(s): (std): AHN JOONKUI ; HWANG DAESUNG ; LEE SEUNGMIN ; PARK HANJUN ; YANG SUCKCHEL ; AHN JONG KI

Agent(s): WATERMARK INTELLECTUAL PROPERTY PTY LTD; GRIFFITH HACK; CABINET PLASSERAUD; PLASSERAUD IP; LEE HONG DEGERMAN KANG WAIMEY; KIM YONG IN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

16) Family number: 63003734 (US2018006788A)

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Title: CARRIER AGGREGATION METHOD PERFORMED BY TERMINAL IN WIRELESS COMMUNICATION SYSTEM AND TERMINAL USING SAME METHOD

Abstract: The present invention provides a massive carrier aggregating method performed by a terminal in a wireless communication system, the method comprising the steps of: controlling a plurality of sounding reference signal (SRS) transmission powers with respect to a plurality of SRS cells to be triggered, respectively; and simultaneously transmitting a plurality of SRSs relating to the plurality of SRS cells to be triggered to a network, wherein the plurality of SRS transmission powers are different from each other.

Classifications:

International (IPC 8-9): H04L12/28 H04L5/00 H04W28/08

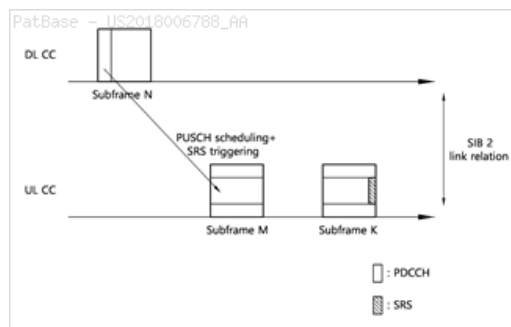
H04W52/32 H04W52/50 (Advanced/Invention);

H04L5/14 (Advanced/Non-invention)

CPC: H04L5/0051 H04W52/32 H04L5/001 H04L5/0023 H04L5/0091

H04L5/14 H04W52/325

US: 1/1 370/329



Family:

Publication number	Publication date	Application number	Application date
CA2974656 AA	20170721	CA20162974656	20160122
US2018006788 AA	20180104	US20160545444	20160122
US10355843 BB	20190716	US20160545444	20160122
WO16117974 A1	20160728	WO2016KR00749	20160122

Priority:

US20150106232P	20150122	US20150112736P	20150206	US20150115161P	20150212
WO2016KR00749	20160122	US20160545444	20160122		

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): LG ELECTRONICS ; LG ELECTRONICS INC

Assignee(s): YANG SUCKCHEL ; HWANG DAESUNG ; KIM SEONWOOK ; LEE SEUNGMIN

Inventor(s): (std): LEE SEUNGMIN ; HWANG DAESUNG ; YANG SUCKCHEL ; KIM SEONWOOK

Agent(s): SMART AND BIGGAR; DENTONS US LLP; ENVISION PATENTAND LAW FIRM

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

17) Family number: 62005744 (US2017280441A)

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Title: TERMINAL DEVICE, BASE STATION APPARATUS, AND COMMUNICATIONS METHOD

Abstract: Provided is a terminal device that communicates with a base station apparatus using a first cell group and a second cell group. The terminal device includes a higher-layer processing unit that sets guarantee power in the first cell group and guarantee power in the second cell group. In a case where a radio link failure occurs in a serving cell belonging to the second cell group, the guarantee power in the first cell group and/or the guarantee power in the second cell group are changed.

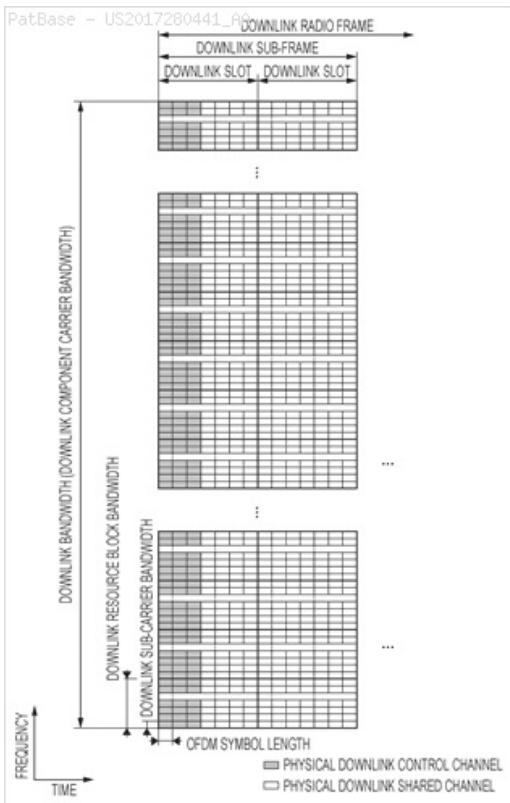
Classifications:

International (IPC 8-9): H04W52/34 H04W52/44

H04W72/04 (Advanced/Invention)

CPC: H04W72/04 H04W72/0413 H04W72/0446 H04W88/02

H04W52/44 H04W88/08 H04W52/146 H04W52/281 H04W52/325



Family:

Publication number	Publication date	Application number	Application date
JP2017208582 A2	20171124	JP20140196213	20140926
US2017280441 AA	20170928	US20150506142	20150925
WO16047747 A1	20160331	WO2015JP77078	20150925

Priority:

JP20140196213 20140926 WO20151P77078 20150925

Probable Assignee: SHARP KK

Assignee(s): (std): SHARP KK

Assignee(s): SHARP CORP

Inventor(s): (std): HAYASHI TAKASHI ; IMAMURA KIMIIHIKO ; KUSASHIMA NAOKI ; OUCHI WATARU ; RUIZ DELGADO ALVARO ; SHIMEZAWA KAZUYUKI ; SHISAWA TOSHIYUKI ; LUIS DELGADO ARBARO ; KUSAJIMA NAOKI

Agent(s): NISHIZAWA KAZUYOSHI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UB UG UZ VC VN ZA ZM ZW

18) Family number: 62803797 (US2017367058A)

Title: LATENCY REDUCTION IN LTE SYSTEMS

Abstract: Systems, methods, and instrumentalities are disclosed for a wireless transmit/receive unit (WTRU) autonomously synchronizing. For example, a WTRU may be configured to receive a downlink timing synchronization. The WTRU may be configured to determine a synchronization signal. The WTRU may be configured to determine a synchronization mode. The synchronization mode may be RRC CONNECTED mode. The synchronization mode may be RRC IDLE mode. The WTRU may communicate data to the network while in an unsynchronized state in an RRC IDLE and/or an RRC CONNECTED mode. The communication of data while unsynchronized may reduce latency relative to one or more of a random access channel (RACH) procedure, a resource radio control (RRC) connection establishment procedure, or a data packet scheduling, for example.

Classifications:

International (IPC 8-9): H04J3/00 H04W52/14 H04W52/24
H04W56/00 H04W72/04 H04W76/04 H04W76/27 (Advanced/Invention)
CPC: H04W76/046 H04W56/0045 H04W56/001 H04W76/27
H04W52/246 H04W72/0413 H04W72/0446

US: 1/1 370/336



Family:

Publication number	Publication date	Application number	Application date
■ CN107409370 A	20171128	CN201580076720	20151223
■ EP3238491 A1	20171101	EP20150831091	20151223
■ US2017367058 AA	20171221	US20150539173	20151223
■ US2019014548 AA	20190110	US20180130223	20180913
■ US10111190 BB	20181023	US20150539173	20151223
■ WO16105570 A1	20160630	WO2015US00474	20151223

Priority:

US20140096221P 20141223 US20150219981P 20150917 WO2015US00474 20151223
US20150539173 20151223 US20170539173 20170623 US20180130223 20180913

Probable Assignee: IDAC HOLDINGS INC

Assignee(s): (std) IDAC HOLDINGS INC ; INTERDIGITAL PATENT HOLDINGS ; INTERDIGITAL PATENT HOLDINGS INC

Inventor(s): (std) GHYSLAIN PELLETIER ; MARINIER PAUL ; PANI DIANA ; PELLETIER GHYSLAIN

Agent(s): AWAPATENT AB; CONDO ROCCIA KOPTIW LLP; ROCCIA VINCENT J

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

19) Family number: 48312837 (US2011205981A)

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Title: MULTIPLEXING UPLINK L1/L2 CONTROL AND DATA

Abstract: Methods and systems for transmitting scheduling requests in an LTE Advanced system are disclosed. Scheduling requests may be superimposed on HARQ ACK/NACK by multiplying the HARQ ACK/NACK by a value. Alternatively, scheduling requests may be channel-coded and multiplexed with other uplink control information. Scheduling requests can also be superimposed on reference signals by multiplying a reference signal by a value or by modulating a reference signal with a cyclic shift. Scheduling requests may also be jointly coded with HARQ ACK/NACK prior to transmission. Alternatively, ACK/NACK responses may be transmitted on assigned ACK/NACK PUCCH resources for a negative scheduling request transmission and on assigned scheduling request PUCCH resources for a positive scheduling request. Various collision handling mechanisms are also disclosed.

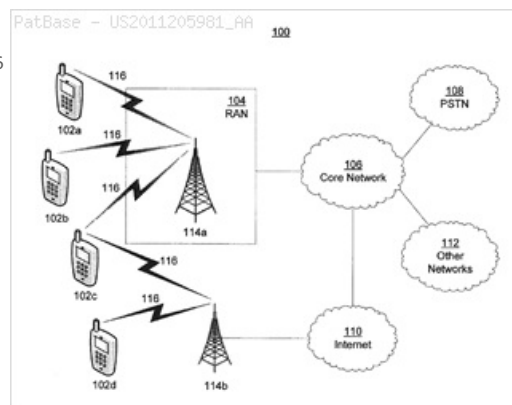
Classifications:

International (IPC 8-9): H04B1/7097 H04B7/26 H04J11/00 H04J13/16 H04L H04L1/00 H04L1/16 H04L1/18 H04L12/26 H04L27/26 H04L5/00 H04Q7/00 H04W H04W24/00 H04W24/08 H04W24/10 H04W28/04 H04W4/00 H04W48/16 H04W72/00 H04W72/04 H04W72/10 H04W72/12 H04W74/04 H04W74/08 H04W80/04 (Advanced/Invention); H04L1/12 H04W48/16 H04W72/00 (Advanced/Non-invention); H04J11/00 H04L1/16 H04L5/00 H04W74/04 (Core/Non-invention); H04L (Subclass/Invention)

CPC: H04L5/0058 H04W72/1284 H04L1/0073 H04L5/0055 H04L1/007 H04L5/0048 H04L2001/125 H04W48/16 H04W72/00 H04W28/04 H04W72/12 H04B1/7097 H04B2201/698 H04B2201/7097 H04L1/001 H04L1/0057 H04L1/1822 H04L5/0016 H04W74/0841 H04L1/0026 H04L5/0007 H04W24/10 H04W24/08 H04W72/0413 H04W72/0446 H04W72/10 H04L1/0023 H04L1/0027 H04L1/0028 H04L1/1671 H04L5/001 H04L5/0053

European: H04L1/00A9C H04L1/00B7U H04L1/00B8F H04L1/16F15 H04L5/00C5 H04L5/00C6 H04L5/00C7 H04W72/12F2 T04L1/00A9 T04W28/04 T04W48/16 T04W72/00

US: 1/1 370/252 370/252P 370/328 370/328P 370/329 370/329P 370/329S



Family:

Publication number	Publication date	Application number	Application date
■ BR112012007487 A2	20170822	BR20121107487	20101001
■ CN102577209 A	20120711	CN201080044439	20101001
■ CN102577209 B	20170405	CN201080044439	20101001
■ CN102812658 A	20121205	CN201180005680	20110107
■ CN102812658 B	20151216	CN201180005680	20110107
■ CN105450360 A	20160330	CN201510783156	20110107
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■ CN107104780 A	20170829	CN201710177925	20101001
■ DE602010063887 D1	20200423	DE201060063887T	20101001
■ DK2484039 T3	20181022	DK20100773757T	20101001
■ EP2484039 A1	20120808	EP20100773757	20101001
■ EP2484039 B1	20180815	EP20100773757	20101001
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■ EP2765730 A2	20140813	EP20130173706	20110107
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■ EP3267610 A1	20180110	EP20170182403	20101001
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■ HK1170606 A1	20130301	HK20120111195	20121107
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■ IN06156DN2012 A	20131206	IN2012DN06156	20120711
■ IN318113 B	20190816	IN2012DN06156	20120711
■ JP2013507067 T2	20130228	JP20120532340T	20101001
■ JP2013516921 T2	20130513	JP20120548177T	20110107
■ JP2015092716 A2	20150514	JP20140257783	20141219

JP2016208553 A2	20161208	JP20160177595	20110107
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Priority:

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JP20190153105	20190823				

Probable Assignee: INTERDIGITAL PATENT HOLDINGS INC

Assignee(s): (std): BELURI MIHAEL C ; BELURI MIHAELA C ; CAVE CHRISTOPHER ; DENNEAN CHARLES A ; DICK STEPHEN G ; FAZILI MUHAMMAD U ; FAZILI MUHAMMED U ; HAIM JOHN W ; INTERDIGITAL PEHTENT KOLDINGZ INK ; INTERDIGITAL PATENT HOLDINGS ; INTERDIGITAL PATENT HOLDINGS INC ; IYER LAKSHMI R ; KOO CHANGSOO ; MARINIER PAUL ; NAYEB NAZAR SHAHROKH ; OLESEN ROBERT L ; PAN KYLE ; PAN KYLE JUN LIN ; PAN KYLE JUNG LIN ; PELLETIER GHYSLAIN ; RUDOLF MARIAN ; SHIN SUNG HYUK H ; STERN BERKOWITZ JANET A ; TSAI ALLAN Y

Assignee(s): INTERDIGITAL PATENT HOLDINGS INC WILMINGTON

Inventor(s): (std): CHRISTOPHER CAVE ; DENNEAN CHARLES A ; DICK STEPHEN G ; FAZILI MUHAMMAD U ; FAZILI MUHAMMED U ; GHYSLAIN PELLETIER ; HAIM JOHN W ; IYER LAKSHMI R ; KOO CHANGSOO ; BELURI MIHAEL C ; BELURI MIHAELA C ; CAVE CHRISTOPHER ; KYLE PAN ; LAKSHMI R IYER ; MARIAN RUDOLF ; MARINIER PAUL ; CHANGSOO KOO ; MUHAMMAD U FAZILI ; NAYEB NAZAR SHAHROKH ; PAN KYLE ; PAN KYLE JUN LIN ; PAN KYLE JUNG LIN ; PAUL MARINIER ; PAUL MARNIER ; PELLETIER GHYSLAIN ; ROBERT L OLESEN ; RUDOLF MARIAN ; OLESEN ROBERT L ; SHAHROKH NAYEB NAZAR ; SHIN SUNG HYUK H ; STERN BERKOWITZ JANET A ; TSAI ALLAN Y ; ROBERT L OLSEN ; KYLE JUNG LIN PAN ;

CHANG SOO KO ; TSAJ ALLAN J ; RUDOLPH M ; RUDOL F MARIAN ; PELTIER G ; PELLET E GISLEN ; PAN KAJL ; PAN K J L ; OLESEN R L ; NAZAR SHAHROKH NAYEB ; NAYEB NAZAR S ; NAJEB NAZAR SHAKHROKH ; KEJV KRISTOFER ; IYER L R ; FAZLI M U ; DIK STEFEN DZH ; MARINER P ; MARIN E POL ; DENNIN CHARL Z A ; CAVE CHRISTOPHER R ; TSAI ALLAN ; OLESEN ROBERT ; KOO CHANG SOO ; DICK STEPHEN ; DENNEAN CHARLES

Inventor(s): ALLAN Y TSAI ; DENNEAN CHARLES A MELVILLE ; CAVE CHRISTOPHER R MONTREAL ; KOO CHANG SOO MELVILLE ; DICK STEPHEN G NESCONSET ; MARINIER PAUL BROSSARD ; NAYEB NAZAR SHAHROKH SAN DIEGO ; OLESEN ROBERT L HUNTINGTON ; PAN KYLE JUNG LIN SAINT JAMES ; PELLETIER GHYSLAIN MONTREAL ; RUDOLF MARIAN MONTREAL ; TSAI ALLAN Y BOONTON ; STEPHEN G DICK ; PAN, KYLE JUNG-LIN ; PAUL MARINER ; CHARLES A DENNEAN ; CHANG SOO KOO ; KOO, CHANG-SOO

Agent(s): HJALMARSSON MAGNUS AXEL; AWA SWEDEN AB; LOQVIST GABRIEL MATHIAS; AWAPATENT AB; MARKS AND CLERK; REINHOLD COHN AND PARTNERS; TANI AND ABE PC; CONDO ROCCIA KOPTIW LLP; ROCCIA VINCENT J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

20) Family number: 50210904 (US2013100888A)

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Title: MOBILE COMMUNICATION SYSTEM, MOBILE STATION APPARATUS, BASE STATION APPARATUS, AND COMMUNICATION METHOD

Abstract: In communication being performed complexly using a plurality of component carriers, a radio resource is efficiently used. A mobile communication system in which a base station apparatus and a mobile station apparatus communicate with each other through the use of the plurality of component carriers, in which the base station apparatus sets a particular downlink component carrier to the mobile station apparatus, the mobile station apparatus selects a first arrangement method for uplink control information when only a physical downlink shared channel in the particular downlink component carrier is scheduled by the base station apparatus, and in which the mobile station apparatus selects a second arrangement method for the uplink control information when at least one of physical downlink shared channels in downlink component carriers other than the particular downlink component carrier is scheduled by the base station apparatus.

Classifications:

International (IPC 8-9): H04W24/10 H04W28/04 H04W28/06

H04W28/18 H04W72/02 H04W72/04 H04W72/12

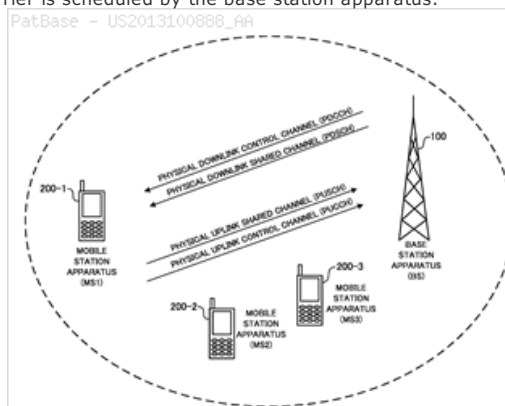
H04W72/14 (Advanced/Invention)

CPC: H04W72/0413 H04L1/1671 H04L1/1861 H04L5/0007

H04W72/02 H04W72/0453 H04W88/02 H04L5/0053

European: H04L1/18R11 H04W72/02 T04L1/16F15 T04L5/00A2A1 T04W28/04

US: 370/328



Family:

Publication number	Publication date	Application number	Application date
JP2011158762 A1	20130819	JP20110554015T	20110610
JP2012114960 A2	20120614	JP20120061633	20120319
JP4959030 B1	20120620	JP20110554015T	20110610
JP4959030 B2	20120620	JP20110554015T	20110610
US2013100888 AA	20130425	US20110704898	20110610
WO11158762 A1	20111222	WO2011JP63414	20110610

Priority:

JP20100139053 20100618 JP20110554015 20110610 JP20110554015T 20110610
WO2011JP63414 20110610 JP20120061633 20120319

Probable Assignee: SHARP KK

Assignee(s): (std): AIBA TATSUSHI ; SHARP KK ; SHIMEZAWA KAZUYUKI

Assignee(s): SHARP CORP ; SHARP KABUSHIKI KAISHA

Inventor(s): (std): AIBA TATSUSHI ; SHIMEZAWA KAZUYUKI ; AIBA TATESHI ; SHISAWA TOSHIYUKI

Agent(s): FUKUCHI TAKEO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

21) Family number: 62057908 (US2016100395A)

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Title: DOWNLINK AND UPLINK CHANNEL WITH LOW LATENCY

Abstract: Certain aspects of the present disclosure provide techniques that may be used to help enable low latency communications between a user equipment (UE) and a base station (BS) using quick uplink channels that enable a reduced transmission time interval (TTI). Additionally, certain aspects of the present disclosure provide techniques for managing communications in a wireless communication system, for example, by using enhanced downlink control channels.

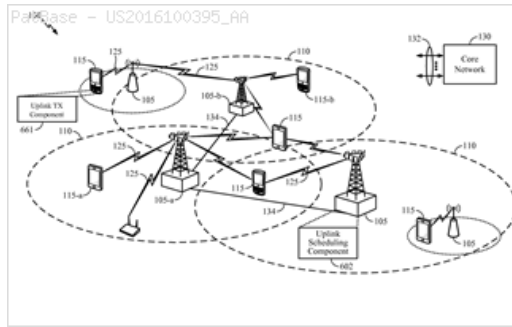
Classifications:**International (IPC 8-9):** H04L1/16 H04L27/26 H04W28/06 H04W4/70

H04W72/04 H04W72/12 (Advanced/Invention);

H04W72/04 (Advanced/Non-invention)

CPC: H04W72/0446 H04W72/1231 H04W72/0413 H04W72/042

H04L1/1607

US: 1/1 370/336**Family:**

Publication number	Publication date	Application number	Application date
AU2015324152 AA	20170316	AU20150324152	20150928
AU2015324152 BB	20190117	AU20150324152	20150928
AU2018275007 AA	20190103	AU20180275007	20181207
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AU2019284020 AA	20200123	AU20190284020	20191220
BR112017006578 A2	20171219	BR20171106578	20150928
CN106797642 A	20170531	CN201580053613	20150928
CN106797642 B	20200424	CN201580053613	20150928
EP3202206 A1	20170809	EP20150775917	20150928
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IN201727006417 A	20170908	IN201727006417	20170223
JP2017536009 T2	20171130	JP20170517709T	20150928
JP2019110551 A2	20190704	JP20190019866	20150928
JP6479972 B2	20190306	JP20170517709T	20150928
JP6679775 B2	20200415	JP20190019866	20150928
JP6679775 B2	20200415	JP20190019866	20190206
KR101979264 B1	20190516	KR20177008988	20150928
KR20170066390 A	20170614	KR20177008988	20150928
KR20190050868 A	20190513	KR20197012751	20150928
US2016100395 AA	20160407	US20150866465	20150925
US2018343649 AA	20181129	US20180052046	20180801
US2020100245 AA	20200326	US20190698521	20191127
US10064165 BB	20180828	US20150866465	20150925
US10624073 BB	20200414	US20180052046	20180801
WO16053844 A1	20160407	WO2015US52592	20150928

Priority:

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AU20150324152	20150928	JP20170517709T	20150928	WO2015US52592	20150928
US20180052046	20180801	AU20180275007	20181207	JP20190019866	20190206
US20190698521	20191127	AU20190284020	20191220		

Probable Assignee: QUALCOMM INC**Assignee(s):** (std): QUALCOMM INC**Assignee(s):** QUALCOMM INCORPORATED**Inventor(s):** (std): ALEKSANDAR DAMNJANOVIC ; CHEN WANSHI ; DAMNJANOVIC ALEKSANDAR ; DURGA PRASAD MALLADI ; GAAL PETER ; HAO XU ; MALLADI DURGA PRASAD ; PETER GAAL ; WANSHI CHEN ; WEI YONGBIN ; XU HAO ; YONGBIN WEI ; WANSI CHEN ; PETER GAHL ; DURGA PRASAD MARADI**Agent(s):** MADDEN PATENT AND TRADE MARK ATTORNEYS; MADDEN PTY LTD; HOHGARDT MARTIN; LUDIYANTO SH MH MM; MORRIS ANTHONY R; READ RANDOL W ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**22) Family number: 62828920 (US2017373741A)**

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Title: UPLINK CONTROL INFORMATION TRANSMITTING METHOD AND USER EQUIPMENT, AND UPLINK CONTROL INFORMATION RECEIVING METHOD AND BASE STATION**Abstract:** The present invention provides a method and device for transmitting/receiving an uplink signal. When an Scell group including only Scells is set for a user equipment of the present invention and one of the Scells included in the Scell group is set as a cell (hereinafter, "Acell") in which a PUCCH can be transmitted, UCI of a particular cell group can be transmitted through a Pcell if the particular cell group is a Pcell group having the Pcell and can be transmitted through the Acell of the Scell group if the particular cell group is an Scell group.**Classifications:****International (IPC 8-9):** H04B7/06 H04L1/16 H04L1/18 H04L27/26

H04L5/00 H04W72/04 H04W72/10 (Advanced/Invention);

H04L12/865 H04L12/927 H04L5/00 H04L5/14

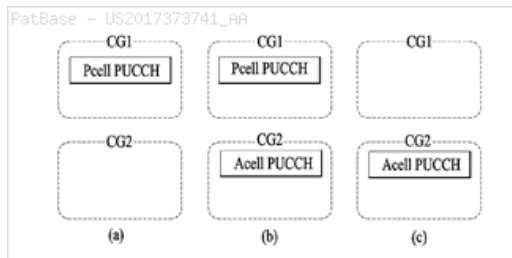
H04W72/12 (Advanced/Non-invention)

CPC: H04B7/0626 H04L1/1671 H04L1/1861 H04L5/001 H04L5/0023

H04L5/0035 H04L5/0048 H04L5/0053 H04L5/0094 H04L5/14

H04L1/18 H04B7/0623 H04L5/0032 H04L5/0055 H04L5/0057

H04L47/6275 H04L47/805 H04W72/0413 H04W72/10 H04W72/1284

US: 1/1 370/252 370/329

Family:

Publication number	Publication date	Application number	Application date
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US2018007681 AA	20180104	US20150540552	20151231
US10264560 BB	20190416	US20150540552	20151231
US10433288 BB	20191001	US20150540939	20151231
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Priority:

US20140098342P	20141231	US20150104044P	20150115	US20150109639P	20150130
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Probable Assignee: LG ELECTRONICS**Assignee(s):** (std): LG ELECTRONICS INC ; LG ELECTRONICS**Inventor(s):** (std): AHN JOONKUI ; LEE SEUNGMIN ; YANG SUCKCHEL**Agent(s):** LEE HONG DEGERMAN KANG WAIMEY; DENTONS US LLP; KIM YONG IN ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**23) Family number: 61650933 (US2017215157A)**

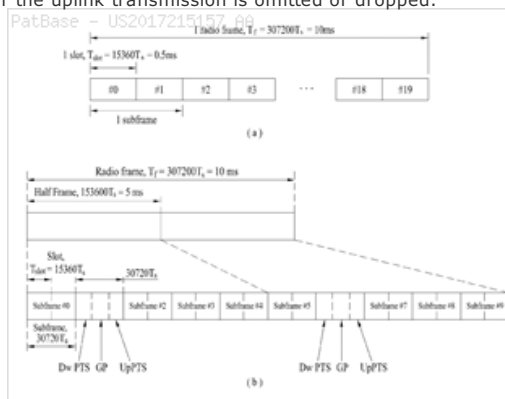
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Title: METHOD FOR TRANSMITTING UPLINK SIGNAL AND USER EQUIPMENT, AND METHOD FOR RECEIVING UPLINK SIGNAL AND BASE STATION

Abstract: The present invention provides a method and a device for controlling uplink transmission on a first cell set in a licensed band and a second cell set in an unlicensed band. In one embodiment of the present invention, when the sum of transmission power required for the first cell and transmission power required for the second cell exceeds maximum power set in user equipment, the transmission power is preferentially allocated to the first cell over the second cell, and the uplink transmission is performed on the first cell within the residual power or the uplink transmission is omitted or dropped.

Classifications:

International (IPC 8-9): H04B7/06 H04B7/26 H04L1/00 H04L1/18 H04L27/26 H04L5/00 H04L5/14 H04W16/14 H04W4/00 H04W52/14 H04W52/28 H04W52/34 H04W52/36 H04W52/38 H04W72/04 H04W72/12 H04W74/08 (Advanced/Invention); H04W52/28 H04W52/36 H04W74/08 (Advanced/Non-invention) **CPC:** H04W52/146 H04W52/346 H04W72/0473 H04W72/1268 H04L5/0007 H04L5/001 H04L5/0044 H04L5/0048 H04L5/0057 H04L5/1469 H04W52/281 H04W52/34 H04W52/365 H04W52/367 H04W52/38 H04B7/26 H04L1/18 H04B7/2612 H04B7/2643 H04W72/0413 H04W72/0446 H04B7/0626 H04L1/1864 H04L5/14 H04L27/2601 H04W16/14 H04W72/042

US: 1/1 370/280 370/329**Family:**

Publication number	Publication date	Application number	Application date
CN106537995 A	20170322	CN201580039446	20150806
CN106537995 B	20191210	CN201580039446	20150806
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DE602015042237 D1	20191212	DE201560042237T	20150806
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US2017215172 AA	20170727	US20150326013	20150806
US2020068511 AA	20200227	US20190672378	20191101
US10278141 BB	20190430	US20150326013	20150806
WO16021954 A1	20160211	WO2015KR08243	20150806
WO16021958 A1	20160211	WO2015KR08249	20150806

Priority:

US20140033663P	20140806	US20140046186P	20140905	US20140075266P	20141105
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US20150183197P	20150623	CN201580039446	20150806	EP20150829913	20150806
US20150326010	20150806	US20150326013	20150806	WO2015KR08249	20150806
WO2015KR08243	20150806	US20170326010	20170112	US20190672378	20191101

Probable Assignee: LG ELECTRONICS**Assignee(s):** (std): LG ELECTRONICS ; LG ELECTRONICS INC**Inventor(s):** (std): AHN JOONKUI ; KIM SEONWOOK ; LEE SEUNGMIN ; YANG SUCKCHEL ; YANG SUCK CHEL ; LEE SEUNG MIN ; KIM SEON WOOK ; AHN JOON KUI**Agent(s):** WUESTHOFF AND WUESTHOFF PATENTANWALTE PARTG MBB; FRENKEL MATTHIAS ALEXANDER; LEE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

24) Family number: 51511940 (US2013286993A)

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Title: APPARATUS FOR TRANSMITTING CONTROL INFORMATION IN A WIRELESS COMMUNICATION SYSTEM AND METHOD THEREOF

Abstract: The present invention relates to a method of transmitting control information by a user equipment may include the steps of receiving a PDCCH including a CSI request field from the base station via at least one serving cell configured for the user equipment, triggering a report of a 1st control information on an aperiodic CSI to correspond to a value of the received CSI request field, and transmitting the 1st control information and a 2nd control information in a same subframe simultaneously. Moreover, the 1st control information may be transmitted on a PUSCH of the at least one serving cell and the 2nd control information may be transmitted on a PUCCH of the at least one serving cell.

Classifications:

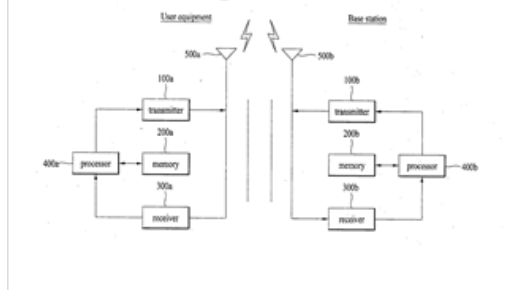
International (IPC 8-9): H04B7/26 H04J11/00 H04L5/00 H04L5/14 H04W24/10 H04W28/04 H04W72/04 (Advanced/Invention); H04L5/14 H04W72/04 (Advanced/Non-invention)

CPC: H04L5/0044 H04L5/0094 H04W72/0406 F01N13/08 F01N2590/02 H04L5/001 H04L5/0057 H04L5/14 H04W72/04 H04L5/0078 H04L5/0053

European: H04L5/00A2A11 T04L5/00C6B T04L5/00C8 T04L5/14

US: 370/329

PatBase - US2013286993_AA



Family:

Publication number	Publication date	Application number	Application date
CN103329464 A	20130925	CN201280005057	20120109
CN103329464 B	20160914	CN201280005057	20120109
CN106130706 A	20161116	CN201610670018	20120109
EP2641349 A2	20130925	EP20120734771	20120109
EP2641349 A4	20171206	EP20120734771	20120109
JP2014505423 T2	20140227	JP20130548362T	20120109
JP5917562 B2	20160518	JP20130548362T	20120109
KR101880460 B1	20180720	KR20120001030	20120104
KR20120081033 A	20120718	KR20120001030	20120104
US2013286993 AA	20131031	US20120979117	20120109
WO12096484 A2	20120719	WO2012KR00199	20120109
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Priority:

US20110431059P 20110110 KR20120001030 20120104 CN201280005057 20120109
WO2012KR00199 20120109 US20120979117 20120109

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): CHUNG JAEHOON ; HAN SEUNGHEE ; LEE HYUNWOO ; LG ELECTRONICS ; LG ELECTRONICS INC

Inventor(s): (std): CHUNG JAE HOON ; CHUNG JAEHOON ; HAN SEUNG HEE ; HAN SEUNGHEE ; LEE HYUN WOO ; LEE HYUNWOO

Agent(s): CABINET PLASSERAUD; KIM YONG IN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW