

1) Family number: 69830135 (US2019342060A)

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Title: NUMEROLOGY-DEPENDENT DOWNLINK CONTROL CHANNEL MAPPING

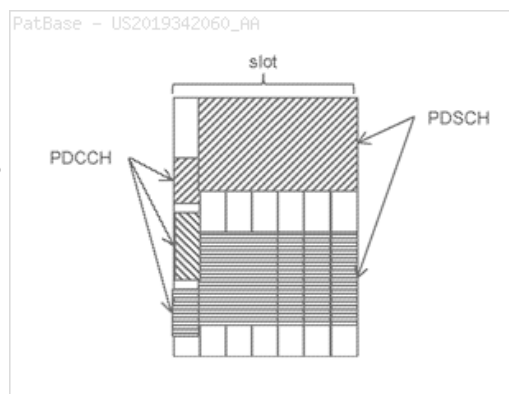
Abstract: A user equipment performs a method comprising: receiving system information indicating a current numerology of a control region with configurable numerology; and decoding the control region in accordance with an assumption of a channel mapping which is selected from at least two predefined channel mappings on the basis of the current numerology. A base station performs a method comprising: transmitting system information indicating a current numerology of a control region with configurable numerology; generating a signal using a channel mapping selected from at least two predefined channel mappings; and transmitting the generated signal in the control region, wherein the channel mapping is selected on the basis of the current numerology of the control region or vice versa.

Classifications:**International (ipc 8-9):** H04L H04L12/28 H04L27/26 H04L5/00

H04W48/08 H04W72/04 (Advanced/Invention)

International (ipc 1-7): H04L27/26 H04L5/00**CPC:** H04L5/0023 H04L5/0053 H04L5/0064 H04L5/0092 H04L27/2602**JP F-Term:** 5K004 5K067 5K067/AA13 5K067/DD34 5K067/EE02

5K067/EE10 5K067/EE64

JP F-Index: H04L27/26/110 H04L27/26/410 H04W48/08 H04W72/04/136**Family:**

Publication number	Publication date	Application number	Application date
BR112019008382 A2	20190709	BR20191108382	20171117
CN109964466 A	20190702	CN201780071237	20171117
EP3542502 A1	20190925	EP20170805301	20171117
HK40004741 A1	20200429	HK20190128227	20190815
ID201903826 A	20190531	ID2019P0004191	20171117
IN201947019344 A	20190524	IN201947019344	20190515
JP2020511012 T2	20200409	JP20190525842T	20171117
MA45821 A1	20191031	MA20170045821	20171117
MX2019005519 A1	20190812	MX20190005519	20171117
RU2719292 C1	20200417	RU20190118291	20171117
US2019342060 AA	20191107	US20170337865	20171117
US2020220699 AA	20200709	US20200820358	20200316
US10637632 BB	20200428	US20170337865	20171117
WO18093325 A1	20180524	WO2017SE51140	20171117
WO18093325 A8	20190509	WO2017SE51140	20171117

Priority:

US20160423254P 20161117 US20170337865 20171117 WO2017SE51140 20171117
 US20190337865 20190328 US20200820358 20200316

Probable Assignee: TELEFONAKTIEBOLAGET LM ERICSSON PUBL**Assignee(s):** (std): ERICSSON AB ; ERICSSON TELEFON AB L M ; TELEFONAKTIEBOLAGET LM ERICSSON PUBL**Inventor(s):** (std): BALDEMAIR ROBERT ; PARKVALL STEFAN ; ROBERT BALDEMAIR ; STEFAN PARKVALL**Agent(s):** ERICSSON; CHINA PATENT AGENT HONG KONG LTD; PARDOMUAN OLOAN LUBIS; YURIDICHESKAYA GORODISSKIJ I PARTNERY OOO FA; WITHROW AND TERRANOVA PLLC; BOU FAICAL ROGER

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

2) Family number: 71405288 (US2018287750A)

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Title: GROUP COMMON CONTROL CHANNEL

Abstract: Methods and systems for group common control channel implementation and use are provided. An embodiment a method in a base station for signaling group common control channel information is provided. The method includes determining

control information common to a group of user equipment (UEs), the control information comprising time-frequency locations for at least one of a plurality of data channels and a plurality of control channels. The control information formatted in a Downlink Control Information (DCI) format. The method also includes encoding the control information in a group common control channel to generate encoded control information. The method also includes transmitting the encoded control information to the group of UEs.

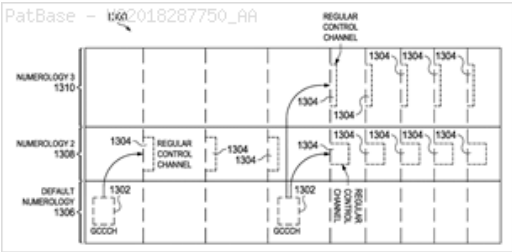
Classifications:

International (IPC 8-9): H04L5/00 H04W72/04 (Advanced/Invention)

CPC: H04L5/0053 H04L5/0094 H04L5/005 H04W72/042 H04W72/0446

H04W72/0453

US: 1/1 370/329



Family:

Publication number	Publication date	Application number	Application date
CN110506442 A	20191126	CN201880020935	20180328
EP3580981 A1	20191218	EP20180775343	20180328
EP3580981 A4	20200219	EP20180775343	20180328
US2018287750 AA	20181004	US20180937559	20180327
US10700837 BB	20200630	US20180937559	20180327
WO18177327 A1	20181004	WO2018CN080902	20180328

Priority:

US20170480075P 20170331 US20180937559 20180327 WO2018CN080902 20180328

Probable Assignee: HUAWEI TECHNOLOGIES CO LTD

Assignee(s): (std): HUAWEI TECH CO LTD

Assignee(s): HUAWEI TECHNOLOGIES CO ; HUAWEI TECHNOLOGIES CO LTD

Inventor(s): (std): ABDOLI JAVAD ; MA JIANGLEI ; TANG ZHENFEI

Agent(s): THUN CLEMENS; SLATER MATSIL LLP

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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: 70077385 (US2018167195A)

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Title: TECHNIQUES FOR UNIFIED SYNCHRONIZATION CHANNEL DESIGN IN NEW RADIO

Abstract: Various aspects described herein relate to techniques for synchronization channel design and signaling in wireless communications systems (e.g., a 5th Generation (5G) New Radio (NR) system). In an aspect, a method includes identifying a frequency band supported by a user equipment (UE), identifying one or more frequency locations based on the identified frequency band, and the one or more frequency locations are a subset of synchronization raster points used for synchronization signal transmission. The method further includes searching for at least one synchronization signal based on the one or more identified frequency locations.

Classifications:

International (IPC 8-9): H04J11/00 H04L27/26 H04L5/00 H04L7/04

H04L7/06 H04L7/10 H04W48/16 H04W56/00 H04W72/04

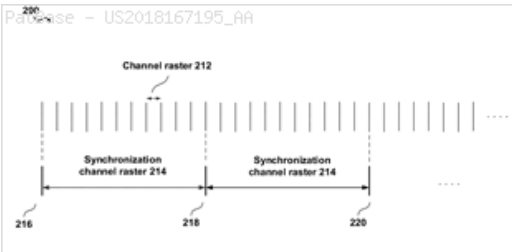
H04W72/12 (Advanced/Invention)

CPC: H04W48/16 H04L5/0098 H04L7/042 H04L7/06 H04L7/10

H04W72/1294 H04J11/0086 H04L5/001 H04L5/0053 H04L27/2613

H04L27/2655 H04W56/0015

US: 1/1 375/350



Family:

Publication number	Publication date	Application number	Application date
CN110036582 A	20190719	CN201780073125	20171212
EP3552329 A1	20191016	EP20170825339	20171212
IN201947017182 A	20190614	IN201947017182	20190430
TW201830913 A	20180816	TW20170143513	20171212
US2018167195 AA	20180614	US20170837871	20171211
US2019222409 AA	20190718	US20190363723	20190325
US10250380 BB	20190402	US20170837871	20171211
US10708037 BB	20200707	US20190363723	20190325
WO18111864 A1	20180621	WO2017US65799	20171212

Priority:

US20160433098P 20161212 US20170837871 20171211 WO2017US65799 20171212

US20190363723 20190325

Probable Assignee: QUALCOMM INC

Assignee(s): (std): QUALCOMM INC
Inventor(s): (std): JI TING FANG ; JI TINGFANG ; LEE HEE CHOON ; LEE HEECHOON ; LY HUNG ; SMEE JOHN EDWARD ; SUN HAI TONG ; SUN HAITONG
Agent(s): WEGNER HANS; ARENT FOX LLP; BINDSEIL JAMES J 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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

4) Family number: 52066459 (US2012250551A)

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Title: SYSTEM AND METHOD FOR TRANSMISSION AND RECEPTION OF CONTROL CHANNELS IN A COMMUNICATIONS SYSTEM

Abstract: A method for transmitting control information to a wireless node includes determining, by a communications controller, a region for the control information in a subframe as at least one of a data region and a control region of the subframe. The method also includes modulating, by the communications controller, the control information, and mapping, by the communications controller, the modulated control information onto resources of the subframe according to the determined region. The method further includes transmitting, by the communications controller, the subframe to the wireless node.

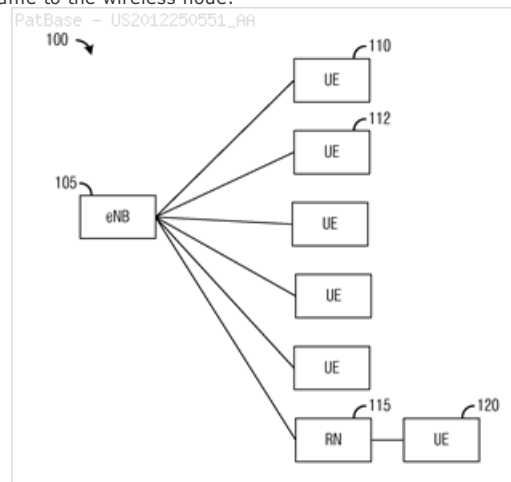
Classifications:

International (IPC 8-9): H04L27/26 H04W24/00 H04W24/10 H04W28/00 H04W4/00 H04W48/12 H04W72/04 H04W80/00 (Advanced/Invention); H04W48/12 H04W72/12 (Advanced/Non-invention)

CPC: H04W48/12 H04W24/10 H04W72/0406 H04W72/042

European: H04W48/12 H04W72/04F4

US: 1/1 370/252 370/329 455/434



Family:

Publication number	Publication date	Application number	Application date
BR112013025199 A2	20161213	BR20131125199	20120401
CN103430617 A	20131204	CN201280012694	20120401
CN103430617 B	20170329	CN201280012694	20120401
EP2671422 A1	20131211	EP20120763491	20120401
EP2671422 A4	20140430	EP20120763491	20120401
EP2671422 B1	20200610	EP20120763491	20120401
RU2013148797 A	20150510	RU20130148797	20120401
RU2573249 C2	20160120	RU20130148797	20120401
US2012250551 AA	20121004	US20120434449	20120329
US2012250641 AA	20121004	US20120436375	20120330
US2012250642 AA	20121004	US20120436657	20120330
US2012252447 AA	20121004	US20120436590	20120330
US2016255612 AA	20160901	US20160149689	20160509
US9055515 BB	20150609	US20120436375	20120330
US9338730 BB	20160510	US20120436590	20120330
US9730200 BB	20170808	US20120436657	20120330
US10638464 BB	20200428	US20120434449	20120329
WO12130180 A1	20121004	WO2012CN073461	20120401
WO12130182 A1	20121004	WO2012CN073466	20120401
WO12130184 A1	20121004	WO2012CN073473	20120401
WO12130185 A1	20121004	WO2012CN073474	20120401

Priority:

US20110470940P	20110401	US20110471049P	20110401	US20110471055P	20110401
US20110471061P	20110401	US20120434449	20120329	US20120434449	20120330
US20120436375	20120330	US20120436657	20120330	US20120436590	20120330
WO2012CN073473	20120401	US20160149689	20160509		

Probable Assignee: FUTUREWEI TECHNOLOGIES INC

Assignee(s): (std): CLASSON BRIAN ; DESAI VIPUL ; FUTUREWEI TECH INC ; FUTUREWEI TECHNOLOGIES INC ; HUAWEI TECH CO LTD ; QU BINGYU ; SARTORI PHILIPPE ; XIAO WEIMIN

Assignee(s): HUAWEI TECHNOLOGIES CO ; HUAWEI TECHNOLOGIES CO LTD ; KHUAVEHJ TEKNOLODZHIZ KO

Inventor(s): (std): CLASSON BRIAN K ; DESAI VIPUL A ; DESAJ VIPUL ; KE BAIAN ; KLASSON BRAJAN ; SARTORI FILIPP ; SARTORI PHILIPPE J ; SJAQ VEJMIN ; TSJUI BINJUI ; XIAO WEIMIN ; SARTORI PHILIPPE ; QU BINGYU ; DESAI VIPUL ; CLASSON BRIAN

Inventor(s): BINGYU QU ; BRIAN K CLASSON ; VIPUL A DESAI ; WEIMIN XIAO ; PHILIPPE J SARTORI

Agent(s): GODDAR HEINZ J; KREUZ GEORG MARIA; SLATER AND MATSIL LLP; SLATER MATSIL LLP

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: 57561516 (US2016043849A) © PatBase

Title: EPDCCH COMMON SEARCH SPACE DESIGN FOR ONE OR MORE CARRIER TYPES

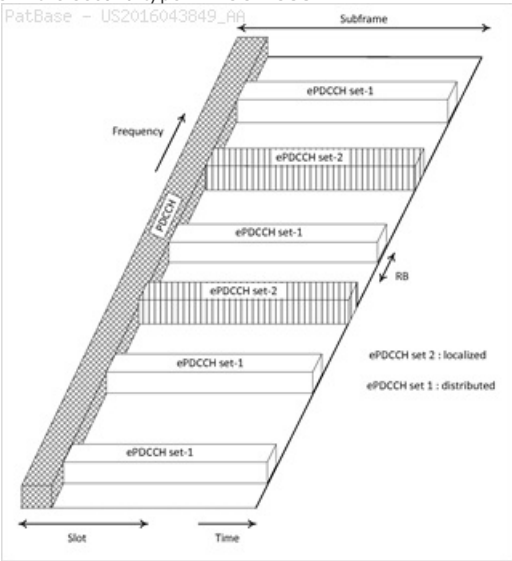
Abstract: Embodiments contemplate enhanced physical downlink control channel (EPDCCH). A user equipment (UE) or a wireless transmit/receive unit (WTRU) may receive a first type (e.g., type 1) EPDCCH common search space (CSS) subframe for example is a subset of subframes. The UE or WTRU may monitor first type downlink control information (DCI), for example perhaps within the first type EPDCCH CSS subframe, among other scenarios. A broadcast channel (e.g. MIB) may be received in the first type EPDCCH CSS. The UE or the WTRU may receive configuration information for a second type (e.g., type 2) EPDCCH CSS, for example from the first type EPDCCH CSS. A system information block (SIB) may be received in the second type EPDCCH CSS. The UE or the WTRU may monitor a second type DCI, for example perhaps in the second type EPDCCH CSS.

Classifications:

International (IPC 8-9): H04L5/00 H04W16/00 H04W48/10 H04W48/12
H04W72/04 (Advanced/Invention)

CPC: H04L5/0048 H04L5/0053 H04L5/0073 H04W72/042

US: 370/329



Family:

Publication number	Publication date	Application number	Application date
CN105075170 A	20151118	CN201480019770	20140403
CN105075170 B	20190503	CN201480019770	20140403
CN110224799 A	20190910	CN201910280195	20140403
EP2982076 A2	20160210	EP20140722062	20140403
EP3509240 A1	20190710	EP20180248186	20140403
TW201507497 A	20150216	TW20140112506	20140403
TW201921962 A	20190601	TW20180140890	20140403
US2016043849 AA	20160211	US20140782251	20140403
WO14165678 A2	20141009	WO2014US32833	20140403
WO14165678 A3	20141127	WO2014US32833	20140403

Priority:

US20130808095P 20130403 CN201480019770 20140403 EP20140722062 20140403
WO2014US32833 20140403 US20140782251 20140403

Probable Assignee: INTERDIGITAL PATENT HOLDINGS INC

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

Inventor(s): (std): LEE MOON IL ; TAMAKI NOBUYUKI

Agent(s): AWAPATENT AB; AWA SWEDEN AB; ROCCIA VINCENT J 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

6) Family number: 51892592 (US2014003349A) © PatBase

Title: METHOD AND APPARATUS FOR SEARCHING CONTROL INFORMATION BY TERMINAL IN MULTINODE SYSTEM

Abstract: Provided is a method of searching for control information of a user equipment (UE) in a multi-node system including a plurality of nodes and a base station connected to each of the plurality of nodes and capable of controlling the nodes. The method includes: receiving search space indication information from the base station; and searching for the control information in a radio

resource region indicated by the search space indication information, wherein the search space indication information indicates any one of a first search space and a second search space.

Classifications:

International (IPC 8-9): H04B7/26 H04J1/00 H04J11/00 H04L1/00
H04L1/18 H04L5/00 H04W72/04 H04W72/14

H04W88/08 (Advanced/Invention);

H04L1/18 H04W72/08 (Advanced/Non-invention)

CPC: H04J11/0083 H04W72/042 H04L5/0092 H04W72/0446 H04W72/0453

H04J11/0079 H04L1/0046 H04L5/0053 H04L5/0091 H04L1/1864

H04L1/1896 H04L5/0048 H04L1/1812 H04L1/1854 H04L1/1861

H04L5/0055 H04W72/08 H04W72/14

European: H04L5/00E1 T04L5/00C6

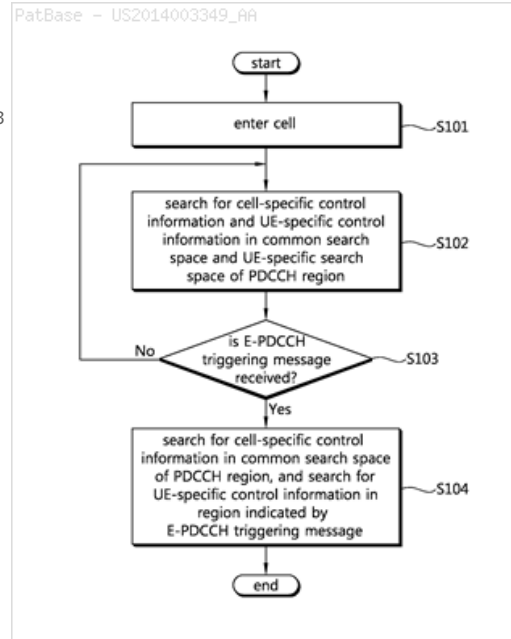
US: 1/1 370/328 370/329

JP F-Term: 5K004 5K022 5K067 5K067/AA13 5K067/CC02 5K067/CC04

5K067/EE10 5K067/GG11 5K067/JJ13 5K067/KK03

JP F-Index: H04J1/00 H04J11/00/Z H04L27/26/113 H04L27/26/114

H04W72/04/136 H04W88/08



Family:

Publication number	Publication date	Application number	Application date
CN103404046 A	20131120	CN201180068890	20111219
CN103404046 B	20160907	CN201180068890	20111219
CN106027220 A	20161012	CN201610671057	20111219
EP2683098 A2	20140108	EP20110860046	20111219
EP2683098 A4	20150107	EP20110860046	20111219
EP2683098 B1	20190515	EP20110860046	20111219
JP2014511056 T2	20140501	JP20130555351T	20111219
JP5698390 B2	20150408	JP20130555351T	20111219
KR101530801 B1	20150622	KR20137022706	20120229
KR101555112 B1	20151001	KR20137022705	20111219
KR20130116350 A	20131023	KR20137022705	20111219
KR20130118383 A	20131029	KR20137022706	20120229
KR20130119484 A	20131031	KR20137021983	20111219
US2014003349 AA	20140102	US20110002566	20111219
US2014003379 AA	20140102	US20110002322	20111219
US2014016589 AA	20140116	US20120002632	20120229
US9432138 BB	20160830	US20110002322	20111219
US9749116 BB	20170829	US20120002632	20120229
US9923659 BB	20180320	US20110002566	20111219
WO12118269 A2	20120907	WO2011KR09811	20111219
WO12118269 A3	20121026	WO2011KR09811	20111219
WO12118270 A1	20120907	WO2011KR09812	20111219
WO12118334 A2	20120907	WO2012KR01539	20120229
WO12118334 A3	20121220	WO2012KR01539	20120229

Priority:

US20110448146P 20110301	US20110475201P 20110413	US20110563613P 20111125
CN201180068890 20111219	US20110002322 20111219	US20110002566 20111219
WO2011KR09812 20111219	WO2011KR09811 20111219	WO2012KR01539 20120229
US20120002632 20120229		

Probable Assignee: LG ELECTRONICS

Assignee(s): (std): CHUN JIN YOUNG ; IHM BIN CHUL ; KANG JI WON ; KIM KI TAE ; KIM SU NAM ; LG ELECTRONICS ; LG ELECTRONICS INC ; PARK SUNG HO

Inventor(s): (std): CHUN JIN YOUNG ; IHM BIN CHUL ; KANG JI WON ; KIM KI TAE ; KIM SU NAM ; PARK SUNG HO

Agent(s): TER MEER STEINMEISTER AND PARTNER; BIRCH STEWART KOLASCH AND BIRCH LLP; YANG MOON OCK

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 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

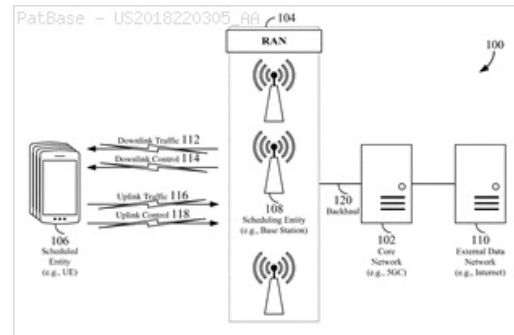
Abstract: Aspects of the disclosure relate to wireless communication over a shared spectrum carrier utilizing a broadcast, common control channel. The broadcast control channel may be multiplexed with a unicast control channel. Further, a scheduling entity may allocate a semi-static set of resources for the broadcast control channel, providing a shared search space on the shared spectrum carrier. The resource allocation for the shared search space may be based on one or more parameters, which may be cell-specific parameters. This shared search space may include resources distributed across the shared spectrum carrier, or a contiguous set of resources that spans only a portion of the carrier. The broadcast control channel may be configured for high reliability, and may carry time-critical control information relating to access control for the shared spectrum carrier. Other aspects, embodiments, and features are also claimed and described.

Classifications:

International (IPC 8-9): H04L5/00 H04W16/14 H04W4/06 H04W48/10 H04W48/12 H04W72/00 H04W72/04 (Advanced/Invention)

CPC: H04L5/0037 H04L5/0053 H04L5/0092 H04B7/0413 H04W16/14 H04W72/005 H04W72/042

US: 1/1 370/329



Family:

Publication number	Publication date	Application number	Application date
CN110226306 A	20190910	CN201880008599	20180126
EP3574605 A1	20191204	EP20180705050	20180126
IN201927023571 A	20191122	IN201927023571	20190614
TW201832575 A	20180901	TW20180102857	20180126
US2018220305 AA	20180802	US20180880096	20180125
WO18140812 A1	20180802	WO2018US15577	20180126

Priority:

US20170451579P 20170127 US20180880096 20180125 WO2018US15577 20180126

Probable Assignee: QUALCOMM INC

Assignee(s): (std): QUALCOMM INC

Inventor(s): (std): LEI JING

Agent(s): DUNLOP HUGH CHRISTOPHER; BURGESS JEFFREY

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 CY CZ DE DJ 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 JO JP KE KG KH KM KN KP KR KW 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 TH TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

8) Family number: 49690751 (US2014177556A)

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Title: METHOD, SYSTEM AND APPARATUS FOR INDICATING RESOURCE POSITION AND BLINDLY DECODING CHANNEL

Abstract: Disclosed in the embodiments of the present invention are a method, system and thereof equipment for resource location indication and blind channel estimation. The method, system and thereof equipment, relating to the wireless communication technology field, are disclosed to solve the problem that physical downlink control channel (PDCCH) can't be received by a terminal correctly. In the present invention, information about the resource locations of common search space (CSS) and UE-specific search space (UESS) of PDCCH is transmitted from a base station to a terminal. Blind estimation is implemented by the terminal according to the resource locations of CSS and UESS of the PDCCH. The problem that PDCCH can't be received by a terminal correctly is solved by applying the present invention.

Classifications:

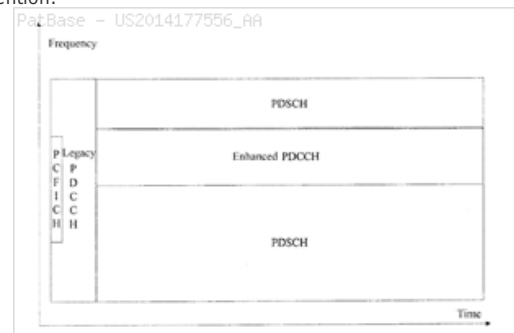
International (IPC 8-9): H04B7/26 H04J11/00 H04J3/00 H04L1/00 H04L5/00 H04W24/00 H04W48/12 H04W72/04 H04W72/12 (Advanced/Invention)

CPC: H04L5/0053 H04L5/0091 H04L5/0037 H04L1/0038 H04B7/2603 H04J11/00

US: 370/329

JP F-Term: 5K028 5K028/KK01 5K067 5K067/CC04 5K067/DD11 5K067/EE02 5K067/EE10 5K067/EE71 5K067/JJ13 5K067/JJ22

JP F-Index: H04J3/00/Z H04W72/04/131 H04W72/04/136



Family:

Publication number	Publication date	Application number	Application date
CN102202324 A	20110928	CN201110131341	20110519
CN102202324 B	20130710	CN201110131341	20110519
EP2713658 A1	20140402	EP20120786261	20120326
EP2713658 A4	20141008	EP20120786261	20120326
JP2014515567 T2	20140630	JP20140510646T	20120326
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KR20140026564 A	20140305	KR20137033720	20120326
US2014177556 AA	20140626	US20120118555	20120326
WO12155690 A1	20121122	WO2012CN073070	20120326
WO12155690 A9	20130131	WO2012CN73070	20120326
WO12155690 A9	20130314	WO2012CN73070	20120326

Priority:

CN201110131341 20110519 WO2012CN073070 20120326

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Assignee(s): CHINA ACADEMY OF TELECOMMUNICATIONS TECHNOLOGY

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Agent(s): KOERFER THOMAS; SEKIYA MITSUO; HIRAKI YUSUKE; TDIP AND PARTNERS

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

9) Family number: 75048814 (US2019215216A)

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Title: RESOURCE GRID OFFSET INDICATION IN MIXED NUMEROLOGIES

Abstract: Systems and methods are provided for configuring an alignment between various resource grids. A base station transmits alignment information between a first resource grid or a first transmission using the first resource grid, and a second resource grid and a third resource grid. The first resource grid uses a first sub-carrier spacing (SCS) from a first set of SCSs, the second resource grid uses a second SCS from a second set of SCSs, the third resource grid uses a third SCS from the second set of SCSs. The base station transmits a synchronization sequence block (SSB) using the first resource grid, and the base station transmits a first physical downlink shared channel (PDSCH) in assigned resource blocks using at least one of the second resource grid and the third resource grid. A user equipment receives the alignment information, and determines the resource grids based on the alignment information so as to be able to receive the transmitted resource blocks.

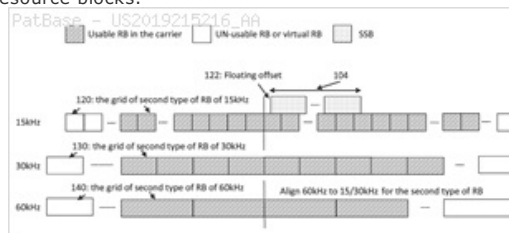
Classifications:

International (IPC 8-9): H04L27/26 H04L5/00 H04L7/10

H04W72/04 (Advanced/Invention)

CPC: H04L5/0092 H04L27/2602 H04L27/2666 H04L7/10 H04L27/266

H04L27/2675 H04W72/0453



Family:

Publication number	Publication date	Application number	Application date
US2019215216 AA	20190711	US20190237997	20190102
US2019349241 AA	20191114	US20190520852	20190724
US10630525 BB	20200421	US20190520852	20190724
WO19137311 A1	20190718	WO2019CN070460	20190104

Priority:

US20180615216P 20180109 US20190237997 20190102 US20190520852 20190724

Probable Assignee: HUAWEI TECHNOLOGIES CO LTD

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Assignee(s): HUAWEI TECHNOLOGIES CO ; HUAWEI TECHNOLOGIES CO LTD

Inventor(s): (std): ABDOLI JAVAD ; TANG ZHENFEI

Agent(s): SLATER MATSIL LLP

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

10) Family number: 63200923 (US2018007673A)

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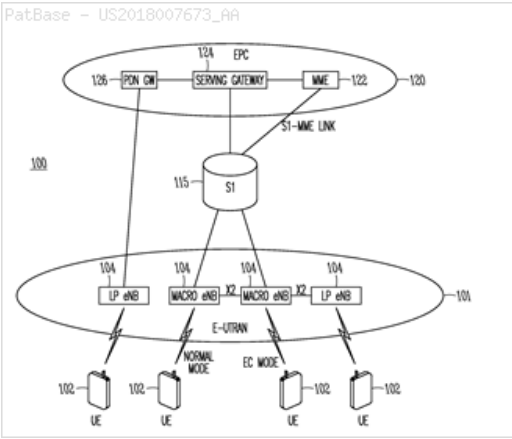
Title: DEVICE, SYSTEM AND METHOD EMPLOYING UNIFIED FLEXIBLE 5G AIR INTERFACE

Abstract: An eNodeB (eNB), user equipment (UE) and method of providing a flexible Radio Access Technology (FRAT) are generally described. The information (resource allocation, partition information and numerology) of at least one of a plurality of RATs used by the eNB is provided to a UE. Each RAT has a flexible subcarrier spacing and symbol duration, which are integer multiples of a base subcarrier spacing and symbol duration, and is associated with at least one of different temporal and frequency resources. The symbol and/or frame structure of each RAT are independent. A Transmission Time Interval (TTI) boundary between the RATs is common, and the RATs comprise a common reference TTI duration. The information of the RATs is

provided either via a different RAT than the RAT used by the UE for communication or via a dedicated carrier in the RAT used by the UE for communication.

Classifications:

International (IPC 8-9): H04B H04B7/26 H04L H04L27/26 H04L5/00 H04W H04W4/00 H04W4/70 H04W72/04 H04W72/12 H04W88/02 H04W88/06 H04W88/08 H04W88/10 H04W92/10 (Advanced/Invention); H04L1/00 H04L5/00 H04W76/04 H04W76/27 H04W88/02 (Advanced/Non-invention); H04B H04L H04W (Subclass/Invention)
CPC: H04L5/0007 H04L5/0037 H04L5/0053 H04L5/0092 H04L27/2602 H04W4/70 H04W72/044 H04W72/1205 H04W88/06 H04W88/10 H04L1/0025 H04W76/27 H04W88/02 H04B7/2656 H04L27/2655 H04L27/2656 H04L27/2666 H04W92/10
US: 1/1 370/330



Family:

Publication number	Publication date	Application number	Application date
CN107210810 A	20170926	CN201580075564	20150811
EP3257308 A1	20171220	EP20150882255	20150811
EP3257308 A4	20181114	EP20150882255	20150811
HK1244117 A1	20180727	HK20180103536	20180313
US2018007673 AA	20180104	US20150542716	20150811
US2020154422 AA	20200514	US20200742043	20200114
US10548129 BB	20200128	US20150542716	20150811
WO16130175 A1	20160818	WO2015US44628	20150811

Priority:

US20150114733P 20150211 US20150542716 20150811 WO2015US44628 20150811
US20170542716 20170711 US20200742043 20200114

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Inventor(s): (std): FWU JONG KAE ; XIONG GANG

Agent(s): GODDAR HEINZ J; SINOMUSE LTD; KOWERT HOOD MUNYON RANKIN AND GOETZEL PC; PERDOK MONIQUE M 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