



- (51) International Patent Classification:
H04L 5/00 (2006.01) *H04L 25/02* (2006.01)
- (21) International Application Number:
PCT/IB2013/052139
- (22) International Filing Date:
18 March 2013 (18.03.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
1204734.6 19 March 2012 (19.03.2012) GB
13/614,052 13 September 2012 (13.09.2012) US
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- (81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

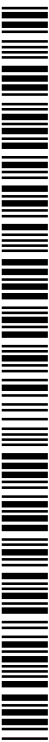
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,
ZM, ZW.

- (84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

- (88) Date of publication of the international search report:
5 December 2013



WO 2013/140322 A3

(54) Title: METHODS, APPARATUS AND COMPUTER PROGRAMS FOR CONFIGURING USER EQUIPMENT

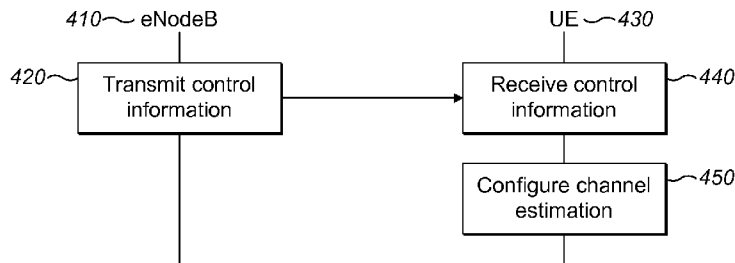


FIG. 4A

(57) Abstract: Examples are described relating to methods, apparatus and computer programs for configuring a user equipment in a cellular wireless network. Certain exemplary methods involve receiving (440), at the user equipment (430), control information regarding one or more of a plurality of channel-state information (CSI) reference signals. The plurality of CSI reference signals are receivable by the user equipment (430) from one or more of a plurality of antenna ports that form part of the cellular wireless network, the plurality of CSI reference signal being associated with corresponding antenna ports. The control information is for use in configuration of the user equipment (430) and is received over a radio communications downlink from a node (410) in the cellular wireless network. If estimation of one or more radio communication channels at the user equipment (430) is configured (450) based on the received control information, improvements in demodulation and CSI feedback are achieved.

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/052139

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L5/00 H04L25/02
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
H04L
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 2011/115421 A2 (LG ELECTRONICS INC [KR]; KIM KIJUN [KR]; KIM HYUNGTAE [KR]; SEO HANBYU) 22 September 2011 (2011-09-22)</p> <p>page 4 - page 8 page 40, line 7 - page 48, line 9 figure 13 page 27, line 17 - page 29, line 3 ----- -/--</p>	<p>1-10, 13-25, 28-41, 44-56, 59-72, 75-78</p>

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier application or patent but published on or after the international filing date
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 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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Date of the actual completion of the international search 24 September 2013	Date of mailing of the international search report 01/10/2013
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Barrientos Lezcano

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2013/052139

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>TEXAS INSTRUMENTS: "Signaling for CSI-RS and PDSCH Muting in Rel-10 LTE", 3GPP DRAFT; R1-104469 TI SIGNALING FOR CSIRS AND PDSCH MUTING, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Madrid, Spain; 20100823, 17 August 2010 (2010-08-17), XP050449795, [retrieved on 2010-08-17] sections II-III</p> <p style="text-align: center;">-----</p>	1,11, 15-18, 26, 30-32, 42, 46-49, 57, 61-63, 73,77,78
X	<p>QUALCOMM INCORPORATED: "Signaling and Configuration of CSI-RS", 3GPP DRAFT; R1-104797 SIGNALING AND CONFIGURATION OF CSI-RS, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Madrid, Spain; 20100823, 17 August 2010 (2010-08-17), XP050449989, [retrieved on 2010-08-17] sections I-V</p> <p style="text-align: center;">-----</p>	1,12, 15-18, 27, 30-32, 43, 46-49, 58, 61-63, 74,77,78
X	<p>MOTOROLA: "RE Muting for CSI-RS based Inter-cell Measurement and Signaling Support", 3GPP DRAFT; R1-104701 RE MUTING FOR CSI-RS AND SIGNALING SUPPORT (FINAL CLEAN), 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Madrid, Spain; 20100823, 19 August 2010 (2010-08-19), XP050450191, [retrieved on 2010-08-19] sections III-IV</p> <p style="text-align: center;">-----</p>	1,11, 15-18, 26, 30-32, 42, 46-49, 57, 61-63, 73,77,78
X,P	<p>RENESAS MOBILE EUROPE LTD: "Co-located and non-co-located antenna ports", 3GPP DRAFT; R1-121369, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Jeju, Korea; 20120326 - 20120330, 20 March 2012 (2012-03-20), XP050599656, [retrieved on 2012-03-20] sections I-III</p> <p style="text-align: center;">-----</p> <p style="text-align: center;">-/--</p>	1,13-18, 28-32, 44-49, 59-63, 75-78

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/052139

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	<p>ERICSSON ET AL: "Discussion on Antenna Ports Co-location", 3GPP DRAFT; R1- 121026 PORTS COLOCATION, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Jeju, Korea; 20120326 - 20120330, 20 March 2012 (2012-03-20), XP050599267, [retrieved on 2012-03-20] sections I-IV -----</p>	1-78

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2013/052139

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