(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
5 November 2009 (05.11.2009)

PCT

(10) International Publication Number
WO 2009/134959 A3

(51) International Patent Classification:
H04L 1/00 (2006.01) *H04B 7/06* (2006.01)

(21) International Application Number:
PCT/US2009/042215

(22) International Filing Date:
30 April 2009 (30.04.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/112,577 30 April 2008 (30.04.2008) 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, BR, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,

[Continued on next page]

(54) Title: MULTI-ANTENNA CONFIGURATION SIGNALING IN WIRELESS COMMUNICATION SYSTEM

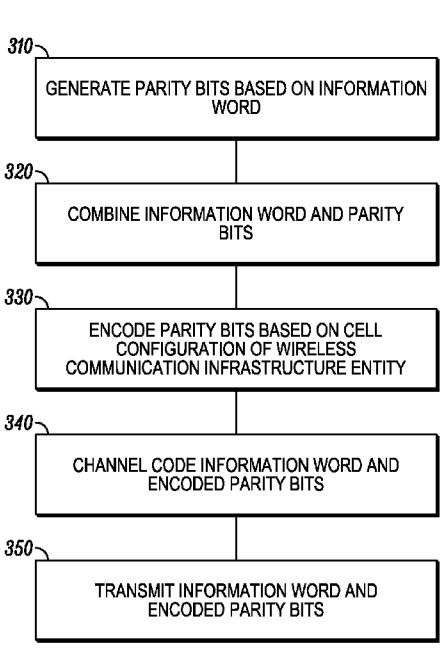


FIG. 3

(57) Abstract: A wireless communication infrastructure entity (200) having a communication configuration is configured to generate parity bits based on an information word and to encode the parity bits based on the communication configuration of the wireless communication infrastructure entity, wherein the encoded parity bits are combined with the information word. A wireless communication user terminal is configured to identify a set of configuration indicator bits used to encode parity bits combined with an information word and to determine a communication configuration of the wireless communication entity from which the combination of the information word and the encoded parity bits were received based on the set of configuration indicator bits used to encode the parity bits.

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TM), European (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, SE, SI, SK, 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:
22 April 2010

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/042215

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L1/00 H04B7/06

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 H04B

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 practical, search terms used)
EPO-Internal, COMPENDEX, INSPEC, IBM-TDB, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MOTOROLA: "Antenna Configuration Detection Based On Reference Signal Energy" 3GPP DRAFT; R1-080434 - ANTENNA DETECTION VIA RS ENERGY, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Sevilla, Spain; 20080109, 9 January 2008 (2008-01-09), XP050108953 page 1, paragraph 1 page 4, paragraph 4 - page 5 ----- -/--	1-6, 14-18

[X] 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 document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

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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

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 November 2009	04/03/2010

Name and mailing address of the ISA/	Authorized officer
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/042215

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NOKIA SIEMENS NETWORKS ET AL: "Issues with PBCH-based Blind Antenna Configuration Detection" 3GPP DRAFT; R1-080324, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Sevilla, Spain; 20080108, 8 January 2008 (2008-01-08), XP050108845 page 4	1-6, 14-18
X	NOKIA SIEMENS NETWORKS ET AL: "Way Forward on PBCH for FDD and TDD" 3GPP DRAFT; R1-080586, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Sevilla, Spain; 20080119, 19 January 2008 (2008-01-19), XP050109087 the whole document	1-6, 14-18
X	NOKIA SIEMENS NETWORKS ET AL: "CRC Mask Selection for PBCH" 3GPP DRAFT; R1-081073_UPDATE_OF_R1-080944, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Sorrento, Italy; 20080215, 15 February 2008 (2008-02-15), XP050109524 the whole document	1-6, 14-18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/042215

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6, 14-18

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6, 14-18

Entity for signaling antenna configuration

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2. claim: 7

Entity for signaling carrier information

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3. claim: 8

Entity for signaling superposed channel transmissions

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4. claim: 9

Entity for signaling symmetry information for frequency resources

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5. claim: 10

Entity for signaling spectrum adjacency information

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6. claim: 11(partially)

Entity for signaling duration of a frame

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7. claim: 11(partially)

Entity for signaling slot structure

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8. claim: 12

Entity for signaling paired or unpaired spectrum operation

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9. claim: 13

Entity for signaling admissibility of access to the base station

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