

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 December 2009 (03.12.2009)

(10) International Publication Number
WO 2009/145476 A3

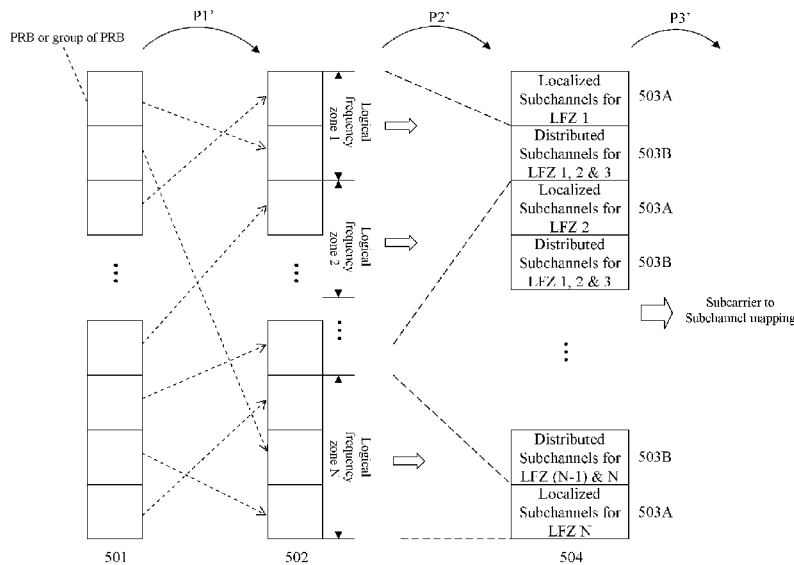
- (51) **International Patent Classification:**
H04W 72/04 (2009.01) *H04B 7/208* (2006.01)
- (21) **International Application Number:**
PCT/KR2009/001699
- (22) **International Filing Date:**
2 April 2009 (02.04.2009)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/041,916 2 April 2008 (02.04.2008) US
- (71) **Applicant (for all designated States except US):** **LG ELECTRONICS INC.** [KR/KR]; 20, Yeouido-dong, Yeongdeungpo-gu, Seoul 150-721 (KR).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **CHO, Han Gyu** [KR/KR]; LG Institute, Hogue 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-080 (KR). **CHOI, Jin Soo** [KR/KR]; LG Institute, Hogue 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-080 (KR). **KWAK, Jin Sam** [KR/KR]; LG Institute, Hogue 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-080 (KR).
- (74) **Agents:** **KIM, Yong In** et al.; KBK & Associates, 7th Floor, Hyundai Building, 175-9, Jamsil-dong, Songpa-ku, Seoul, 138-861 (KR).

- (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, 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))

[Continued on next page]

(54) **Title:** DOWNLINK LOCALIZED AND DISTRIBUTED MULTIPLEXING IN A FREQUENCY DIVISION MULTIPLEXING MANNER



[Fig. 5]

(57) **Abstract:** A method of signaling system configuration information in a wireless mobile cellular communication system is disclosed. The method comprises transmitting the system configuration information at every predetermined period. In this case, each downlink subframe is divided into a plurality of frequency partitions, and subcarriers from at least two of the plurality of frequency partitions are allocated to a first mobile station using distributed resource allocation.

WO 2009/145476 A3

(88) Date of publication of the international search report:
21 January 2010

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2009/001699**A. CLASSIFICATION OF SUBJECT MATTER****H04W 72/04(2009.01)i, H04B 7/208(2006.01)i**

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)

IPC: H04B 1/04, H04B 1/16, H04B 7/005, H04B 17/00, H04J 11/00, H04L 12/56, H04Q 7/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility Models since 1975

Japanese Utility Models and applications for Utility Models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) "configuration, configure, information, communication, cellular, transmit, frequency, downlink"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| A | WO 2007-060093 A1 (IPWIRELESS INC) 31 May 2007 See abstract, page 15, line 31-page18, line7, page 25, line 26-page 26, line 2, claims 5, 18, 28. | 1-12 |
| A | US 2007-0165584 A1 (VISHAKAN PONNAMPALAM et al.) 19 July 2007 See abstract, paragraphs 19-24. | 1-12 |
| A | US 2006-0199544 A1 (SUDHIR RAMAKRISHNA et al.) 07 September 2006 See abstract, paragraphs 13-29. | 1-12 |
| A | JP 2007-134809 A (MATSUSHITA ELECTRIC IND CO., LTD.) 31 May 2007 See abstract. | 1-12 |
| A | JP 2005-311413 A (MATSUSHITA ELECTRIC IND CO., LTD.) 04 November 2005 See the whole document. | 1-12 |

 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

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

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

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"&" document member of the same patent family

Date of the actual completion of the international search

20 NOVEMBER 2009 (20.11.2009)

Date of mailing of the international search report

20 NOVEMBER 2009 (20.11.2009)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Soak, Sang Moon

Telephone No. 82-42-481-8470



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2009/001699

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|----------------------------------------|------------------|-------------------------|------------------|
| WO 2007-060093 A1 | 31.05.2007 | CN 101356779 A | 28.01.2009 |
| | | EP 1955494 A1 | 13.08.2008 |
| | | EP 2068501 A1 | 10.06.2009 |
| | | GB 2432484 B | 27.12.2007 |
| | | US 2007-0165584 A1 | 19.07.2007 |
| | | GB 0523710 D0 | 28.12.2005 |
| | | GB 2432484 A | 23.05.2007 |
| | | JP 2009-516972 A | 23.04.2009 |
| | | KR 10-2008-0077215 A | 21.08.2008 |
| | | US 2007-0165584 A1 | 19.07.2007 |
| GB 0523710 D0 | 28.12.2005 | | |
| GB 2432484 A | 23.05.2007 | | |
| GB 2432484 B | 27.12.2007 | | |
| KR 10-2008-0077215 A | 21.08.2008 | | |
| WO 2007-060093 A1 | 31.05.2007 | | |
| US 2006-199544 A1 | 07.09.2006 | None | |
| JP 2007-134809 A | 31.05.2007 | None | |
| JP 2005-311413 A | 04.11.2005 | EP 1735981 A1 | 27.12.2006 |
| | | US 2005-0238109 A1 | 27.10.2005 |
| | | WO 2005-101774 A1 | 27.10.2005 |