



- (51) International Patent Classification:  
*H04J 11/00* (2006.01) *H04B 7/26* (2006.01)
- (21) International Application Number:  
PCT/KR2011/005958
- (22) International Filing Date:  
12 August 2011 (12.08.2011)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10-2010-0078546 13 August 2010 (13.08.2010) KR
- (71) Applicant (for all designated States except US):  
**PANTECH CO.,LTD.** [KR/KR]; Pantech Bldg., I-2, DMC, Sangam-dong, Mapo-gu, Seoul, 121-270 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HONG, Sungkwon** [KR/KR]; Pantech Bldg., I-2, DMC, Sangam-dong, Mapo-gu, Seoul, 121-270 (KR). **KWON, Kibum** [KR/KR]; Pantech Bldg., I-2, DMC, Sangam-dong, Mapo-gu, Seoul, 121-270 (KR).
- (74) Agents: **KIM, Eungu** et al.; 2F, Sangwon Bld., 636-15, Yeoksam-dong, Gangnam-gu, Seoul, 135-908 (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, 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, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, 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.

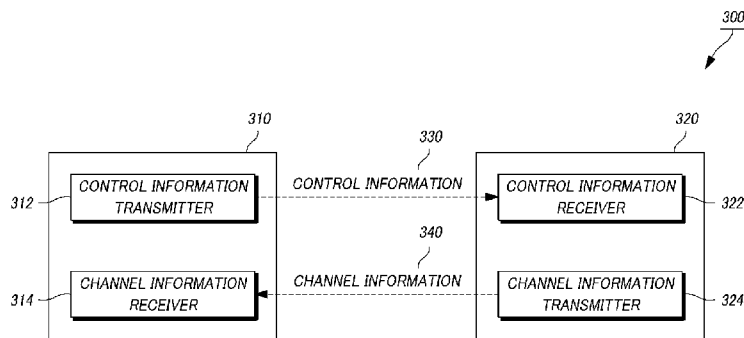
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, 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:  
31 May 2012

(54) Title: METHOD FOR TRANSMITTING AND RECEIVING CHANNEL INFORMATION, AND UE AND BASE STATION USING THE SAME



(57) Abstract: Disclosed is a wireless communication system transmitting and receiving channel information through a carrier aggregation.



## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/KR2011/005958****A. CLASSIFICATION OF SUBJECT MATTER****H04J 11/00(2006.01)i, H04B 7/26(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)

H04J 11/00; H04B 7/26

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  
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: PDCCH(Physical Downlink Control Channel), PUCCH(Physical Uplink Control Channel), RRC(Radio Resource Control), CC(Component Carrier)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2009-022868 A1 (LG ELECTRONICS INC. et al.) 19 February 2009 See the abstract; claims 1-16; figure 1.	1-36
A	US 2009-0168704 A1 (LEE, YOUNG DAE et al.) 02 July 2009 See the abstract; paragraphs [72]-[86]; figures 5-6.	1-36
A	US 2006-0116080 A1 (EOM, KWANG-SEOP) 01 June 2006 See the abstract; paragraphs [44]-[56]; figures 2-6.	1-36
A	US 2004-0203980 A1 (DAS, ARNAB et al.) 14 October 2004 See the abstract; paragraphs [18]-[28]; figure 3.	1-36

 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

28 MARCH 2012 (28.03.2012)

Date of mailing of the international search report

**28 MARCH 2012 (28.03.2012)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
Government Complex-Daejeon, 189 Cheongsu-ro,  
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

SONG, Hyun Chae

Telephone No. 042 481 5786



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/KR2011/005958**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2009-022868 A1	19.02.2009	KR 10-2009-0017389 A US 2011-0249629 A1	18.02.2009 13.10.2011
US 2009-0168704 A1	02.07.2009	KR 10-0949969 B1 KR 10-2008-0046679 A WO 2007-024099 A2 WO 2007-024099 A3	29.03.2010 27.05.2008 01.03.2007 01.03.2007
US 2006-0116080 A1	01.06.2006	KR 10-2006-0060382 A	05.06.2006
US 2004-0203980 A1	14.10.2004	DE 60300227 D1 DE 60300227 T2 EP 1351411 A1 EP 1351411 B1 JP 2003-318821 A KR 10-2003-0079782 A US 7133688 B2	27.01.2005 15.12.2005 08.10.2003 22.12.2004 07.11.2003 10.10.2003 07.11.2006