

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 December 2008 (24.12.2008)

PCT

(10) International Publication Number
WO 2008/156276 A3

(51) International Patent Classification:
H04B 7/26 (2006.01)

D Complex, 533, Hogue 1-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-749 (KR).

(21) International Application Number:
PCT/KR2008/003403

(74) Agent: **YANG, Moon-Ock**; S & IP Patent & Law Firm, 10F., Songam Bldg., 642-10, Yeoksam-dong, Gangnam-gu, Seoul 135-080 (KR).

(22) International Filing Date: 18 June 2008 (18.06.2008)

(25) Filing Language: English

(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, 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, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
60/944,785 18 June 2007 (18.06.2007) US
10-2008-0023809 14 March 2008 (14.03.2008) KR

(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

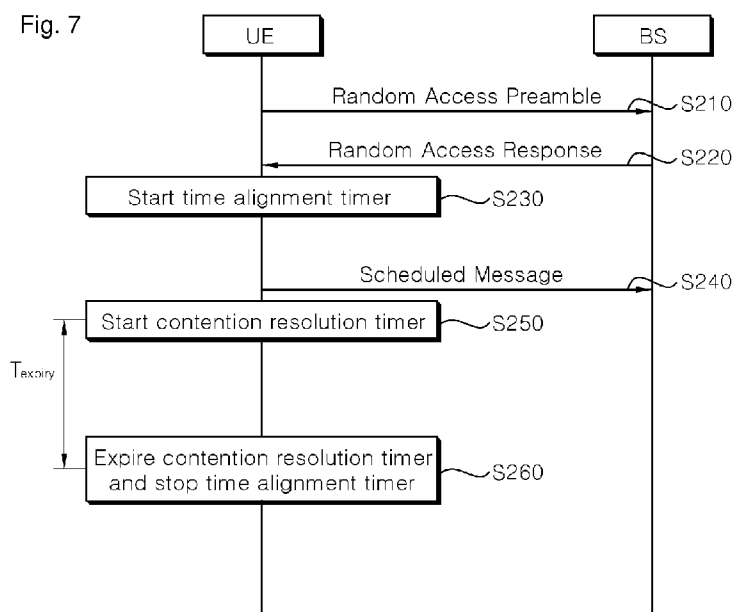
(75) Inventors/Applicants (for US only): **PARK, Sung Jun** [KR/KR]; LG R & D Complex, 533, Hogue 1-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-749 (KR). **LEE, Young Dae** [KR/KR]; LG R & D Complex, 533, Hogue 1-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-749 (KR). **YI, Seung June** [KR/KR]; LG R & D Complex, 533, Hogue 1-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-749 (KR). **CHUN, Sung Duck** [KR/KR]; LG R &

(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, 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).

[Continued on next page]

(54) Title: METHOD OF PERFORMING UPLINK SYNCHRONIZATION IN WIRELESS COMMUNICATION SYSTEM

Fig. 7



(57) Abstract: A method of performing uplink synchronization in a wireless communication system includes transmitting a random access preamble which is randomly selected from a set of random access preambles, receiving a random access response, the random access response comprising a random access preamble identifier corresponding to the random access preamble and a time alignment value for uplink synchronization, starting a time alignment timer after applying the time alignment value, starting a contention resolution timer after receiving the random access response, wherein contention resolution is not successful when the contention resolution timer is expired, and stopping the time alignment timer when the contention resolution timer is expired.

WO 2008/156276 A3



Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
5 February 2009

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2008/003403**A. CLASSIFICATION OF SUBJECT MATTER****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)

IPC 8 H04B, H04L

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 1975Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS, DELPHION, ESPACENET & Keywords : uplink, synchronization, and similar terms.**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2004/102833 A1 (KONINKL PHILIPS ELECTRONICS) 25.11.2004 See the abstract, page 8 line 20 - page 12 line 2, figure 3	1-12
A	US 2005/054365 A1(AHN, JOON-KUI et al.) 10.03.2005 See the abstract, paragraphs [0004]-[0006], figure 1	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

27 NOVEMBER 2008 (27.11.2008)

Date of mailing of the international search report

27 NOVEMBER 2008 (27.11.2008)

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

JEONG Heon Ju

Telephone No. 82-42-481-8356



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/003403

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004/102833 A1	25.11.2004	CN 1549612 A	24.11.2004
US 2005/054365 A1	10.03.2005	WO 2004/102838 A1	25.11.2004