

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 December 2009 (23.12.2009)

PCT

(10) International Publication Number
WO 2009/154403 A3

(51) International Patent Classification:
H04B 7/26 (2006.01) *H04W 80/02* (2009.01)
H04W 52/00 (2009.01)

(21) International Application Number:
PCT/KR2009/003252

(22) International Filing Date:
17 June 2009 (17.06.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/073,743 18 June 2008 (18.06.2008) US
61/108,156 24 October 2008 (24.10.2008) US
61/119,343 2 December 2008 (02.12.2008) US
61/142,257 2 January 2009 (02.01.2009) US
10-2009-0053587 16 June 2009 (16.06.2009) 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): **CHUN, Sung-Duck** [KR/KR]; 533, Hogye-Dong, Dongan-Gu, Anyang, Gyeonggi-Do 431-080 (KR). **YI, Seung-June** [KR/KR]; 533, Hogye-Dong, Dongan-Gu, Anyang, Gyeonggi-Do 431-080 (KR). **PARK, Sung-Jun** [KR/KR]; 533, Hogye-Dong, Dongan-Gu, Anyang, Gyeonggi-Do 431-080 (KR). **LEE, Young-Dae** [KR/KR]; 533, Hogye-Dong, Dongan-Gu, Anyang, Gyeonggi-Do 431-080 (KR).

(74) Agent: **PARK, Jang-Won**; Jewoo Bldg. 5th Floor, 200, Nonhyun-Dong, Gangnam-Gu, Seoul 135-010 (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, 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.

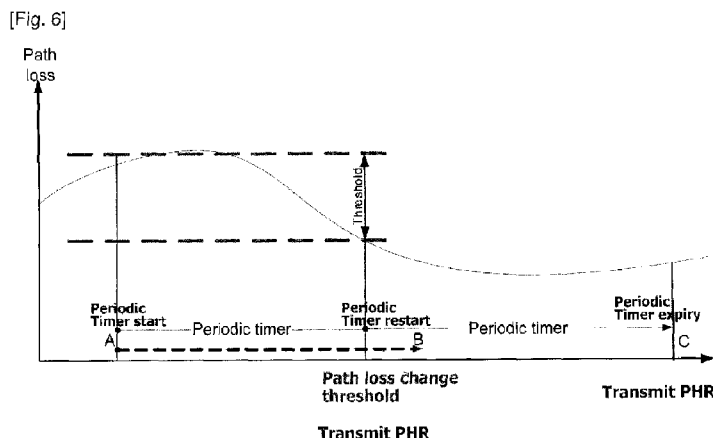
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT,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

(88) Date of publication of the international search report:
1 April 2010

(54) Title: METHOD OF TRANSMITTING POWER HEADROOM REPORTING IN WIRELESS COMMUNICATION SYSTEM



(57) Abstract: Disclosed is related to a method of effectively transmitting a power headroom report (PHR) from the terminal to the base station in an evolved universal mobile telecommunications system (E-UMTS) evolved from universal mobile telecommunications system (UMTS) or a long term evolution (LTE) system, and more particularly, to a method of providing the power headroom report after determinations of whether the power headroom reporting is triggered and whether allocated uplink resource(s) accommodate a medium access control (MAC) control element.

WO 2009/154403 A3

A. CLASSIFICATION OF SUBJECT MATTER**H04B 7/26(2006.01)i, H04W 52/00(2009.01)i, H04W 80/02(2009.01)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)

H04B 7/26; H04B 7/005; H04W 28/02; H04W 28/16

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

(Chinese Patents and application for patent)

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

eKOMPASS(KIPO internal) & Keywords: , IEEE xplore

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| X | WO 2004-056009 A1 (TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)) 01 July 2004 See page 5 paragraph[0016] - page 10 paragraph[0028] | 1-3,9 |
| A | KR 10-0816598 B1 (NEC CORPORATION) 24 March 2008 See page 8 paragraph[0060] - page 11 paragraph[0080] | 1-9 |

 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

09 FEBRUARY 2010 (09.02.2010)

Date of mailing of the international search report

11 FEBRUARY 2010 (11.02.2010)

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

JANG, Dae Geun

Telephone No. 82-42-481-5710



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2009/003252

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|---|--|
| WO 2004-056009 A1 | 01.07.2004 | AU 2003-288596 A1 US 2004-147276 A1 | 09.07.2004 29.07.2004 |
| KR 10-0816598 B1 | 24.03.2008 | CN 1868227 A EP 1679910 A1 JP W020-050392 09A1 US 2007-0076679 A1 WO 2005-039209 A1 | 22.11.2006 12.07.2006 28.04.2005 05.04.2007 28.04.2005 |