

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
5 October 2006 (05.10.2006)

PCT

(10) International Publication Number  
**WO 2006/104344 A3**

(51) International Patent Classification:

**H04Q 7/38** (2006.01) **H04L 29/06** (2006.01)  
**H04Q 7/22** (2006.01)

(74) Agents: **KIM, Yong In** et al.; KBK & Associates, 15th Floor Yo Sam Building, 648-23, Yeoksam-dong, Kangnam-gu, Seoul, 135-080 (KR).

(21) International Application Number:

PCT/KR2006/001142

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 29 March 2006 (29.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10-2005-0026044 29 March 2005 (29.03.2005) KR

(71) Applicant (*for all designated States except US*): **LG ELECTRONICS INC.** [KR/KR]; 20, Yoido-dong, Youngdungpo-gu, Seoul, 150-721 (KR).

(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, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **CHUN, Sung Duck** [KR/KR]; 601-1007, Saethyeol Hanyang Apt., Daran-dong, Dongan-gu, Anyang-si, Gyeonggi-do 431-719 (KR). **LEE, Young Dae** [KR/KR]; 370-43, Deokpung 2-dong, Hanam-si, Gyeonggi-do 465-012 (KR). **JUNG, Myung Cheul** [KR/KR]; 2/2, 358-36, Sangdo 2-dong, Dongjak-gu, Seoul, 156-032 (KR).

Published:

— with international search report

[Continued on next page]

(54) Title: METHOD OF GENERATING LOWER LAYER DATA BLOCK IN WIRELESS MOBILE COMMUNICATION SYSTEM

D/C	Sequence Number			
Sequence Number	P	HE		
LI 1			E	Oct1
⋮				Oct2
⋮				Oct3(Optional)(1)
LI n			E	⋮
First LI			E	⋮
Second LI			E	
SDUs				
Piggybacked status PDU				OctN

(57) Abstract: A method of generating a data block including control information in a specific layer of a mobile communication apparatus having a hierarchical structure constructed with a plurality of layers is disclosed. The present invention includes the steps of inserting a control data block including control information into a first region of a lower layer data block if the lower layer has the control information to be transmitted to a receiving side and inserting at least one portion of the data block of an upper layer into a second region of the lower layer data block, wherein the first region is allocated to the control data block before the second region is allocated to the at least one portion of the upper layer data block.

WO 2006/104344 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

16 August 2007

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 2006/001142

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>8</sup>: **H04Q 7/38** (2006.01); **H04Q 7/22** (2006.01); **H04L 29/06** (2006.01)

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<sup>8</sup>: H04L, H04Q

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 practicable, search terms used)

WPI, EPODOC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1326388 A2 (LG ELECTRONICS INC.) 9 July 2003 (09.07.2003) <i>Fig. 2; Claims 1,5</i>	1,11,17,25,31
	--	
A	WO 2004/042952 A1 (LG ELECTRONICS) 21 May 2004 (21.05.2004) <i>Fig. 2; Claims 27,47</i>	1,11,17,25,31
	---	

☐ 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 another 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  
31 May 2007 (31.05.2007)Date of mailing of the international search report  
15 June 2007 (15.06.2007)Name and mailing address of the ISA/ AT  
**Austrian Patent Office**  
Dresdner Straße 87, A-1200 Vienna

Authorized officer

FUSSY S.

Facsimile No. +43 / 1 / 534 24 / 535

Telephone No. +43 / 1 / 534 24 / 328

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/KR 2006/001142**

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
EP	A2	1326388	2003-07-09	UA	C2	77228	2004-09-15
				KR	A	20030060028	2003-07-12
				RU	C2	2287220	2006-11-10
				MX	A	PA04006546	2004-10-04
				JP	A	2003283596	2003-10-03
WO	A1	2004042952	2004-05-21	KR	A	20040039944	2004-05-12
				MX	A	PA04007596	2004-11-10
				RU	C2	2280327	2006-07-20
				JP	T	2005536168T	2005-11-24
				CN	A	1692567	2005-11-02