

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 May 2009 (07.05.2009)

PCT

(10) International Publication Number
WO 2009/057920 A3

- (51) International Patent Classification:
H04N 7/08 (2006.01)
- (21) International Application Number:
PCT/KR2008/006330
- (22) International Filing Date: 27 October 2008 (27.10.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10-2007-0109876 30 October 2007 (30.10.2007) KR
10-2007-0138647
27 December 2007 (27.12.2007) KR
- (71) Applicant (for all designated States except US): SAM-
SUNG ELECTRONICS CO., LTD. [KR/KR]; 416, Mae-
tan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742
(KR).
- (72) Inventors: LIM, Yeon-Ju; #605, Pungjeon Officetel,
602-34, Namhyeon-dong, Gwanak-gu, Seoul 151-801
(KR). LEE, Hak-Ju; #110-1003, Shindonga APT.,
Sipjeong 2-dong, Bupyeong-gu, Incheon 403-759
(KR). KIM, Jae-Yoel; #435-1601, Cheongmyeong-
maeul 4-danji Samsung Raemian APT., Yeongtong
1-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-374
(KR). KWON, Hwan-Joon; #944-1510, Byeokjeokgol

9-danji Lotte APT., Yeongtong-dong, Yeongtong-gu, Su-
won-si, Gyeonggi-do 443-726 (KR). LEE, Hyeon-Woo;
#806-901, Byucksan APT., Gwonseon-dong, Gwon-
seon-gu, Suwon-si, Gyeonggi-do 441-390 (KR).

(74) Agent: LEE, Keon-Joo; Mihwa Bldg., 110-2, Myon-
gryun-dong 4-ga, Chongro-gu, Seoul 110-524 (KR).

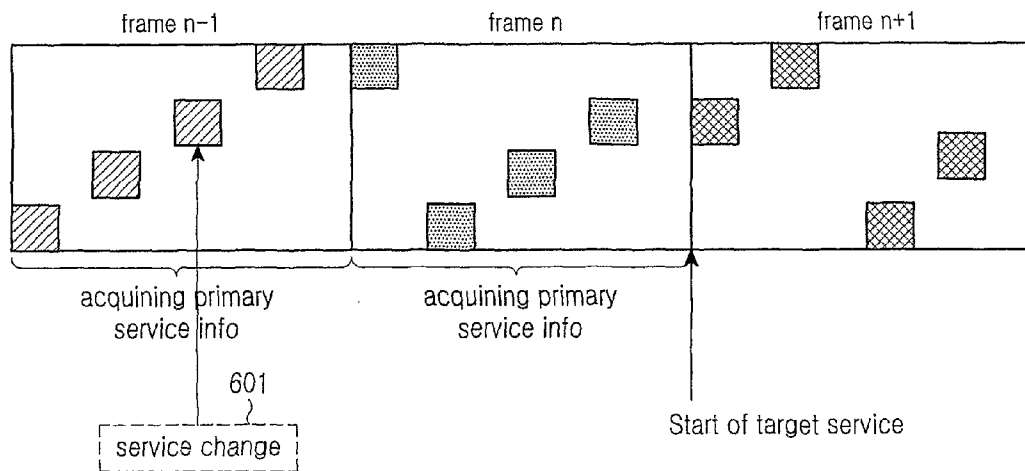
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID,
IL, IN, IS, JP, KE, KG, KM, KN, KP, 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, 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 AND APPARATUS FOR TRANSMITTING/RECEIVING CONTROL INFORMATION IN BROADCAST COMMUNICATION SYSTEM

FIG. 6



(57) Abstract: Disclosed is a method and apparatus for transmitting/receiving control information in a system in which one or more Radio Frequencies (RFs) are used to carry multiple services through a frame constituted by time resources or time-frequency resources. Control information regarding frame configuration information is not transmitted over a separate control channel but over a data channel through which to transmit primary service traffic among all service traffic, and each non-primary service traffic other than the primary service traffic includes control information for a primary service. Thus, even when a receiver changes the current service to a target service, control information necessary to detect the location of the target service in a frame and demodulate the target service can be acquired, and thus a service change can be made without reading a separate control channel.



WO 2009/057920 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:
18 June 2009

A. CLASSIFICATION OF SUBJECT MATTER***H04N 7/08(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 H04N

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 : IPC as aboveElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS(KIPO Internal): "service control information", "frame"**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	KR 10-2006-0016582 A (LG ELECTRONICS INC.) 22 February 2006 See abstract; page 3 lines 1-15; claims 1,6; figures 1,2.	1-4 5-22
A	KR 10-2005-0008440 A (SAMSUNG ELECTRONICS CO., LTD.) 21 January 2005 See abstract; page 3 lines 4-11; claims 1,5.	1-22
A	JP 2004-134931 A (KENWOOD CORP) 30 April 2004 See [0014]-[0015]; claims 1-2.	1-22

 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

10 APRIL 2009 (10.04.2009)

Date of mailing of the international search report

20 APRIL 2009 (20.04.2009)

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

CHOI, Seong Jin

Telephone No. 82-42-481-8366



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/006330

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 1020060016582 A	22.02.2006	CN 1738436 A	22.02.2006
		EP 1628420 A2	22.02.2006
		EP 1628420 A3	12.09.2007
		US 2006039308 A1	23.02.2006
KR 1020050008440 A	21.01.2005	AU 2004300830 A1	20.01.2005
		AU 2004300830 B2	20.01.2005
		CA 2529171 A1	20.01.2005
		CN 1806401 A	19.07.2006
		JP 2007528633 T	11.10.2007
		RU 2005140651 A	10.06.2006
		US 2005058078 A1	17.03.2005
		WO 2005006599 A1	20.01.2005
JP 2004134931 A	30.04.2004	DE 03807981 T1	15.12.2005
		EP 1551105 A1	06.07.2005
		KR 1020040073454 A	19.08.2004
		KR 1020060114388 A	06.11.2006
		WO 2004034599 A1	22.04.2004