(19) World Intellectual Property Organization

International Bureau



) – I MANT ANNANG IN BANGKAN KANTANG K

(43) International Publication Date 31 December 2008 (31.12.2008)

${ m T}$

(10) International Publication Number WO 2009/001211 A3

(51) International Patent Classification: H04N 7/24 (2006.01) H04N 7/26 (2006.01)

(21) International Application Number:

PCT/IB2008/001715

(22) International Filing Date: 30 June 2008 (30.06.2008)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:

60/946,851 28 June 2007 (28.06.2007) US 60/948,234 6 July 2007 (06.07.2007) US

(71) Applicant (for all designated States except US): SAM-SUNG ELECTRONICS CO., LTD. [KR/KR]; 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YU, Jung-Pil [KR/KR]; 710, YT Officetel, 947-8 Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-809 (KR). JEONG, Hae-Joo [KR/KR]; 109-402 Sinbanpo Hansin, 2nd Apartment, 73, Jamwon-dong, Seocho-gu, Seoul

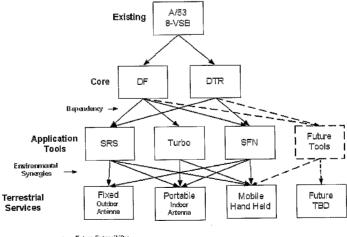
137-797 (KR). KIM, Joon-Soo [KR/KR]; 209-602 Gileum New Town, Gileum-dong, Seongbuk-gu, Seoul 136-110 (KR). PARK, Chan-Sub [KR/KR]; 201-707 Samhwan 2nd Apartment, Gwankyo-dong, Nam-gu, Incheon 402-707 (KR). KIM, Jung-Jin [KR/KR]; 102-908 Seocho Hyundai Apartment, 1648-2 Seocho-dong, Seocho-gu, 137-070 Seoul (KR). KWON, Yong-Sik [KR/KR]; 299-5 Seongsu 2ga-3-dong, Seongdong-gu, Seoul 133-833 (KR). PARK, Eui-Jun [KR/KR]; 101, 196-199 Bongcheon 11-dong, Gwanak-gu, Seoul 151-817 (KR). JI, Kum-Ran [KR/KR]; 2nd Floor, 553-5 Dogok-dong, Gangnam-gu, Seoul 135-270 (KR). KIM, Jong-Hun [KR/KR]; 517-705 Baekseol-maeul Samhwan Apartment, 880-3 Jeongja 3-dong, Jangan-gu, Suwon-si, Gyeonggi-do 440-719 (KR).

- (74) Agent: JEONG, Hong-sik; 8th Floor, Daelim Bldg., 1600-3, Seocho-dong, Seocho-gu, Seoul 137-877 (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, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN,

[Continued on next page]

(54) Title: RESPONSE TO ATSC MOBILE/HANDHELD RFP A-VSB MCAST AND, PHYSICAL LAYERS FOR ATSC-M/HH

[Fig. 2] A-VSB System Architecture



__ _ 🌦 Future Extensibility

(57) Abstract: The Mobile Broadcasting (A-VSB MCAST) design consists of transport and s ignaling optimized for mobile and handheld services. Section 5 provides the overall A-VSB MCAST architecture. Section 6 specifies the physical and link layers. Section 7 specifies the transport layer. And, Section 8 describes the frame slicing mechanism for burst transmission. Backwards compatibility is ensured by the careful design of the physical and link layers. Field tests are well underway now, being overseen by ATSC T SG/S9.



WO 2009/001211 A3



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.

(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).

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: 9 April 2009

International application No.

PCT/IB2008/001715

A. CLASSIFICATION OF SUBJECT MATTER

H04N 7/24(2006.01)i, H04N 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 H03M H04L H04J

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 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKIPASS, SEARCH TERMS: Turbo stream, Multiplexer, Broadcasting system 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.
Х	US 20070113145 A1 (YU et al.) 17 May 2007 See abstract; Paragraph[0017] - Paragraph[0062]; Figures 3,6,7.	1
X	US 20070094566 A1 (PARK et al.) 26 April 2007 See abstract; Paragraph[0035] - Paragraph[0081]; Figures 3-7.	1
A	US 6671327 B1 (GARY Q. JIN) 30 December 2003 See abstract; Column 01, Line 53 - Column 02, Line 11; Column 02, Line 43 - Column 03, Line 39; Figures 1-4.	1
A	US 5907582 A (BYUNG KWAN YI) 25 May 1999 See abstract; Column 03, Line 34 - Column 05, Line 44; Column 06, Line 08- Column 10, Line 55; Figures 1-4.	1

		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

11 FEBRUARY 2009 (11.02.2009)

Date of mailing of the international search report

11 FEBRUARY 2009 (11.02.2009)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seogu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

PARK, Sang Chol

Telephone No. 82-42-481-8372



INTERNATIONAL SEARCH REPORT Information on patent family members			International application No. PCT/IB2008/001715	
Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2007-0113145 A1	17.05.2007	NONE		
US 2007-0094566 A1	26.04.2007	NONE		
US 6671327 B1	30.12.2003	NONE		
US 5907582 A	25.05.1999	JP 11-163841 A JP 11-163841 US 5970085 US 6061387 US 5970085 A US 6061387 A	18.06.1999 18.06.1999 19.10.1999 09.05.2000 19.10.1999 09.05.2000	