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10-2011-0003854 14 January 2011 (14.01.2011) KR(71) Applicant (for all designated States except US): **SAM-SUNG ELECTRONICS CO., LTD.** [KR/KR]; 129, Sam-sung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742 (KR).

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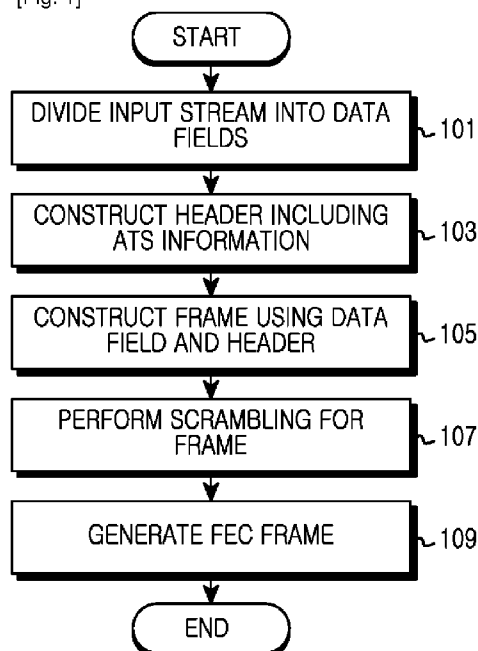
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[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR PROVIDING COMPATIBILITY OF TRANSMISSION SIGNAL IN COMMUNICATION SYSTEM

[Fig. 1]



(57) Abstract: Method and apparatus for transmitting and receiving a signal in a broadcasting communication system are provided. Data of an input stream is divided for transmission through a frame. A header that includes information about the input stream is constructed. The frame is constructed using the header and the divided data.



DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE,
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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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

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

eKOMPASS(KIPO internal) & Keywords: header, CRC, FEC, transmission

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2010-079873 A1 (LG ELECTRONICS INC. et al.) 15 July 2010 See abstract; paragraphs [2]-[12]; paragraphs [115]-[261]; figures 1-83; claims 1-15	1-15
A	WO 2010-085025 A1 (LG ELECTRONICS INC. et al.) 29 July 2010 See abstract; paragraphs [2]-[34]; paragraphs [179]-[343]; figures 1-94; claims 1-12	1-15
A	WO 2010-101328 A1 (LG ELECTRONICS INC. et al.) 10 September 2010 See abstract; paragraphs [3]-[18]; paragraphs [155]-[297]; figures 1-57; claims 1-15	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010-079873 A1	15.07.2010	CN 102257816 A EP 2207293 A2 EP 2207293 A3 KR 10-2011-0104549 A	23.11.2011 14.07.2010 06.04.2011 22.09.2011
WO 2010-085025 A1	29.07.2010	AT 519310 T CN 102292982 A DK 2211514T3 EP 2211514 A1 EP 2211514 B1 EP 2387194 A1 EP 2388967 A2 KR 10-2011-0104570 A PT 2211514E SI 2211514T1	15.08.2011 21.12.2011 21.11.2011 28.07.2010 03.08.2011 16.11.2011 23.11.2011 22.09.2011 21.11.2011 30.12.2011
WO 2010-101328 A1	10.09.2010	AT 520236 T AU 2009-341664 A1 CN 102292984 A DK 2226983T3 EP 2226983 A1 EP 2226983 B1 EP 2387192 A1 EP 2387193 A1 ES 2371537 T3 KR 10-2011-0129380 A PT 2226983E SI 2226983T1 US 2011-274204 A1	15.08.2011 10.09.2010 21.12.2011 28.11.2011 08.09.2010 10.08.2011 16.11.2011 16.11.2011 04.01.2012 01.12.2011 25.11.2011 30.12.2011 10.11.2011