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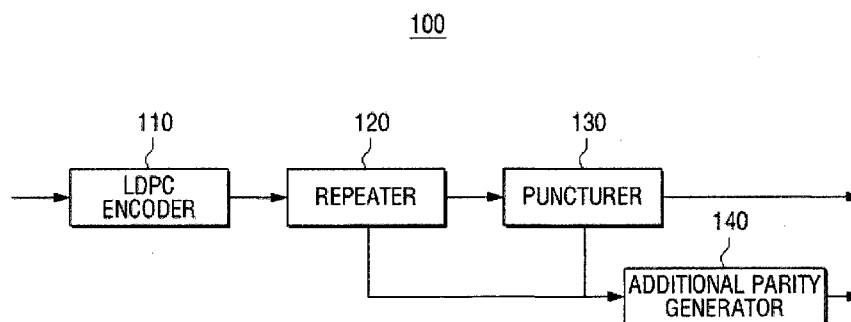
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(54) **Title:** TRANSMITTER AND ADDITIONAL PARITY GENERATING METHOD THEREOF

[Figure 1]



(57) **Abstract:** A transmitter is provided. The transmitter includes: a Low Density Parity Check (LDPC) encoder which encodes input bits including outer encoded bits to generate an LDPC codeword including the input bits and parity bits to be transmitted to a receiver in a current frame; a puncturer which punctures a part of the parity bits which is not transmitted in the current frame; and an additional parity generator which selects at least a part of the parity bits to generate additional parity bits transmitted to the receiver in a previous frame of the current frame, wherein a number of the additional parity bits is determined based on a number of the outer encoded bits and a number of the parity bits left after the puncturing.

A. CLASSIFICATION OF SUBJECT MATTER**H03M 13/11(2006.01)i, H03M 13/09(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)

H03M 13/11; H03M 13/27; H03M 13/09; H04N 11/00; H03M 13/05; G06F 11/10; H04N 7/08; H03M 13/03; G06F 11/00

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: LDPC, encoder, additional, puncture

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2015-016666 A1 (LG ELECTRONICS INC.) 02 February 2015 See paragraphs [0190], [0195]; and figure 6.	1-15
Y	US 2013-0055051 A1 (HONG-SIL JEONG et al.) 28 February 2013 See paragraph [0138]; claims 1, 2, 4, 17; and figure 10.	1-15
Y	US 2012-0216099 A1 (HONG-SIL JEONG et al.) 23 August 2012 See paragraph [0031]; and figure 2.	3-7, 12-15
A	US 2006-0123277 A1 (DALE E. HOCEVAR) 08 June 2006 See paragraphs [0032]-[0081]; and figures 1-7b.	1-15
A	US 2010-0275089 A1 (WAI HO MOW et al.) 28 October 2010 See paragraphs [0039]-[0074]; and figures 1-15.	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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