Title: MULTIPLE-FIELD BASED CODE GENERATOR AND DECODER FOR COMMUNICATIONS SYSTEMS

Abstract: A method of encoding data for transmission from a source to a destination over a communications channel is provided. The method operates on an ordered set of input symbols and includes generating a plurality of redundant symbols from the input symbols based on linear constraints. The method also includes generating a plurality of output symbols from a combined set of symbols including the input symbols and the redundant symbols based on linear combinations, wherein at least one of the linear constraints or combinations is over a first finite field and at least one other of the linear constraints or combinations is over a different second finite field, and such that the ordered set of input symbols can be regenerated to a desired degree of accuracy from any predetermined number of the output symbols.

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(Continued on next page)
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B FIELDS SEARCHED

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IPC(8) - H04B 14/04, H03M 7/00 (2007.10)
USPC - 375/242; 340/50

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)
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C DOCUMENTS CONSIDERED TO BE RELEVANT

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