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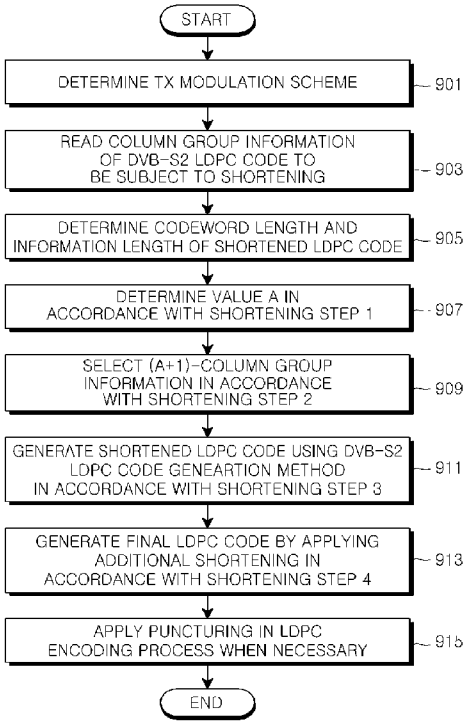
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR CHANNEL ENCODING AND DECODING IN A COMMUNICATION SYSTEM USING LOW-DENSITY PARITY-CHECK CODES

[Fig. 9]



(57) Abstract: A method and apparatus for encoding and decoding a channel in a communication system using a Low-Density Parity-Check (LDPC) code. The encoding method includes determining a modulation scheme for transmitting a symbol; determining a shortening pattern in consideration of the determined modulation scheme; grouping columns corresponding to an information word in a parity-check matrix of the LDPC code into a plurality of column groups; ordering the column groups; determining a range of a resulting information word desired to be obtained by shortening the information word; based on the range of the resulting information word, performing column group-by-column group shortening on the ordered column groups of the information word, according to the determined shortening pattern; and LDPC-encoding the shortened information word.

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