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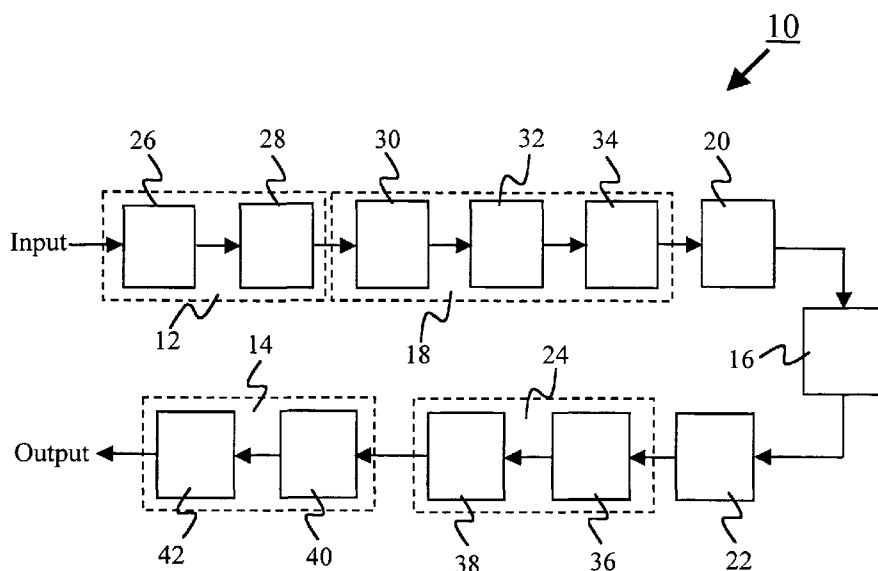
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(54) Title: CODED MODULATION SCHEME FOR A WIRELESS COMMUNICATION SYSTEM AND METHODS THEREOF



(57) Abstract: A wireless communication system (10), an encoding method (300) for encoding a binary input signal and a decoding method (800) for decoding a coded baseband signal within the wireless communication system (10) are described. The system (10) has an encoding section (12) and a decoding section (14). The encoding section (12) has a mapper (26) for mapping bits into symbols, and an encoder (28), coupled to the mapper (26), for encoding the symbols to corresponding integers modulo M, where M is an arbitrary predetermined integer. Coded symbols are derived from the corresponding integers. At the decoding section (14), a decoder (40) decodes an output phasor stream of a coded baseband signal to derive an estimate of a codeword. Thereafter, a demapper (42) demaps the estimate of the codeword to derive the bits from decoded symbols.



WO 03/017500 A1



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