

Modified Algorithm For Hard Decision Decoding Of Product Codes

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Summary

Product coding produces powerful long codes from short constituent codes. The conventional row-column decoding algorithm of the product code does not exploit its full power of correcting random errors and proposes a modification to the conventional decoding algorithm, which makes it capable of reaching the theoretical error correction capability of the code. In addition to its theoretical significance, the modified algorithm is shown to provide a gain of 0.5 dB over the conventional algorithm for AWGN channels.

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