Improved BPA-EH decoding technique applied to LDPC codes

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Abstract: This topic focuses on researching and implementing the improved decoding technique BPA-EH (Block Parallel Architectures for Enhanced Decoding) applied to LDPC (Low-Density Parity-Check) codes. In practical contexts, ensuring communication efficiency in low-frequency network systems is becoming increasingly important. The objective of the research is to improve decoding accuracy and speed while minimizing hardware resource usage. The applied method combines theory with experimentation to build an efficient decoding system for LDPC codes. The expected results from the topic not only provide a specific solution but also contribute to the development of modern communication technologies.

Keywords: Decoding technique, BPA-EH, LDPC code, Low-frequency network system