ERROR DETECTION AND CORRECTION USING BCH AND TURBO CODE

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ABSTRACT

This project is aim to discuss and analyze the field of error detection and correction by using Based on Bose, Chandhuri and Hocquengham (BCH) code and TURBO code in software MATLAB. During this project, it's necessary to study and simple understand the methods and expressions of BCH code and TURBO code. By going through that way to do the specific details on some of particular signal and channel analysis in computer, the requirement of knowledge in bch code and turbo code is needed.

In order to completely do error correction and detection on BCH code and TURBO code, one of project requirement is to familiar use the MATLAB computer software. This system is powerful to assist and provide appropriating tools in different test and simulation on different objectives. Of course, it's also rely on large coding commands input that transform the formulas from BCH code and TURBO code to proceed in many field analysis.

Actually, this project has needed to show the difference between objective with errors and without errors by using BCH code and TURBO code to apply different algorithms. Besides that, all the analysis or results are considered to perform into the figures or graphs way to show the progress in some of simulation, like the analysis of BER (bit error rate) and AWGN (additive white Gaussian noise) channel.