ABSTRACT

To generate a reliable communication system, in terms of freedom from error, need to be applied to an algorithm that can error detection as well as fixing the error correction, using a Hamming code error can be in the correction and detection with ease, it aims to improve reliability and to obtain an optimal way of solutions, Hamming code is able to correct all error in one single block.

On this final project done Hamming Decoder and Encoder implementation on TMS320C6416 which is one of the basic modules for the development and evaluation of applications for digital communication systems real time handcrafted Texas Instruments. Programming using Simulink in MATLAB software.

The analysis covers the value of the BER is obtained by changing the parameters of the Eb/No of errors a block (pattern errors) through the ideal canal (AWGN) using BPSK modulation. From the results of Analysis carried out that the probability of error of the Canal before performed encoding can be scaled down after Hamming encoding performed. Hamming code (7,4) showed better performance than other Hamming code proved to Eb/No 6 dB has no error at transmitter.

Keyword: hamming, Encoder, Decoder, error detection, TMS320C6416
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