Abstract

In the previous correspondence we introduced a binary double error correcting long code \((8\ 2\ 5)\), for 100% data correction. This paper evaluates the BER performance of UWB system using \((8\ 2\ 5)\) code over UWB (SV) channel for image transmission. The simulation results presented here uses BPSK, as well as 2-dimensional Hermite pulse modulation. Image to be transmitted over UWB channel is compressed by using Huffman coding to achieve lossless compression. The simulink model is developed to implement the basic UWB system without any means for channel correction (equalizer). The receiver is simple correlator instead of rake receiver, which is generally used to combat multipath. The performance of the double error correcting code for UWB communication is evaluated here to achieve 100% accurate image at the receiver.
Reference

Performance Analysis of a Novel Double Error Correcting Code for Image Transmission over UWB Channel


Index Terms

Computer Science

Signal Processing

Key words

Error-Correcting-Code

Generator-Matrix

Image-Compression

UWB-Communication