A Proposed Turbo Coded Wavelet Packet Modulation based MC-CDMA

Abstract

A turbo coded Discrete Wavelet Packet Transform DWPT based Multicarrier CDMA system has been proposed to enhance the bit error rate and complexity of the conventional MC-CDMA which based on Fast Fourier Transform FFT over different channel models. The decoding algorithm used max-log-MAP algorithm. The computer simulation tests show that the BER of the coded DWPT based MC-CDMA has been improved by 4 dB compared with the coded FFT based MC-CDMA over Additive White Gaussian Noise AWGN and 4.5 dB over the multipath fading channel at of BER=10^-3.
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Index Terms

Computer Science  
Signal Processing
Keywords
MPM MC_CDMA  PCCC  MCM  Mallat's Algorithm  OFDM