Performance of Convolution Coded Multicarrier CDMA System in Frequency Selective Rayleigh Channel

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Abstract

The paper describes the performance of convolution coded Multicarrier Code Division Multiple Access (MC-CDMA) system evaluated for different equalization techniques i.e. Maximal Ratio Combining (MRC) and Equal Gain Combining (EGC) in frequency selective Rayleigh channel in detail. For symbol mapping two modulation techniques: Binary Phase Shift Keying (BPSK) and Quadrature Phase Shift Keying (QPSK) is used. The comparison is done between the performances of MC-CDMA system with convolution codes and without convolution codes for different equalization and modulation techniques in terms of Bit Error Rate (BER) and Signal to Noise Ratio (SNR) using MATLAB based simulation. Simulation results reveal better SNRs when ½ rate convolution coding is used with different modulation techniques.

References


Index Terms

Computer Science  Signal Processing

Keywords

Convolution Code, MC-CDMA, MRC, EGC, BPSK, QPSK