Simulation study and analysis of OFDM

Abstract

In this paper, we describe the Orthogonal frequency division multiplexing (OFDM) is an established technique for wireless communication applications. Typical constraints faced during OFDM transmission are: a large peak-to-mean envelope power ratio, which can result in significant distortion when transmitted through a nonlinear device, such as a transmitter power
amplifier. We study the effects of clipping and filtering on the performance of OFDM, including the power spectral density, BER, through intensive MATLAB simulation. We have indigenously simulated the effect of multipath fading to ensure that all specifications of OFDM transmission are taken care of. To simulate the modulation of the sub-carriers, we have chosen DQPSK. The way OFDM handles ISI has also been encompassed.

Reference


Index Terms

Computer Science
Communications

Key words

OFDM
BER