

The Effectiveness of Orthogonal Frequency Division Multiplexing as Modulation Technique

Authors : Mohamed O. Babana

Abstract : In wireless channel multipath is the propagation phenomena where the transmitted signal arrive at the receiver side with many of paths, the signal at these paths arrive with different time delay the results is random signal fading due to intersymbols interference(ISI). This paper deals with identification of orthogonal frequency division multiplexing (OFDM) technology, and how it is used to overcome intersymbol interference due to multipath. Also investigates the effect of Additive White Gaussian Noise Channel (AWGN) on OFDM using multi-level modulation of Phase Shift Keying (PSK), computer simulation to calculate the bit error rate (BER) under AWGN channel is applied. A comparison study is carried out to obtain the Bit Error Rate performance for OFDM to identify the best multi-level modulation of PSK.

Keywords : intersymbol interference(ISI), bit error rate(BER), modulation, multiplexing, simulation

Conference Title : ICWCMC 2016 : International Conference on Wireless Communications and Mobile Computing

Conference Location : Istanbul, Türkiye

Conference Dates : July 21-22, 2016