Abstract

Orthogonal frequency division multiplexing (OFDM) is a type of multicarrier modulation technique in which available bandwidth is divided into narrow bands at different frequencies. It is used to compress a large amount of data into a small amount of bandwidth. This is possible by dividing a large amount of data into smaller parts, then sending that data simultaneously over a number of frequencies. OFDM allows a large amount of data to be transmitted quickly and reliably, with a minimum of loss or interference. As OFDM is used in various applications like Wi-Fi, 4G, DAB & WiMax, so its performance is an important factor and for this Bit Error ratio (BER) is calculated. This paper deals with the comparison between DWT based OFDM and FFT based OFDM for various digital modulation techniques and channel coding in terms of Bit error rate calculation. Simulation results shows that FFT based OFDM have better results as compared to DWT based OFDM.

**Index Terms**

Computer Science  
Signal Processing

**Keywords**

Bit error ratio (BER), FFT, DWT, orthogonal frequency division multiplexing (OFDM)