Abstract

The concept of OFDM (Orthogonal Frequency Division Multiplexing) is a FDM (Frequency-Division Modulation) concept scheme ara commonly used for multicarrier digital modulation methods. This application is use for wireless transmission system, because of its resistance to multipath fading. However, the problem that came out in OFDM implementation is the PAPR (Peak-to Average Power Ratio) that is too high. This affects the non-orgthogonal subcarrier wich is the effect of non-linier distortion on the waveform causing inter-block interference or IBI, it is take longer guard time than the impulse response, and it will decreases the spectrum efficiency and the system performance.

The wavelet transform is one of techniques for PAPR reduction. The purpose of such filtering process is to separate high frequency components and low frequency, wich is expected to reduce PAPR. The type of wavelet used in this research is the familty of the biorthogonal and the orthogonal wavelet.

The result of this project, the best reduction technique of PAPR obtained wavelet reversbior is rbior5.5 that is equal to 1.017 dB with BER 0.00579. For the biorsplines family the best PAPR reduction is obtained from bior3.5 which is 1 dB with BER value 0.07685. Then the daubechies wavelet family did a PAPR reduction of 0.723 dB with BER value of 0.0048.

Keyword : *Orthogonal Frequency Divison Multiplexing(OFDM), Transformasi Wavelet, PAPR*