

ABSTRACT

OFDM (Orthogonal Frequency Division Multiplexing) has very high spectral efficiency and robust against frequency selective fading. This technology have many advantages, but on the other hand also has its drawbacks. One of them is sensitive to carrier frequency offset (CFO) caused by channel response. This leads to inter carrier interference (ICI) causing loss of orthogonality.

This research focus on ICI mitigation method using channel matrix estimation and equalization zero forcing (ZF). While the enhanced ZF using interpolation matrix estimation so could simplifying and shortening the inverse matrix computation

The simulation results using ZF obtained improvement factor 2 dB with target BER of 10^{-3} . While the enhanced ZF equalizer provide increase performance 0.5 dB from conventional OFDM results and decrease the invers matrix channel complexcity,conventional ZF spent 0,002 s for invers matrix but enhanced ZF spent 0,0012s.

Key Words : *OFDM, ICI, CFO, ZF Equalizer,Enhanced ZF Equalizer*