ABSTRACT

Nowadays, communication system offering high speed and big capacity. Wireless communication system is required to transmitting data and voice with high speed, bandwidth efficiency, and have a good performance in handling channel condition that caused by multipath fading.

In wireless communication system, accuracy between information that transmitted from source with received data in destination, ideally should same. But, in real condition this thing could not realize because Inter-symbol Interference and noise that happen in channel transmission. This research will be conducted comparison between LMS, RLS, and MLSE with variation of modulation and user movement, then will be determined which equalizer give the best performance in handling ISI.

The result from this research shows that MLSE equalizer gives the best performance in handling ISI. This conclusion proved by E_b/N_0 value for MLSE is smaller than E_b/N_0 value for LMS and RLS for all observed condition: compare the performance of equalizer against variations of modulation, compare the performance of equalizer against user movement, and compare the performance of modulation against equalizer.

Keyword : LMS, RLS, MLSE, BPSK, QPSK, 8-PSK