ABSTRACT

One of solutions to bring much information on a finite bandwidth is using Phase Shift Keying (PSK) modulation. It is a popular modulation which used in a number of telecommunication system.

Bandwidth efficiency on PSK modulation is better than the other modulation method. It is why we can maximize the bandwidth usage by using this modulation method. In M – PSK modulations, we will know about better usage of bandwidth with a higher of M number.

This research creates a prototype of 16 – Ary PSK system. So that some of variable here are simplify to get the better result. Those two factors which have dominant role are carrier signal and bit rate. Both have important information to analyze each block of Modulator and Demodulator later.

The analyze result of Modulator show us the inconsistency of amplitude of output signal. And each symbol has had different phase than the others. Output Demodulator has high error rate of bit. This is happened because of simplifying block and imperfect Modulator output.