ABSTRACT

The need for wireless service currently required to meet the needs of large-capacity transmission with high bit rate. With the increasing channel capacity is an issue that can not be avoided.

In the U.S., Canada and Europe have applied to fixed wireless access service is Fixed Broadband Wireless Access (FBWA), one of them, known as Local Multipoint Distribution Services (LMDS). LMDS is a wireless communication system with a bandwidth of 1 GHz is expected to be the solution to the problem of high-capacity technology. However, the communication system with this technology is very sensitive to interference and error propagation. So to access services that operate at high frequencies will result in significant fading.

So to reduce this influence, we used the method Adaptive coded modulation (ACM) on advanced multicarrier-CDMA (MC-CDMA) to maintain the quality of service for performance will be maintained, where the merger between adaptive modulation and adaptive dual coding (Reed Solomon Code and Convotional) using the algorithm Threshold Method.

The simulation results show that the performance of adaptive coded modulation (ACM) to provide improvements Eb / No range ± 1.3 dB to ± 3.9 dB for a target BER 10^{-4}. In addition, when the value of Eb / No used 12.3 dB performance BER ACM achieve results with the smallest, less than 10^{-4}.

Keywords : FBWA, LMDS, Adaptive Coded Modulation, the MC-CDMA.