

## ***ABSTRACT***

WiMAX (Worldwide interoperability for microwave access) is a Broadband Wireless technology that gives new hope to create a broadband network using wireless infrastructure. This technology has a wide coverage area with a relatively high speed of 75 Mbps. In the current world of information communication is transmitted not only by voice, but in many forms such as data and video are transmitted more and more as well. The needs for video information that increased of course must be followed by the development of supporting technology service. Video services would have to consider the necessary bandwidth, the speed of data transmission, as well as Quality of Service (QoS) that must be satisfied.

In this final task will be done analysis of data and video services on WiMAX in terms of throughput and quality of service parameters, including delay, packet loss, jitter, and throughput.

From the simulation and analysis the maximum value of 25,0256 ms delay is obtained when the condition Constant Bit Rate (CBR) of 1000 bits with a bit rate of 512 Kbps as well as background traffic 20% from bandwidth. The maximum value of 10,04% packet loss, for the measurement with 512 kbps bit rate, background traffic for 8Kbps. Delay results that obtained are still below the maximum limit of standardized ITU, and for the packet loss doesn't fulfill the ITU standard for video to several conditions. So the optimization by adding bandwidth to 15 Mbps from the original capacity for Quality of Service (QoS) can meet the ITU standard is required.

Keywords: Mobile WiMAX 802.16e, WiMAX QoS, ITU