SUMMARY

Rama Whidi Whisika, Analysis The Influence of Antenna Pointing Angle With Quality of Service (QoS) Variant Real Time Polling Service (RTPS) on WiMAX 802.16d, Department of Electrical Engineering, Faculty of Engineering, Brawijaya University, January 2016, Academic Supervisor : Ali Mustofa dan Rusmi Ambarwati.

Worldwide Interoperability for Microwave Access (WiMAX) IEEE 802.16d is one of technology which send the data quickly and efficiently. WiMAX had the advantages of QoS differences, one of them is real time polling service (RTPS) with live streaming service.

In its implementation, WiMAX having concerns do of change of an angle pointing in antenna receiver effected received signal is not maximum, so performance will be disturbed. The performances will be received by looking at 4 parameter, 3 of them are delay, throughput and packet loss by using packet analyzer wireshark and the last is signal to noise ratio by using Telnet. The method is changing the pointing angle of receiver antenna with the transmitter. Antenna's receiver will be turned mechanical way (manual).

The results show for the throughput on changing the angle pointing antenna elevation angle tend to be stable with a value of 0.292 to 0.293 ms, whereas for data with azimuth to experience the value that fluctuates but has no significant difference with the highest value 0.385 Mbit / s in 0° and the smallest value 0.311 Mbit / s. The value of packet loss on the antenna pointing angle changes with elevation angle tend to be stable with a value of 0° to 0.08%, while for the data with the azimuth experiencing fluctuating value but has no significant difference with the highest is 0% and the smallest is 1.03%, According to the standard TIPHON 2012, the value of packet loss on the azimuth and elevation angles belong in either good category because it has a percentage of 0-3%. Delay value tends to be stable on the data from the measurement results with elevation angle with a value of 11.64 to 11.65 ms. Meanwhile, the highest delay in the change of the pointing angle of the antenna with azimuth 19.56 ms in the smallest 0° and 15.87 ms at a 180°. All data delay value belong in either category according to ITU-T G.114 that good value on the network delay <150 ms. The value of the signal to noise ratio (SNR), the largest are at an 0° in azimuth with 31.73 dB and 0° elevation with a value of 28.5 dB.

***Keywords** : WiMAX IEEE 802.16d, Pointing angle, QoS.*