

## ABSTRACT

Speedy 1 Mbps is a product of PT. TELKOM is marketed in the year 2008. This product provides the Internet access service end-to-end technology-based Asymmetric Digital Subscriber Line (ADSL), which can deliver voice and data simultaneously through a regular phone lines at speeds up to 1 Mbps from the modem that is sent to BRAS (Broadband Remote Access Server). To find out how well the performance of Speedy 1 Mbps then the required QoS analysis. At Speedy service, quality is strongly influenced by the distance between the central customer, the type of multimedia services in the customers do, and internet usage on the busy hour.

At the final project will be the measurement of electrical parameters and network QoS Speedy 1 Mbps and performance analysis will be conducted electrical parameters (attenuation channel and S/N) and QoS parameters (delay RTT, jitter, packet loss, and throughput). Multimedia service which is applied is browsing, chat, streaming and downloading. Expected in this final project obtained the optimum QoS in accordance with ITU-T standardization.

From the results of the measurement and analysis on the network Speedy 1 Mbps available 20 of 30 have said customers are still eligible to serve Speedy 1 Mbps with a distance of  $\leq 6.7$  km. RTT delay on a chat application in the 5 km distance 0.131765667 seconds and a streaming application on the smallest distance of 1 Km in 0.002522 seconds. Jitter on the application streaming smallest distance 1 km in 0.021032 seconds and on the application chat at 5 km distance of 0.12205733 seconds. Smallest packet loss on the application streaming in 1 km distance 1.128% and packet loss on a browsing application largest distance in the 5 km of 6.104% . Throughput streaming applications on the largest distance in the 1 Km of 523 Kbps and throughput smallest in the chat that is application of 2.3 Kbps. Occurred in the busy hours 08.00 am-17.00 pm. Optimum distance between customers is central to 4.21 Km. Browsing the optimal throughput of 53.3853 Kbps, chat of 2.596 Kbps, streaming of 371.75 Kbps, and download 246.937 Kbps.

Keywords: ADSL, QoS,, Speedy 1 Mbps, RTT delay, jitter, packet loss, throughput, attenuation channel, S / N.