ABSTRACT

Basically there are a lot of things done by some companies, particularly in telecommunications service providers improve service quality. Problems are usually obtained in the development and trends of data traffic has been designed and implemented to provide optimal sound tarafik with circuit switched networks. As performed by PT Telkom Tbk in implementing VLAN technology on Metro Ethernet network. This technology will serve the data transmission speed and large capacity.

Analysis and simulation of the project end IP VPN services in the Metro Ethernet network based on PT Telkom Tbk VLAN to segment a case study in Bandung. The design of Metro Ethernet network configuration system Telkom Tbk. By using OPNET Modeler software 5.14. QoS performance analysis in terms of throughput, delay, and packet loss. QoS Comparison with simulations and real data traffic forecasting Bandung link observed.

From the research that I had been doing on network metro Ethernet simulation for Bandung area, on ideal condition, realtime communication which is VoIP application with CODEC G.729A produce average throughput 7.7145 kbps, delay 60,134 ms, and 0% packet loss. Whereas for non realtime communication namely browsing application produce average throughput 12.87 , delay 0,502 ms and 0,4% packet loss.

Keywords: VLAN, Metro Ethernet, Quality of Service (QoS), IP VPN services