

ABSTRACT

Telecommunication network used now is no longer dominated by voice communication channel, its portion is shared with the data communication channel. For current time data transmitting require for more data transmission speed and accuracy, especially for metropolitan areas with a very dense population and diverse activities as well. Various research and technological development carried out in order to create a new technology that is cheap and easy to implement that called Metro Ethernet. In the current development, technology that pass through many obstacles because of the variety of services that are passed and the variation of the user demand that can resulting damage to data or a more severe result the data can not reach the receiver. Sometimes a user access to certain services. This resulted in a lack of consumer satisfaction.

In this final task will be carried out simulations using Modified Deficit Round Robin (MDRR) and Weighted Fair Queueing (WFQ) algorithm to measure the QoS of each service on Metro Ethernet Network. Furthermore Metro Ethernet network performance is analyzed by measuring the amount of QoS include delay, jitter, throughput, and packet loss.

From the test results and analysis obtained that MDRR and WFQ algorithms give the same value and have not much differences. In the scenario of a user changes, the results of delay were 0.0607823 sec for MDRR and 0.06014 sec for WFQ, the results from simulation of user changes still meets the standards of ITU-T delay that is <150ms, the results of packet loss were 0.07744532% for MDRR and 0.07923093% for WFQ, and the results of throughput were 113285.675 bps for MDRR and 112766.08 bps for WFQ.

Key word : Metro Ethernet, MDRR, WFQ, QoS