

ABSTRACT

Metro Ethernet technology is one means for the creation of Next Generation Network (NGN). This technology has the potentials to transfer data up to 10 Gbps. At this time many Ethernet metro network is implemented using physical media such as optical fiber as the transmission medium so it become fixed. But, along with technological advances and development trends in addition to high speed data transfer, new technologies are also required to be able to support communications that are mobile.

WiMax is a broadband wireless access technology that has high speed access with a wide range and supports high mobility. WiMax standard used by the IEEE 802.16e standard with data speeds more than 75 Mbps. It has the ability to handover and hand off so that it can support the Metro Ethernet technology with high mobility.

In this final project will be done simulasi Mobile Metro Ethernet over WiMAX technology and analyzes the performansi of these technologies. The simulation is conducted to determine the performance of Mobile Metro Ethernet over WiMax technology. Performance emphasized in the QOS parameter above (Throughput, Delay, and Packet Loss).

In this final project was found that the mobile metro ethernet over wimax technology can delivered good Qos for user with high mobility up to 130 km/hour. But for the large amount of user, the mbile metro ethernet over wimax technology cannot delivered good QOS. The WfQ queue management is better implemented in mobile metro ethernet over wimax. Because it gives the value of throughout and has the better fairness value than other queue management.

Keywords: Merto Ethernet, WiMax, Ethernet