

ABSTRACT

WiMAX (Worldwide Interoperability Microwave Access) is a very promising technology for the future. This technology has a wide coverage area with a relatively high speed of 75 Mbps and up to 15 Mbps for mobile WiMAX 802.16e. And the development of telecommunication technology with high mobility is growing at the moment. Therefore, the IEEE set a new standard of 802.16e mobile WiMAX to overcome this, but the data speed is not necessarily the same as the previous products that are WiMAX fixed wireless.

In this final task analysis performed on the packet delivery using mobile WiMAX video streaming based on quality parameters of WiMAX service is provided UGS (Unsolicited Grant Service), rtps (Real Time Polling Service), nrtps (Non Real Time Polling Service), and BE (Best Effort). Research methodology used to collect the literatures of mobile WiMAX, and then design a network to use, then perform simulation using NS-2 simulator, retrieve data from the simulation results and the data is processed.

The end result of this final task is to get maximum user, maximum speed of user and maximum background traffic for access video streaming application in mobile WiMAX 802.16e network. Maximum user to access video streaming in mobile WiMAX network at the same time is about 60 user with speed of user 5 m/s. Maximum speed of 2 user to access video streaming application is 30 m/s. And maximum background traffic in mobile WiMAX network is 9 Mbps to access video streaming application.

Keyword : *Mobile WiMAX 802.16e, QoS WiMAX, NS-2 Simulator*