ABSTRACT

Worldwide Interoperability for Microwave Access (WiMAX) is wireless technology based on IEEE.802.16 standard; has many applications and services in Metropolitan Area Network (MAN) area. WiMAX technology combine several Quality of Service (QoS) mechanism in one of Media Access Control (MAC) layer. This technology guarantees quality of data, voice, and video.

WiMAX technology requires a suit algorithm scheduling so that can support several QoS. This algorithm should guarantee bandwidth allocations so that fairness can be reached for all users. In this research is using Network Simulator NS-2.29 as a tools to simulate the program.

The scenario is designed to increase the number of nodes and offered traffic results compared with RR algorithm. SNR Threshold value changes affect the value of average delay, throughput, and packet loss. Threshold most ideal SNR value is 8.5 dB. Change Time Removed (TR) have increased the value of everage that originally 3.39367 ms delay, which initially increased the value of 22.764 Kbps throughput, packet loss and increase the value of 0.0184468%. Change the value of L times provides increased leverage the value of 3.39367 ms initial delay, the initial increase in the value of 22.764 Kbps throughput, packet loss and decrease the value of 0.0184468%. From the simulation results conclude that TRS+RR algorithm has better performance because of its ability to block a node that has a SNR below the threshold.

Key words : WiMAX, scheduling, TRS+RR, QoS, NS-2.29