ABSTRACT

WiMAX (Word Interoperability for Microwave Access) are technology that implemented by IEEE 802.16 which is evolutions of Broadband Wireless Access (WBA) previous technology with more addition of interesting features and able to provide high speed access and service (until 75 Mbps) and its designed for Non-LOS(non- Line of Sight) condition. In its developing, WiMAX is later not only allocated for fixed market but also portable even mobile. So, with this high speed accesses WiMAX reasonably use for "last mile" broadband connections backhaul and high speed enterprise.

Cause so many WiMAX features for real time or non-real time, it is need to do performance (QoS) analysis. Its need to compare the scheduling-algorithms and to choose which one is more effectively to increase QoS. On this Final Task, there are three scheduling-algorithm will be simulated, Weighted Round Robin (WRR), Weighted Fair Queueing (WFQ) and Modified Deficit Round Robin (MDRR). In this QoS's trial, its needed some parameters which is throughput, delay and data drop (packet loss). All of this simulations will use OPNET Modeler 14.0 software.

From all scenarios, WRR, WFQ and MDRR shows a good performance. Each algorithm has superiority or special quality on particular network condition. WFQ good on network which dominating by rtPS traffic that have intolerant to delay. Meanwhile MDRR good on network with more addition numbers of user with high mobility.

Key Word   **:** WiMAX, Weighted Round Robind (WRR), Weighted Fair Queuing (WFQ) and Modified Deficit Round Robin (MDRR), throughput, delay, datadrop.