ABSTRACT

Communication technology the future of communication is expected to serve wherever and whenever we can communicate. This has led to the idea to develop a current wireless technology is WiMAX (Worldwide Interoperability for Microwave Access). WiMAX has a very important role in the development of Broadband Wireless Access current and future. This is in line with the increasing needs of an increasingly large data with very high user mobility. The ability of the allocation of the amount of bandwidth on a channel contained in the MAC (Medium Access Control) is an important concept in WiMAX to reduce latency and improve QoS. Therefore, the mobile WiMAX needed a good scheduling algorithm that can provide QoS guarantees to users.

This final compare several scheduling algorithms, including algorithms Deficit Round Robin (DRR), smoothed Round Robin (SRR), Dynamic RED (Dred), and Stabilized RED (SRED) along with simulation and analysis of impact on performance especially in mobile WiMAX pass voice packets. Performance parameters to be measured are throughput, packet loss and delay. It is expected that the results of this Final that is getting the right algorithm and optimal scheduling for a scenario - a scenario that will be simulated.

Calculation of performance parameters of the simulation is based on the effects of changes in the speed of MS, changes in the capacity of a link between the BS with the Router and the effect of the extra users in the WiMAX network. In effect change in velocity can be generated that with the increasing speed of the user then the resulting QoS worse. In the simulation added a user, with the increasing amount of traffic a user without balanced so that there will be a significant increase in packetloss, with the number of users reaching as low as 24 pieces of 22.251% packetloss produced by the SRR. And to the changing scenario link capacity throughput reaches a maximum value on the size of the 10Mbps link is equal to 20.0123 Kbps produced by the SRR.

Keywords : WiMAX, Scheduling algorithm, DRR, SRR, DRED, SRED