ABSTRACT

Worldwide Interoperability For Microwave (WiMAX) is a standard for broadband wireless access (BWA) with the ability to deliver high-speed data. Another characteristic of wimax is a guaranteed QoS (Quality of Service). Therefore, in wimax needed a good scheduling algorithm, so as to support QoS service classes exist in wimax to run trending range of applications. A good scheduling algorithm should be able to ensure the total maximum data rate, fairness, and good use of bandwidth for all users.

In this research, simulates the wimax network USING OPNET 14.5 using 3 service, voice, video, and HTTP. The research was conducted, with an increase of 13 scenarios the number of SS and network weighted services that vary in every script that HTTP SS as much as 0-70%, video SS as much as 0-30% and voice SS as much as 0-30%. Then from each scenario will use algorithm scheduling algorithm Modified Deficit Round Robin (MDRR), Modified Weighted Round Robin (MWRR) and Priority Queuing (PQ).

Based on simulations carried out, for the services of voice and video, the higest delay are PQ i.e 42.27 for voice , 08188 for video. For the voice services and video jitter which the higest result are PQ i.e 1.06 s for voice and 0.00290 for video. For the voice services and video packet loss that the higest are PQ i.e 09866 for voice, 098661 for video and 0655 for HTTP

Keywords : WiMAX, QOS, MDRR, MWRR, PQ, OPNET