

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, more focused on service-class real-time Polling Service (rtPS) is simulated with the simulator NS-2.29. Also, will compare the scheduling algorithms are algorithms kedula mSIR (maximum Signal-to-Interference-Ratio) scheduler, and the algorithm TRS (Temporary Removal Scheduler) + mSIR (maximum Signal-to-Interference-Ratio) scheduler to generate traffic to VBR (Variable Bit Rate). In this scheduling simulation, created three scenarios attempt to see the performance which is more efficient algorithms, based on the parameters of delay, throughput, and packet loss. The first scenario describes the influence of the addition of the SS (subscriber station). The second scenario describes the effect of background traffic, and the third scenario describes the effects of changes (C / I) Threshold algorithm TRS_mSIR.

Based on the simulations are made, for the first scenario with the addition of SS, the delay, throughput, and packet loss increases as the second algorithm. For the second scenario in the presence of background traffic, the delay, throughput, and packet loss greater than the previous scenario, for the third scenario with the effects of changes in (C / I) Threshold TRS_mSIR algorithm, that algorithm TRS_mSIR showed a smaller value based on comparison mSIR algorithm on (C / I) Threshold = 17dB.

Keywords: WiMAX, scheduling algorithms, QoS, mSIR, TRS, NS-2.29