ABSTRACT

Mobile Ad hoc Network or MANET is a wireless network that consists of some mobile nodes (mobile station) which are dynamic and spontaneous, can be applied anywhere without using the network infrastructure (cellular or PSTN) that already exist and for the temporary network. The problems that occurred in mobile ad hoc are mobility of the nodes and inclination error in media, these problems can increase the amount of delay, packet loss and reduce throughput. Therefore, to analyze the parameters network performance with packet scheduling algorithms.

In this Final Project is studied mobile ad hoc network performance to support of triple play services by analyzing the value of QoS parameters such as delay, packet loss, throughput, fairness index and jitter. To measure that can be simulated by scheduling Deficit Round Robin (DRR) and smoothed Round Robin (SRR) with the type of services are file transfer (data), video streaming (video) and VOIP (voice).

In this study, the results are every scheduling algorithm give the difference perform like throughput, packet loss, delay and jitter. Beside that for the fairness index, all of scheduling algorithm give the best perform because the value of FI still at under maximal. For node with speed 5.6 m / s or like a speed of user driving, both DRR and SRR give a bad performance for video and voice services. From these results it can be concluded that for mobile ad hoc networks are not recommended for speed driving users to access video streaming and VOIP. From of the scenario fairness index, the results of FI at node 20 for all services give the value almost reaches 1, which means that the two algorithms has been sent packet with fair, especially on real time services.

Key word: *Mobile Ad Hoc Network* (MANET), *scheduling*, QOS, DRR, SRR