

## ABSTRACT

Mobile ad-hoc network (MANET) is an aggregate of *nodes* which are not connected to the wired (wireless) builds a temporally network without any structures and centered administration with dynamic topology.

Because of the characteristics of MANET, there are so many challenges that have to be faced, such as the influence of the number of *nodes*, the influence of velocity of the movement of the *nodes*, and the influence of packet size that will be sent. These problems will cause the increasing of packets delay and decreasing of throughput. So that, the payload will raise and the performance will decrease too.

In this final task, the research is done in order to solve those problems by using traffic scheduling methods. The methods used are First In First Out (FIFO), Deficit Round Robin (DRR), and Random Exponential Marking (REM). From those methods, the performance of network is analyzed based on parameters like throughput, packet loss, end-to-end delay, round trip time and jitter using the number of *nodes* scenario, the velocity of movement of the *nodes* scenario and the influence of packet size scenario.

The results from the simulation, REM gives the best performance for throughput value in the number of *nodes* scenario and packet size scenario. Meanwhile, FIFO gives the best performance for throughput value in the velocity movement scenario.

**Keywords** : mobile ad-hoc network, FIFO, DRR, REM, throughput, packet loss, end-to-end delay, round trip time, jitter.