

ABSTRACT

Mobile Ad Hoc Network (MANET) is a decentralized network that consists of some mobile nodes (mobile station) which are dynamic, which every node that it has, can come in and come out into and from the network easily. The problems that occurred in mobile Ad hoc Network are came from the movement of it's nodes and also the probability of error in wireless media that can affect the Quality of Service (QoS) of the mobile Ad hoc network. One of the method to maintain the QoS of the network, is by applying a queue scheduling method to choose which node should be delivered first in the network.

This final project, is studied about the performance comparison between three queue scheduling algorithm in mobile Ad hoc Network, which are *First In First Out* (FIFO), *Priority Queueing* (PQ) dan *RED In/Out* (RIO) using NS-2.34 software for triple play services that includes voice, video and data.

This project has the results from the performances comparison between those three queue scheduling algorithms. Generally, PQ algorithm has the best performance for voice and video services, and FIFO has the best performances for data services. And for RIO algorithm, it has the worst performance for packet loss parameter, which it highest packet loss for data service is 1,8263%, for the voice service is 61,0704%, and for the video service is 53,1364%. From the fairness index point of view, PQ has the best fairness index for voice and video services, that's almost approaching the maximum score of fairness index, which is 1. It means that PQ algorithm is already good enough in delivering packet, especially for real time packet services.

Keywords : Mobile Adhoc Network (MANET), scheduling, FIFO, PQ, RIO