

## ABSTRACT

Technology growing up very fast especially in communication. Communication technology has grown up until small village. There are many place don't have permanent infrastructure to support communication technology. MANET came to be a solution that solve about permanent infrastructure of communication technology. Mobile ad-hoc network (MANET) is collection of mobile node can connect wirelessly which can to be a router and can forward packet to another node.

One of parameter need for performance MANET is TCP congestion control. TCP is algorithm for how to send a packet with connection oriented and reliable. TCP use for control speed of sending packet in network depends on that link. The aim of research about TCP is to make it can guarantee 100% packet sent because in this age communication of data to be needs. There are many algorithm TCP congestion control.

This research talk about some TCP congestion control. There are TCP FACK and Full TCP. This research want to comparison performance between TCP FACK and Full TCP in MANET. It is simulation and analyze the parameter that need for network performance. It use throughput, end-to-end delay, and packet loss rate to know performance of TCP FACK and Full TCP. Scenario in this research are amount of node and speed of node. The research is simulation and analysis. The simulation use Network simulator 2 (NS-2).

The result of this research shown that TCP FACK is better than Full TCP in all parameter. That shown mean of throughput TCP FACK and Full TCP is 565,5633 kbps and 469,1067 kbps, mean of end-to-end delay is 108,41789 ms and 328,6134 ms, and mean of packet loss rate is 0,003767 and 0.010467.

Keywords: MANET, NS-2, TCP FACK, Full TCP, performance.