ABSTRACT

The development of technology has bought some change in network technology, especially wireless. Mobile Ad-hoc Network (MANET) is an example. Mobile Ad-hoc Network (MANET) is a technology in wireless LAN which not nedd an infrastructure on the network, so that its easy for build and configured. MANETs are extremely flexible and each node is free to move independently, in any random direction when communication still exists.

MANET using wireless media for information delivery which is sensitive to the range each node, velocity and the number that communicating so its need a routing protocol that can provide a reliable communication. In this final project will be analyzed the performance of Destination Sequenced Distance Vector (DSDV), Ad-hoc On-demand Distance Vector (AODV) dan Dynamic Source Routing (DSR) on Manhattan Grid mobility model on using Network Simulator version 2 (NS2). The performance that analyzed are packet delivery ratio, average delay, packet loss dan throughput with a change of node number scenario and increased of node velocity.

Simulation result shows that occurs a descreasing performance for all routing protocol when the number of node and node velocity increase. The optimal configuration of MANET using Manhattan grid mobility model are when the number of node is 20 and node velocity is 1 m/s using DSR routing protocol with performance result are packet delivery ratio 99.783 % , average delay 32.588 ms, packet loss 0.217 %, throughput 288.548 Kbps and *Routing Overhead* 0.197 %.

Keyword : MANET, DSDV, AODV, DSR, Manhattan Grid, NS2