

## ABSTRACT

Ad hoc network is a collection of mobile nodes that communicate over a wireless channel without any network infrastructure and changes according to the movement performed by each node. Each node is free to move anywhere and anytime. Due to it requires no infrastructure, ad hoc networks can be used in various situations, for example in times of disasters that cause damage to the telecommunication's network in the disaster area. The function of the ad hoc network is highly dependent on the routing protocols determine the path or route between the nodes.

Ad hoc On-demand Distance Vector (AODV) is one of the routing protocol in ad hoc networks. The most types of protocol is widely studied and used. But as the development and progress of time, AODV has developed into AODV+ (Extended Ad hoc On-demand Distance Vector). In this Final Project, AODV+ and AODV be analyzed of their performance on an ad hoc network with Network Simulator2 (NS-2). Output parameters analyzed is packet loss, routing overhead, throughput, average delay and average hop. In the simulation, changes in input parameters is addition of nodes, node movement speed, and change the pause time.

From the simulation result with Random Way Point uses, can be seen the value of routing overhead, average delay and average hop AODV + better than AODV, while packet loss, and throughput of AODV is better than AODV +

**Keywords:** *Ad hoc, AODV, AODV+,MANET*