

ABSTRACT

Mobile Ad Hoc Network (MANET) is a combination of nodes (mobile wireless devices) that move dynamically and forming a temporary network without using any existing network structure (Li et al, 2007) . Routing in MANET is an interesting challenge because it has dynamic features , as well as limited by the bandwidth and energy . The movement of nodes will make the network topology always change. Because of this each node always make changes to the routing table , and the result is too many control packets in the network and use too much energy consumption.

In MANET routing protocols are generally only use a single path (Unipath) to use from the source node to the destination node . But , with dynamic network topology, making the pre-existing node becomes disconnected and had to re- establish a new route . Therefore , today multipath routing has been implemented , which can provide more than one route to the destination node . So the source node and the intermediate node can use this route as back up route or the main route.

In this final assignment analyzed performances of multipath routing protocol , and unipath routing protocols in MANET. The author use Ad - hoc On-Demand Distance Vector Routing (AODV) for Unipath routing protocol and Ad-hoc On-demand Multipath Distance Vector Routing (AOMDV) for multipath routing protocol. AOMDV protocol is used because it is extension of AODV protocol . This final project was simulated using Network Simulator v2 . From the test results we can conclude that AOMDV protocol is better than AODV protocol only in parameters of average delay , and for parameters of normalized Routing Load (NRL) , routing overhead , throughput , and packet delivery ratio (PDR) , AODV routing protocol shows better performance than AOMDV routing protocol.

Keyword : *wireless, ad-hoc, AODV, AOMDV, multipath, routing*