ABSTRACT

MANET is a collection of multiple nodes that move dynamically to enable communication between nodes without any infrastructure required. One of the characteristics of MANET is a dynamic topology where nodes that move freely and unpredictable will cause the network topology to change from time to time. To overcome the dynamic topology changes, it is necessary to choose the right routing protocol. This study aims to compare the performance of proactive routing protocols between OLSR and DSDV using UDP packet delivery services. This research uses Network Simulator 3 software to create a simulation scenario with the parameters of the number of nodes as much as 10, 50, and 100 nodes. And node speeds of 10, 30, and 60 m/s. The analytical parameters of this study include throughput, packet loss, and delay. Based on the test results, it was found that the performance of the OLSR routing protocol is better than the DSDV routing protocol in each parameter which includes the throughput parameter with an average value of 7.69599 Kbps, packet loss parameter with an average value of 7.05%, and delay parameter. with an average value of 6.4469 ms.

***Keywords**: MANET, routing protocol, OLSR, DSDV, node*