ABSTRACT

Telecommunications technology has evolved very quickly to support people in different aspects. Wireless communication technology is one of the fastest growing. This is because the many benefits offered on this technology. Cost is one reason why wireless technology is very popular. Maintenance costs are also cheaper than a wired network that requires cable maintenance costs are not cheap. One of the popular wireless technology is the IEEE 802.11s.

To determine the better routing protocol to be used in the IEEE 802.11s research is needed. The default routing protocol used is the Hybrid Wireless Mesh Protocol and RA-OLSR can be optionally used. RA-OLSR is an adaptation of OLSR is a proactive protocol that makes the whole network topology at each node is connected, so the route can be immediately used. In contrast to OLSR, RA-OLSR using Mac Address as a communication medium for RA-OLSR works on layer 2. Simulation software will be used in ns-2

From the simulation results obtained that the Protocol HWMP still better in the Packet Loss and Throughput while RA-OLSR protocol slightly better in the Average Delay. The average value of throughput, average delay and packet loss generated is 3052.7 Kbps, 47.8 ms and 0.175% for the Protocol to the Protocol HWMP whereas RA-OLSR is 2922 Kbps, 45.9 ms and 0.65%.

Keyword: Wireless Mesh Network, IEEE802.11s, ns-2, HWMP, RA-OLSR.