

ABSTRACT

Wireless Local Area Network (WLAN) is an indoor or outdoor local network without wires for data communication. WLAN is intended to combine multiple terminals or users in the LAN area. In a WLAN, Access Point (AP) connected to the Internet used to provide network services to users. However, such systems have limited coverage. One solution to solve this problem is to use Wireless LAN Mesh networks (WLAN Mesh). Therefore, to obtain optimal results it is necessary to a proper routing protocol in WLAN Mesh network.

In this Final Assignment simulates by comparing the Hybrid Wireless Mesh routing protocol Protocol (HWMP) and Optimized Link State Routing (OLSR) with analysis of its impact on the performance of the WLAN Mesh. QoS parameters in this simulation is delay, throughput, packet loss, routing overhead and normalized routing load. Calculation of performance parameters of the simulation is based on the effect of the change in velocity at stations as well as the effect of the number of stations in a WLAN Mesh network.

Effect of change in velocity that increasing speed of user make the resulting QoS gets worse when the speed of 3 m / s throughput to be decreased at 3.38% for HWMP and 3.22% for OLSR. When the speed of 27 m / s decline by 7.765 % for HWMP and 7.64% for OLSR. The largest delay value is 92,9423ms for HWMP and 95,5589 ms for OLSR. The biggest value packetloss is 3.28957% for HWMP and 3.36636% for OLSR. Routing overhead is 3.26615% for HWMP and 3.34698% for OLSR. The largest value of Normalized Routing Load is 3.27595% for HWMP and 3.37113% for OLSR.

Keywords : WLAN Mesh, HWMP, *OLSR*, *delay*, *throughput*, *packet loss*, *routing overhead*, *normalized routing load*