

## **ABSTRACT**

Congestion has often occurred and there is still no proper solution to prevent or reduce the incidence. One of the things that causes it is the lack of communication between drivers or vehicles that will cause congestion.

In this problem the author chose a solution that is by using VANET. To know the protocol is good for VANET then the authors choose one of the protocols OLSR is simulated using SUMO, MOVE, NS-2 and some other help applications. The result of the simulation will be analyzed the performance of the protocol with the parameter of end to end delay. Simulation test results show that average end to end delay in number of vehicles has delay increase from 9.402 ms to 188.562 ms as measured number of vehicles from 20 nodes to 200 nodes this also happen in average end to end delay to velocity of vehicles with 100 nodes has delay increasing from 20.518 ms to 79.676 ms as measured from 10 m/s to 30 m/s however in average end to end delay to velocity of vehicles with 60 nodes has delay increasing not significantly from 7.824 ms to 7.841 ms as measured velocity of vehicles from 10 m/s to 30 m/s.

Keywords: VANET, OLSR, Average end to end delay