

## ABSTRACT

*Changes frequently and a lot of nodes may trigger collision happen on VANET and causes packet loss. So, the information doesn't received. Therefore, VANET require an efficient routing to transmit data.*

*In that case, routing electing is important to find out the most effective route. Dynamic Source Routing (DSR) is one of routing type in wireless communication. DSR belong to routing type based on topology it characteristic is reactive, it means the route toward destination node will determined when the data reach that node. Superiority of this type is fast adaptation on topology changes which is problem in VANET.*

*In this final project will examine a simulation, that is sending data between some nodes with Dynamic Source Routing in realistic scenario. Simulation of Urban Mobility (SUMO) and Network Simulator (NS-2.35) used for simulation. Probability that collision occur will be seen based on the result of simulation that had examined. The result of DSR has an average value with throughput 443,204 kbps , packet delivery ratio 86,25%, packet loss 13,75%, delay 2,78 ms and collision rate 0,12. While result of TORA has an average value with throughput 259,04 kbps, packet delivery ratio 41,97%, packet loss 57,98%, delay 2,81 ms and collision rate 0,61. It shows that probability of collision occur on DSR is less than TORA on the alteration number of node scenario.*

**Keywords :** VANET, Collision, DSR, SUMO, NS-2