ABSTRACT

Vehicular Ad Hoc Network is the development of Mobile Ad Hoc Network (MANET), a technology that enables inter-vehicle (Inter Vehicle Communication) or between vehicles and with the infrastructure (Roadside-to-Vehicle) can communicate with each other. A hyperlink between vehicles can communicate with each other to provide a variety of benefits which include that overcome bottlenecks, avoid accidents by warning, choosing a better path to pass a vehicle, and so on. VANET is more dynamic and complex dibangingkan with MANET, because it has a behavior that always moves to the travel time and different conditions. Therefore, a routing protocol is needed to improve the performance of VANET itself.

The final project will analyze the performance of AODV protocol performance in VANET scenarios on a city street intersection. This simulation uses a variety of tools, including JOSM for making maps, MOVE, and SUMO. The performance metrics are measured end-to-end delay, packet delivery ratio, and throughput.

And by comparison it can be concluded that the application of VANET routing protocols AODV perfomance on a city street intersection with the current conditions and the overall condition 10km/jam number of nodes can be used to address Life Safety-Critical, Warning Safety, Internet Access, Automatic parking, and Roadside Service Finder because delay values below 100 ms, 53.46 ms precisely. While in other circumstances can only be used for Internet Access, Automatic parking, and Roadside Service Finder only.

Keywords: *MANET, VANET, Inter Vehicle Communication, Roadside-to-Vehicle, MOVE, SUMO.*