

## **ABSTRACT**

*Vehicular Ad-Hoc Network (VANET) is technology which has ability for vehicle can communicate with the others for information exchange. Topology changes make end-to-end path connection between source and destination is not guaranteed. While conventional routing protocol such as TCP/IP doesn't work cause long transmission delay and quickly disconnection make packet which is bought will be drop. Delay Tolent Network (DTN) is solution to fix the weakness of VANET and TCP/IP. With store-carry-foward paradigm enables communication in área with sparsely distributed node. However the performance of DTN is determined by routing protocol performance.*

*In this Final Project will discuss about affect of buffer size, node speed, node density and message size to delivery probability, throughput, average latency, packet loss, and packet drop. There are two routing protocols that are used in my final project i.e. Direct Delivery and First Contact. Both routing protocols have single copy character. The execution of this final project devides in two parts. Part one is map processing and part two is network simulation. For map processing use OpenJUMP 1.8.0 with map source from [www.openstreetmap.org](http://www.openstreetmap.org). For simulation use ONE simulator RC2. Route of vehicle is modeled based research area Buahbatu-Cileunyi highway which has 13.50 km route length. For the network simulation uses IEEE 802.11p standard.*

*Based on simulation output shows on delivery probability, throughput, and packet loss test parameter, Direct Delivery is better than First Contact. But, In average latency and packet drop First Contact is better than Direct Delivery.*

*Keywords: DTN, VANET, Direct Delivery, First Contact*