ABSTRACT

VANET (Vehicular Ad-hoc Networks) has become the one of points that gets a lot of attention. VANET is a Subclass of MANET (Mobile Ad-hoc Networks) [1]. VANET provides services in form of communication between V2V (Vehicle to Vehicle) that can increases of the ITS (Intelligent Transportation System) [2]. Now, VANET always close about the density that increases along with the number of vehicle growth and the Velocity of data which become a necessary. Therefore it is necessary to balance the load of data traffic in order to spread the data to be balanced, .

In this research, there are two subsystem that are mobility subsystem and network subsystem. To make a mobility model ,used VanetMobiSIm such a software. Meanwhile, NS-2 (Network Simulator 2) is used to make a network subsystem. The VANET network in this reasearch uses GPSR and DSDV protocol. The simulation is performed to analyze the performance of VANET that has used the load balancing by analyzing the Performance parameters which are average end to end delivery, throughput, and packet delivery ratio.

It can be concluded that VanetMobiSim can be used such a simulator for load balancing scheme. Between GPSR and DSDV, shows that the most suitable to the scheme is GPSR. The QoS of GPSR Routing is 97% for PDR, 131.13ms for Delay, and 178,7kbps for Througput. The routing protocol based of Position is better for load balancing scheme that has dynamic mobility.

Key word : Load Balancing, Vehicle Traffic, Node Velocity , GPSR, DSDV.