ABSTRACT

Mobile Ad hoc Network (MANET) could be established between mobile devices in certain area without fixed infrastructure like router or base station. One of routing protocols that have been developed is Ad hoc On Demand Distance Vector (AODV). There is interested to connecting MANET with fixed network across gateway, this gateway has function as bridge between mobile node and fixed host. Mobile node must find gateway address before have connectivity between MANET and Fixed network. For that reason, gateway discovery mechanism absolutely needed. Gateway discovery mechanism offers three way, reactive, proactive and hybrid method.

For each gateway discovery mechanism tested with different network parameter like number of mobile node sender, velocity changes, packet sending interval, and routing message interval. From the simulation, the result will analyze by performance metric like packet delivery ratio, AODV overhead, Average end to end delay, and throughput.

From the simulation, proactive and hybrid mechanism offer higher packet delivery ratio and throughput than reactive. However, AODV overhead in proactive have higher value and can lead constrain in networks. The effectively of AODV routing message will decide how large end to end delay in gateway discovery mechanism. The consideration of gateway discovery mechanism that chosen, influenced by testing parameters.

Key word: Routing protocol ad hoc, gateway discovery