ABSTRACT

The very rapid development of wireless network infrastructure encourages the growth of the use of mobile devices as a means of communication, where the Mobile Ad-Hoc Network (Manet) wireless network from a collection of nodes that do not have routers still plays a role in being responsible for finding routes between nodes as well as routers. The topology of the manet network often changes because the nodes move dynamically. The process of transmitting data requires a routing protocol to be a solution in overcoming problems that occur on the Manet network. The routing protocol that will be used in this research is DSDV (Destination Sequenced Distance Vector) which is one of the proactive routing protocols. This study aims to determine the performance of energy consumption, remaining energy, PDR and Throughput. By applying the scenario of adding nodes, moving node speed and adding node lag time. From the results of research that has been tested, the DSDV routing protocol has an increase in the throughput value at a large number of nodes and at a low speed with a value of 52.14 bps. the PDR value increased at a large number of nodes and a low speed with a value of 93.49%. The energy consumption value increased at a small number of nodes and a low speed with a value of 798,565 joules. The value of residual energy consumption has increased at a small number of nodes and at a large speed with a value of 199,656 joules.

Keywords: MANET, DSDV, Energy consumption, proactive routing protocols, Network Simulator 2.