

ABSTRACT

Mobile Ad Hoc Network (MANET) has ability to self-configure and establish a mobile mesh using wireless lines that can be used in extreme conditions, such as conditions in areas affected by disasters. One of the routings in MANET is AODV routing. AODV is one of the reactive routing needed to send data.

However, in the implementation of disaster conditions, AODV has weaknesses that are vulnerable to extreme environmental conditions. Then can occur in the process and changes in message delivery. In this study, communication will be designed that leads to disruption due to disaster, namely MANET AODV-DTN.

With this system the Probability Delivery Ratio (PDR) parameter value can be increased as evidenced by the variable modification of the number of nodes to be 0.431%, reducing the average delay by 63.525%, and producing the energy consumption increased by 0.170%. Likewise with the variable modification of speed obtained by PDR 0.482%, reducing the average delay by 78.710% and energy consumption increased by 0.167%. Modification of buffer size variables obtained 0.729% PDR results, reducing the average delay of 71.603% and energy consumption increased by 0.161%. From these data, MANET AODV-DTN is better than MANET AODV.

Keywords: MANET, AODV, DTN, PDR, average delay.