ABSTRACT

DTN (Delay Tolerant Network) is still a concept that is new to the wireless network. DTN has the ability to establish communication in difficult conditions for the concept of the classic network. The basic principle of the DTN is a store-and-forward. routing protocols in DTN itself aims to provide a solution to the presence of wireless networks. DTN routing scheme aims to choose the path for packets on the network in order to minimize resource utilization, maximize delivery opportunities and reduce packet delay.

In this final project routing protocol that used was RAPID. RAPID work to do against the replication messages that are sent in without limits with the goal to minimize the delay. A package ordered by the value of their utility. The packaged routed and replicated until package reach the destination is transmitted with the awareness that the given bandwidth is limited, this is the difference RAPID with other routing protocol. RAPID get utility functions per package of routing metrics. When doing transfer, RAPID replicates packets that locally produce the highest increase of utility.

In this final project was analyzed DTN network using RAPID routing by comparing the performance of network where there are change occurred against the number of nodes, the total time to live of packets, buffer size and speed of the node. Where are the performance aspects to review are the Delivery Probability, average latency, energy consumption, average last time and buffer overhead ratio.

Based on the results of simulations can be summed up best when the probability of the existence of delivery increased speed node. As for the average latency is also best when an increase in speed of the node. While the most effective energy consumption is when an increase in buffer size. But for the average buffer time is when the number of nodes are offered up. Last for the most excellent overhead ratio is when any change buffer size.

Keyword *RAPID, Delivery Probability, Latency Average, Energy Consumption, Average Buffer Time, Overhead Ratio*