## ABSTRACT

Delay Tolerant Network (DTN) enabling communication in an environment where there may be no link end-to-end, communication opportunities come and go and the intervals can be extremely long and even previously unknown. There are some Routing Protocol on DTN, including Binary Spray and Wait is a development of Spray and Wait, and PROPHET. In Binary Spray and Wait message is sent through two stages: stage Spray which forwards a copy of the source node to a different node and phase Wait until the destination node is found. While PROPHET use Delivery Predictability to find the destination node.

In this Final Project will discuss about modification of Binary Spray and Wait in spray phase using delivery predictability in PROPHET. Simulation will use ONE (Opportunistic Network Environtment) Simulator and will analyze Delivery Probability, Overhead Ratio, Buffer Time, Average Latency and Average Remaining Energy in Shortest Path Map Based dan Random Way Point movement.

Based on observation, the resulting modification of Binary Spray and Wait improve performance and buffer time average latency compared with Binary Spray and Wait, but slightly lower probability delivery and improving overhead ratio.



**Keywords** : Delay Tolerant Network, Spray and Wait, PROPHET, Shortest Path Map Based, Random Way Point.