ABSTRACT

Communication network has developed widely and enormous, especially on its applications and services. Therefore, efficiency and optimal data transmission become necessity. Routing is an important factor in communication network that needed for choosing the best path objectively. In order to achieve the goal, technician are still developing routing methods up to now.

Every router built with 'Distributed Routing method' periodically change routing information with others; and with the information obtained, router will make decision which path is suitable for continuing data. While in 'Centralized Routing method', the router only receive information on which route should be taken.

In this Final Assignment, Distributed Routing method will be simulated using Djikstra algorithm (with MCI topology model, Switched Cluster model, and Variable Mesh model) compare with Centralized Routing method using A Star algorithm. The simulation result will be analyzed and observed from ability to use minimum resource, the success in determining the right route, 'loss' package and end-to-end delay.

The result of simulation's data analysis give us information about A Star algorithm's higher capability than Djikstra algorithm in ability to use minimum resource, handling 'loss' package, and performance difference when both algoritm are implemented in different topology models.