

## ABSTRACT

Technology developed in the world of communications, one of which is data and multimedia communications. Slow convergence process of routing protocols after a network failure has become a growing problem. The ability of an algorithm to perform error handling failure of choosing an optimum path on transferring data and multimedia from the interface happens to be the main goal in this final project. Routing protocol has a function to collect all valid nodes in the network and make the selection optimal route to destination node, routing protocol is a fundamental thing to the network because of this way the router knows where the data should be sent.

To ensure the recovery process of the IP network in this final project which titled **Fast IP Network Recovery Simulation And Analysis Using Multiple Routing Configuration Algorithm** simulates a recovery scheme called Multiple Routing Configuration (MRC) which compared with performance of Open Shortest Path First (OSPF) routing protocol in the process of error handling and best path selection after a failure which is concern to Quality of Service.

The study of network performance is done by background traffic composition changes in the scenario without background traffic, background traffic with 256 kbps and 512 kbps aims to see the response that occurs in each configuration. From the simulation and measurement results obtained MRC has a close performance of OSPF routing protocol QoS parameters in terms of throughput, end-to-end delay, delay variation and packet loss. MRC has a value of the average throughput is lower than 1.313 Mbps for OSPF is 1.323 Mbps, but the MRC has a packet loss ratio which is lower, while 20.71% which OSPF has 25.58%.

Keywords : Fast recovery, routing, Multiple Routing Configuration, OSPF