ABSTRACT

Multi Protocol Label Switching (MPLS) is a protocol arsitechture that have good ability for routing on *IP* networks. In this time, algorithm that most used is *Open Shortest Path Fisrt (OSPF)* that works by determining the shortest route among source router and destination router. There is a weakness in OSPF, it tends to route traffic onto the same set of. This leads to concentration of traffic on certain parts of the network, so that can causing big *delay* and a lot of *loss packets* that can reduce networks throughput.

OSPF performance is compared to new algorithm, *Dynamic Online Routing Algorithm (DORA)*. The tool that used in this research made with Microsoft Visual Studio 2005 software. By using a network model, the two network performance can be seen, such as : *delay*, *packet loss*, and *throughput*. The test does by generating a number of traffics to the networks model so the network performance metrics are known its results.

From the research that have done, it obtained a cumulative result that OSPF still have delay smaller if compared to DORA with about 1 – 20 ms delay added. But, DORA have bigger throughput and smaller packet loss then OSPF thats about 3 %.

Keywords : MPLS, traffic, routing, performance, algorithm.