ABSTRACT

Multiprotocol Label Switching (MPLS) is a high-performance method for forwarding packets (frames) through a network.. The concept of MPLS use switching node called *Label Switching Router* (LSR). MPLS do such operation by labeling every incoming packet and then use that label to decide which way that packet should be delivered. MPLS technology have a purpose to combine *Internet Protocol* (IP) technology which has connection-less system into IP technology which has connection-oriented system. Since there is no mechanism of keeping the *Quality of Service* (QoS) in the IP technology. So MPLS technology is introduced as traffic engineering for IP network, that giving a set off bandwidth management and optimizing the performance.

This final project will explain how the *Multiprotocol Label Switching* (MPLS) technology is actualy applicate IP technology to get a good QoS for every delivered packet. There is also a simulation to calculate QoS parameter in MPLS networking, so all treatment for every delivered packet can be analyzed.

Kata kunci : *Multiprotocol Label Switching, Label Switching Router, Internet Protocol, Quality of Service*