

## ABSTRACT

The internet user is increasing by year. The unexpected huge growth from networking is unavoidable. From IP over ATM, traditional WAN technologies like X.25, and also Frame Relay. The huge network is usually make optimisation is something that just passes on. It makes networking no longer in optimal condition, cause we just make the network just work with minimal optimisation, and not utilise it's capabilities like it should be. To cope with this problem, MPLS (Multiprotocol Label Switching) was introduced. The existing network can be upgrade to MPLS, which type is depending on the previous network type, and the future need. But on this paper, we will only study the migration from ATM network to MPLS which is having two options. The first is to Cell-switched MPLS, and the second is to IP-Routed MPLS. But before, will be explained a little about ATM to make a better understanding about MPLS. Then we will study about MPLS architecture, plane control, networking element, and also operation mode. There will be explained how MPLS can handle the problem that was faced by traditional networking. There also a study about MPLS traffic engineering, differentiated service, Class of Service, and also MPLS VPN. Here we will see the benefit from migration from ATM network to IP-routed MPLS or to Cell-switch MPLS. Which one the migration that we suppose to take, does the migration worth of the effort to the expected performance or not.

Key words : MPLS, IP-ROUTED MPLS, CELL-SWITCH MPLS