ABSTRACT

Recently telecommunication technology is growing fast. For example in VoIP case, VoIP is alternative technology which for possibility we can communicate each others as in PSTN network based on circuit switched, VoIP implementation using packet switch extremely cheaper than the PSTN does, now voip communication still using SIP and H.323 protocol. This protocol has different standard, SIP developed by IETF, and H.323 developed by ITU – T, this final project implementation used IETF standard caused this standard can be developed in NGN which all of telecommunication network were integrated with SIP protocol.

This final project focused on VoIP implementation using SIP Protocol that developed by IETF. The final results of the implementation show that the VoIP quality in VPN-MPLS network is good enough. The Delay of system is still in the range of the aceptability in data communication which is under 150 ms, the packet loss is under (<2.5%) , the jitter is under (30 ms), so VoIP with SIP Protocol can be implemented in VPN-MPLS network at PT Aplikanusa Lintasarta.

Keyword : VoIP, SIP, VPN, MPLS