

## **ABSTRACT**

*Along the development of internet network, the allocation of public IPv4 become overloaded. One of the steps to solve it, is by develop IPv6. IPv6 implementation requires many changes in communication infrastructures, either on the side of the terminal, applications or network side. Therefore, the telecommunication operators need to develop IPv6.*

*In this final project, the author implement and analyze the comparative performance of Dual Stack transition mechanism with NAT-PT translation, and also implement end-to-end application by using QoS parameter such as throughput, RTT, jitter, and packetloss.*

*The result indicates that dual stack mechanism shows better performance than NAT-PT. This is proved by comparison of measured parameters. But for implement Dual Stack mechanism, we require devices which support IPv6 on both sides (sender and receiver).*

*Keywords: IPv6, Dual Stack, NAT-PT, transition*