

## ABSTRACT

Softswitch is a new switching technique in telecommunication system which is IP based and highly potential to change the conventional switching. The appearance of this new technology was caused by the growth of telecommunication network which will be change from conventional switching that is circuit switch network become packet switch network that full of IP based. Convergence and migration of PSTN become Next Generation Telecommunication Network (NGN) being convinced by many sides will be platformed by IP technology. The characteristic of IP technology that open and connectionless will be a big problem when touch the existing technology which circuit switch based (PSTN), that give Quality of Service Warranty.

In this Final Project studied about softswitch implementation in stages in Bandung, that is changed the potential STOs (such as Centrum STO, Dago STO, and A.Yani STO) with Access Gateway, while the existing network (PSTN and PLMN) defended the service other area. In this Final Project used linear regression method to measure the future demand whether for measure population, telephone, and multimedia. While for predict the traffic used simple point to point forecasting method.

The result of this final project is the new network configuration that obtained by looking the existing condition, measuring the POTS demand, measuring the bandwidth link needed, and softswitch capacity. In this implementation, the migration to softswitch based did in stages which placed the combination between trunk gateway, signaling gateway, and access gateway.

Key: NGN, Softswitch, Media Gateway