

## ABSTRACT

These days, customers demand on telecommunication services, are not limited on voices, but also on data and multimedia. PT. Telkom needs to upgrade their network from Time Division Multiplexing (TDM) network, circuit switch based to Internet Protocol (IP) network, packet switch based. Writer would like to plan Internet Protocol (IP) network which are focused on Access Network side. The infrastructure for the Access Network is Softswitch Class 5. Softswitch is switching technique which is use software to gives switching function in PSTN network.

This final project is mostly research on Softswitch network planning in Bandung by doing outsource survey to obtain number of voice services demand and data.

The network designing process gives a result that the total capacity for Busy Hour Call Attempt (BHCA) are 310.152,42. One softswitch is needed to fulfill those demand and one redundant with 2.8 million BHCA capacity is needed also. This network planning is needed four Trunk Gateway which are relate four area in Bandung. Besides that, we also need eight access gateway which have 80.000 customers capacity.

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Keywords : *softswitch class 5, TDM. Packet-switch*