

## ABSTRACT

Technology Development in the telecommunication word recently is progressive. Objective of application of this technology are to give a better quality of service and to be a place to develop quantity of costumer. High development of inhabitant is pushing the development of available telecommunication tools. Then plans or programs the network which could predict the need service of telecommunication in the next years are needed.

In STO Bengkulu Centrum service area for Lingkar Timur and Semarang area which quantities of customers are 620 sst shared with copper local access network technology. Today there are 353 customers applicant. To anticipation this problem then enlarge the network is needed. Copper local access network technology has limit in the service then in the plans to enlarge the network will use local fiber accesses. Methods in this thesis to solve problems are to predict the needed of connecting with macro and micro theories.

In this thesis planning local access fiber network in STO Bengkulu Centrum is analyzed which cover demand calculation, chose the technology, capacity, and kind of service. This planning uses *Digital Loop Carrier (DLC)* technology. Then the loss optic channel, link power budget and rise time budget are analyzed too from analyses in Lingkar Timur and Semarang area, results are still under the allowed standard, showing that planning of *Local Fiber Access Network* for two areas is suitable.

**Keywords:** *Local Fiber Access Network, Digital Loop Carrier (DLC).*