

ABSTRACT

In prior period, local network was relatively very simple. As telecommunication technology growth, especially in multiplexing technology and developing of fiber optic, those make the local network configuration more complex. The implementation of multiplexing technology and fiber optic usage as the access of local network at Margoyoso 1's Central Exchange (West Surabaya) is relocation planning of 6 cable cabinets such as RU, RBW, RCS, RDP, RCD and RW. These cable cabinets are applied as fiber access because the demands of subscriber lines are increased rapidly than the other cabinets.

Based on the macroscopic prediction method through the next 10 years, the capacity of subscriber lines have been fulfilled. They exclude the demand of non-telephone services.

In this fiber access local network planning by implementing PON's technology with double star topology, it also calculates power budget between OLT and ONU. In addition, it also calculates the amount of required equipment to build this fiber access network. In this recent time, fiber access network only uses for distributive service. In the next stages, fiber access network is developed to serve telecommunication services interactively.