ABSTRACT

Optical network is a data transmission path that can be relied upon to meet the growing bandwidth requirements. It makes optical communication system as a solution to meet the needs of large and dense data traffic at this time. In most places, especially large cities in Indonesia are already using optical network as a whole or a combination of optical and copper.

In this research, analyzed reconfiguration of the hybrid network between optical and copper to the optical networks in a case study of optical communications network in central office Cijawura. In this study also analyzed the needs required to perform the migration from hybrid network into optical networks. The other analysis related to the quality of the existing network in Cijaura region that still apply hybrid network to then be compared with the reconfiguration result of optical networks.

The output of this research is the form of the reconfiguration of optical networks with maximum total attenuation of 28 dB and 1×10^{-9} BER. Results of this research is also expected to be a reference for designing and improving the quality of the PT Telkom's network especially in central office Cijawura.

Keywords:
Optics, migration, hybrid optics, full optics, FTTH