

ABSTRACT

Fiber optics is a transmission medium for the most recent data transmission media currently. Fiber optics resistant to electromagnetic interference as is the case with copper are susceptible to electromagnetic interference. Besides optical fiber average a minimum speed up to 100 Mbps. There are several methods to build a fiber optic communication FTTB (Fiber To The Building). That PT . Jabar Telematics designing FTTB network for IPTV in Tamansari Panoramic apartment use GEAPON Technology

Design networks for fiber to the building of the central leading IPTV subscribers by determining the use, placement, distance between the rooms and the device specifications. IPTV network design using software optisystem 7.0 and use the software SnmpNMS3.3.4 (Neutral) to determine the quality of a signal and image. As the case studies in this final project is Tamansari Panoramic Apartment Soekarno-Hatta Bandung. Having obtained the image quality and the results of the simulation, then do the calculations manually.

From the results of design that has been done shows that the FTTB network architecture for IPTV in Apartment Tamansari Panoramic using two stage method which uses splitter 1 : 4 and 1:32 splitter. In this design using GEAPON with a data rate of 1.0 Gbps. Analysis performance network at a wavelength of 1550 nm has a value of PLB (power link budget) - 26.9062 dB and has a 0332 ns RTB (rise time budget). Q factor for 7,752 and for BER : $4,505 \times 10^{-15}$ In the Q factor and BER analysis declared eligible because it meets the standard Qfaktor > 6 and BER 10^{-9} .

Keywords : fttb, fiber optik, iptv, plb, rtb