ABSTRACT

Easton Park Residence was one of the apartments located in the Jatinangor inhabited by the urban community. Telecommunication technology developments make the public want to get access of information and communication. To get a perfect service required is appropriate a media. Fiber-optic technology as current technology will be used to create a network of FTTB in order to meet the needs for information, communication, and multimedia as well as safeguards for any occupant of the apartment.

PT Jabar Telematika is one of information and communication companies in West Java that also serve the deployment of optical fibre for various needs is selected by the developer of apartments to do network deployment at the apartment. The design of FTTB using GPON technology (*Gigabit Passive Optical Network*) is selected to provide services to tripleplay. The design begins with doing a survey of the field, define the fiber-optic lines, designing the network then determines the required device specifications and analyze network using *Power Link Budget* and *Rise Time Budget* as parameters, configuration start to settings in the olt VLAN (*Virtual Local Area Network)* adjusted Id have configuration VLAN ,VLAN id and then forwarded to the user with VLAN access mode, adapted to the slot pon olt

On the design of network FTTB GPON in apartment as measured at the farthest ONT obtained the result value downlink of power link budget -21,4284 dB and for uplink -4,3584 dB. This result it still within tolerance which specified by PT Jabar Telematika and ITU-T G984 until at -28 dB. While result are obtained value downlink of rise time budget 0.022513ns and for uplink 0.090 ns. And This period still in below of value period in NRZ System which is at 0.282 ns for downlink and 0.5833 ns for uplink. Configuring the OLT is a step to get the triple play services that will be enjoyed by customers with the configuration of vlan id 31 for internet, 51 for voip, 907 for iptv then triple play services can be enjoyed by customers in Easton Park Residence Jatinangor