ABSTRACT

Current technological advances continue to grow very rapidly, it gives people ease in carrying out activities that will support its performance. With the increasing desire of human associated the world of technology and communication technology , communications service providers must be able to desire of consumers. As for how to change the old technology into new technology to transform the old technology into new technologies will have a major impact on the various changes such as data rate, large bandwidth, consumers are increasing.

In the transmission system based wired communications that used to use copper and now turned into a fiber optic. One of fiber optic technology is GPON (Gigabit Passive Optical Network). GPON is an access technology using optical fiber as a medium for transport to the customer. GPON or Gigabit PON is also standardized by ITU-T. GPON can transmit ATM cells or Ethernet packet. The process uses GPON Optical Network Distribution while from the central toward the customer can be called FTTx Fiber to the home, fiber to the building, and fiber to Curb, and fiber to the zone. But that will be discussed only on the fiber to the building (FTTB) in compliance with existing homegateway consumer side.

Before we can simulate the testing done in a design application . There are two tests in the design of FTTB network is Power Link Budget (PLB) and Rise Time Budget (RTB). Attenuation of the total design of the network using GPON technology by 28 dB and Telkom standarized by 26 dB. If under the standard Telkom and the design of GPON technology can be made.

Keyword: GPON,Homegateway,PLB,RTB