

ABSTRACT

Attenuation analysis in the FTTB (Fiber To The Building) network with GPON (Gigabit Passive Optical Network) technology at the kasablanka city mall, with the need for a transmission medium capable of transmitting information at high capacity and reasonable data transmission speed. By implementing GPON, the FTTB service meets the user quickly according to what the user wants, this study aims to identify the cause of attenuation increasing or disconnecting in the FTTB and this study discusses the attenuation that exists in the kasablanka city mall using OPM (Optical Power Meter) and using calculations Power Link Budget which calculates the power budget required by the receiver so that the received power level does not fall below the minimum sensitivity, from the results of calculations and measurements, the results are ONT 1 with a distance of 1.102 km mathematical calculations - 16.225 dBm, and measurements using OPM -16.36 dBm, ONT 2 with a distance of 1,220 km mathematical calculations -19,635 dBm, and measurements using -19,93 dBm, ONT 3 with a distance of 2,110 km mathematical calculations -21,407 dBm and measurements using OPM -21,51 dBm, calculate the power budget required by the receiver so that the received power does not fall below the minimum sensitivity the specified standard is 15-25 dB, so the service can be used because the attenuation meets the standards set by PT Telkom Access. The reasons for increasing the attenuation value in fiber optic cables include the number of splices/connections on each cable and the occurrence of cable bending greater than 25°.

.Keywords: FTTB, GPON, Power Link Budget, Fiber Optic