

ABSTRACT

In optical fiber networks, there are power transmitter release power to the receiver. The power released in units of dB (decibel). And the power received by the receiver is measured in units of dBm.

However, when performed simulations manufacture of optical fiber networks, the power received is not in accordance with optical receiver in the optical fiber network. Factors include the loss of distance cables, connectors, splicing, and others. All variables loss is the loss budget.

Simulation calculation of loss in the final report is done at Pesona Bali Residence Block E3-E7 with 47 homes. Calculation will be done manually, by counting all the loss of devices used and will be simulated using Optical System. The difference of manual calculation and simulation of Optical System will get an accurate error margin is 11.6 dB on average.

Key Word : Fibre Optic, GPON, Optical System, Google Earth, *loss budget*, *margin error*.