

ABSTRACT

Fiber optic access network is an access networks with an excellent reliability. This network replaces copper based access networks that are still not be able to support broadband services to the fullest. This network uses fiber-optic cable to connect the ODC to the ODP, so this network can support the triple play services (voice, data, video) with an excellent network reliability.

In this final project will be design the ODC to ODP network in Padasaluyu residential area that located in STO Gegerkalong, Bandung. This design will calculate the link power budget and rise time budget to be used as a conclusion whether the designed of the network is feasible or not feasible yet.

The result from link budget calculation are, total attenuation uplink is 18.979 dB and total attenuation downlink is 18.938 dB. Both of this results are still below from ITU-T G.984.3 standard that is 28 dB. For the margin power calculation obtained 9.021 dBm for uplink and 9.062 dBm for downlink. Both of this results are above from 0 dB, so the link that has been designed is still meet the requirement of link power budget. Rise time budget calculation showed the result 0.25 ns for uplink, this result is still below the maximum rise time and signal bit rate for the NRZ encoding that is 0.5833 ns. For downlink obtained the result 0.25 ns, it is also still below the maximum rise time and signal bit rate that is 0.2917 ns.

Keyword : ODC, ODP, Broadband, triple play services, link power budget, rise time budget.