ABSTRACT

Fiber to the curb (FTTC) is a fiber optic network architecture that distributes optical signaling formats from service providers to near-costumer cabinet (curb) using optical fiber as the medium of delivery. In its development, FTTC can use 10-gigabit-capable passice optical network (XGPON) technology to meet people's need for bandwitdh and data speed. In previous research, FTTC design has been done using GPON and XGPON technologyby performing calculation and simulation to get the value of LPB, RTB and BER.

In this final project has been evaluated fiber to the curb (FTTC) network using 10-Gigabit-Capable Passive Optical Network (XGPON) technology applied in STO Tanjung Priok. Evaluation performed is the analysis of system feasibility parameters by calculation and simulation of OLT to the closest MSAN that is MRH and MSAN furthest is MRAZ in accordance with data network FTTC STO Tanjung Priok. The feasibility parameters analyzed were LPB, RTB, SNR, Q factor, and BER.

Based on the results obtained from the simulation calculation, the SNR value obtained from downstream 36.52 dB for the nearest MSAN and 35.32 dB for the farthest MSAN. SNR value of upstream 33.34 dB for nearby MSAN and 30,073 dB for farthest MSAN. The downward BER value is approaching 0 for the closest MSAN and 1.684 x 10^{-279} for the farthest MSAN. BER value upstream direction 1.199 x 10^{-223} for the nearest MSAN and 1.856 x 10^{-105} for the farthest MSAN.

Keyword : FTTC, LPB, RTB, SNR, Q factor, BER, XGPON.