

ABSTRACT

The requirement of telecommunication service is increase as far as the society increased. Now, telecommunications services is not only limited to voice services, but has expanding to a data service over internet technology. The more diverse range of services who used by customer, the more too technology and system must improve for the better services to customer. Bandung, is the one of Indonesian city which have most populating especially on Ahmad Yani district so Fiber To The Curb (FTTC) network architecture can be implemented at these locations.

FTTC planning in this Ahmad Yani district have two distributions pull which one of that pull is toward to MSAN MRAH (feeder 11) and other pull is toward to MSAN MRAZ (feeder 16). The method which used in this planning is the survey location, collecting the existing data, planning using AutoCad and GE SmallWorld and the result research by calculating power link budget and rise time budget. Beside using the manual calculation, this analysis using OptiSystem simulation too.

Each of every pull give the power link budget value and rise time budget value. The powerlink budget is calculating based on ITU-T G.984 standardization and using PT. INTI regulation which a distance is not more than 20 km, and receiver power is not less than -28 dBm while the standard value for the feasibility rise time budget is 0.292 ns in upstream side and 0.583 in downstream side

In MRAH scheme, the feeder distance is known for 9,67 km with the power link budget value is -11.985 dBm for downstream side and -13.808 dBm for upstream side. While the value of t_{sys} on rise time budget calculations obtained for 0.252 ns for downstream side and 0.283 ns for upstream side . In MRAZ scheme, the feeder distance is known for 3.296 km with the power link budget value is -4.354 dBm for downstream side and -6.623 dBm for upstream side. While the value of t_{sys} obtained for 0.25 ns for downstream side and 0.254 ns for upstream side . Power link budget value and rise time budget value for each MSAN is still within the limits of standardization so this planning is proper to be implemented.

Keywords: telecommunications, fiber optics, fiber to the curb, network architecture, Power Link Budget, Rise Time Budget.