

Analisis Dan Desain Jaringan Fiber To The Home (Ftth) Di Perumahan Kasongan Residence

Ramadhan Bagaskara

*Program Studi Teknik Elektro, Fakultas Sains & n Teknologi
Universitas Teknologi Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail: ramadhanbagaskara7@gmail.com*

ABSTRACT

Along with the rapid development of technology in society, especially information and communication technology, it triggers people to get easy, practical, and efficient services. It takes a means of communication capable of serving all services, such as voice, data, and video services, commonly known as triple play services using optical fibre, a transmission medium with large bandwidth to meet today's society's needs. The design using Google Earth includes determining the path of the fibre optic cable for Feeder, Distribution, ODC (Optical Distribution Cabinet) placement, and ODP (Optical Distribution point) placement to find network feasibility. It can be seen in the Link Power Budget, Rise Time Budget and Bit Error Rate. The steps are done to determine the power received which does not exceed the minimum limit of power. According to PT, the receiver can receive in order to maintain the quality of service so that the minimum power can receive -25 dBm. Telekomunikasi Indonesia or -28 dBm according to the ITU-T standard. The calculation of the feasibility of designing a fibre optic network using Optisystem simulation software on the downstream link power budget parameters with the closest range produces Rx Power -21.640 dBm for simulation - 24.356 dBm for calculations. The Rx Power value is -21.736 dBm for simulation, and -24.451 dBm for calculation for the most distant rare.

Keywords : *Link power budget, Google Earth, ODP, ODC, PT.Telkom, ITU-T*