

ABSTRACT

A government organization must have a viable network infrastructure to support the development of applications that run on the local governance system. Fiber optic network is a data communications network that uses light waves as the transmission medium. Fiber optic network technology is one technology that is considered appropriate for the data communications network infrastructure in the area of governance, especially for the external network is a network that connects between the district and sub-district. In the study design of the fiber optic network is taking objects in the district of Bandung, especially in districts Rancabali using Network Development Life Cycle (NDLC). This method is one of method that is in use in creating or developing a data communication network infrastructure with fiber optic media and can be done gradually. Analysis and testing of fiber optic network is done by simulating the proposed prototype fiber optic network and measuring the value of Bit Error Ratio (BER) as a standard parameter fiber optic network on the user side that has been set. The results of this research is the design of the measurement is the design and analysis of the proposed appropriate network standards GPON architecture and DEPKOMINFO regulations for infrastructure development on the external data communication network in the district of Bandung.

Keywords : Fiber Optic, FTTH, NDLC, BER, External Network, GPON.