

ABSTRACT

Technological development today is growing rapidly, especially in the field of communication technology and information, the development of these technologies bring great influence in the life of society in general and companies particular. Information technology is currently widely used for everyday purposes, ranging from administrative affairs office until the government's public service to the community. Bandung government currently uses a data communication network using *wireless* for communication between district where infrastructure *wireless* network has many constraints, therefore Bandung government has the desire to use fiber optics for network technology fiber optic considered appropriate as network infrastructure data communications Bandung Government.

In this study, the *design* of the optical fiber network takes the object in Badan Perpustakaan, Arsip dan Pengembangan Sistem Informasi (BAPAPSI) Bandung government using the *Network Development Life Cycle* (NDLC). This method is one method used to develop the network infrastructure and can analyze current infrastructure network in Bandung government.

Analysis and testing of fiber optic network is done with the prototype simulations and measurements of the *Bit Error Rate* (BER) in each district. The results of this research is the *design* of the measurement and analysis of the fiber optic network will be proposed to the Bandung Government.

Keywords : *Wireless*, NDLC, BER, Fiber Optics, Network Infrastructure.