

ABSTRACT

Telkom Indonesia as the largest telecom operator in Indonesia, increased performance by using a fiber optic as communication system network. One of the many rings in West Java, namely Remote Junction Metro Rangkas Bitung ring. Remote Junction Metro Rangkas Bitung ring is past the point of Leuwi Damar - Rangkas Bitung - Pandeglang - Saketi - Menes – Labuan - Malingping - Bayah. So that the Rangkas Bitung ring is expected to be able to fulfill needs of users of telecommunications services, has large bandwidth and troubleshooting of existing limitations on the transport network the previous system.

Rangkas Bitung Ring is a fiber optic communication network system composed by several types of optical fibers and different devices in it. So this ring Rangkas Bitung is the networks that are not homogeneous.

This thesis analyze the performance of ring Rangkas Bitung including availability, maintainability, reliability, link power budget, rise time budget, and the bit error rate (BER) of the devices used to kind of optical fiber used.

Quality performance in the ring Rangkas Bitung system is good enough, average value of availability amounted to 99.988% and recommendations for improving system performance is to make a mini-ring on the Labuan - Malingping link.

Keywords: Fiber optics, Ring, Performance.