

ABSTRACT

Ungaran – Krian backbone link network is an optical fiber communication that using Synchronous Digital Hierarchy (SDH) multiplexing with 2.5 Gbps of bit streams. The optical cable that used is optical ground wire (OPGW) type which deployed along 500 kV electrical transmission that belong to PT PLN (Perusahaan Listrik Negara). Optical transmission systems factors such as losses and fiber dispersion that influence quality of transmitted information, are very important to evaluate the whole performance.

This final project will evaluate SDH technologies and optical fiber that used, refers to G652 recommendation, to deployed optical fiber communication performance. Some methods that used such as loss analysis, dispersion, power budget, rise time budget, maintainability, availability, reliability and protection scheme.

As result shows that generally Ungaran – Krian backbone link performance is good, except for some parameters such losses and availability values, are not accord with ICON+ and ITU-T standard.

Keywords : Backbone performance analysis, Optical fiber communication