ABSTRACT

Fiber optics are a transmission medium that helps improve data, voice, and video communication system services. The advantages of optical fiber are that can form channels, bandwidth, the ability to transmit data at high speed, the confidentiality of the transmitted data, and is not disturbed by the influence of electromagnetic waves, lightning, and weather.

Factors that affect the level of efficiency or working quality of a fiber optic system, such as attenuation, dispersion, power loss, and others. PT. Telkom does not want to reduce the quality of the network, because it can affect the quality of data services. Further analysis of attenuation in fiber optic networks caused by attenuation working along fiber optic cables.

Of the 9 STOs of Telkom Pasar Baru Tangerang that have been tested, 3 sections have an average attenuation above PT Telkom Indonesia's attenuation standard, which is 5 dB. The third section is Pakulonan – Tangerang, Keronjo – Kresek, and Tangerang – Lengkong 1. The DWDM damping is large because the connectors are dirty, and dusty, have not been cleaned, and others as such.

5 sections have DWDM. The five sections are the Pakulonan – Lengkong section, the Pakulonan Tangerang section, the Pakulonan – Legok section, the Pakulonan Ciledug section, and the Keronjo – Kresek section. The most DWDM is used on the Pakulonan – Ciledug section. As for the use of DWDM, at least it is on the Pakulonan – Lengkong section.

Keywords: Optical Network Measurement, Attenuation, DWDM