

ABSTRACT

Efforts to improve the performance of optical fiber network is closely related to KPI (Key Performance Indicator). PT Bakrie Telecom has set the standard for determining the optical network performance on the field, whether they are above or below the standard established standards.

Some standardization of optical fiber parameters ie slope attenuation, splice attenuation, connector attenuation and BER test results. In this thesis discusses these parameters. OTDR is used to determine the length of the optical fiber, attenuation slope, splice attenuation, attenuation or damping bending connector, while the BER test is used as a parameter to determine whether the traffic that can pass well received or not. Standards are used in accordance with ITU-T standard G.653E. For the attenuation slope is equal to 0.3 dB / km to 0.4 dB / km, attenuation 0.5 dB connector and splice attenuation of 0.2 dB. This standard is used for fiber optic wavelength 1310 nm. Results BER test maximum acceptable is $\leq 10^{-10}$.

After taking measurements and calculations indicate that the backbone network MSC-HUB Taman Rasuna West Bekasi and MSC-MSC Taman Rasuna the Western Cape is still in a good performance. In terms of capacity was still capable of loading capacity of 2-3 years.

KEY WORDS : *Fiber optic, BER test, OTDR, slope, splice*