

ABSTRACT

Attenuation analysis on a Fiber To The Home (FTTH) network using Gigabit Passive Optical Network (GPON) technology at PT Telkom Kelapa Gading, with Nurwan Reza Fachrur Rozi as the supervisor. To use GPON technology, which is rapidly expanding as a communication requirement, a transmission media device with a large capacity and adequate data transmission speed is required. GPON technology is used to deliver FTTH services to users at speeds of up to 2GBps. The goal of this study is to determine what causes more attenuation or interference in Fiber To The Home (FTTH). Determine the source of the increased attenuation in Fiber To The Home (FTTH). Overcome damping values that are greater than the specified tolerance limit. The method used in this study was an analysis of the attenuation value of each core at the research location on the FTTH network at PT Telkom Kelapa Gading. The total attenuation value of the fiber optic cable running from OLT to ONT is within the 15-28 dB tolerance limit. Some of the factors that contribute to the increase in the attenuation value of fiber optic cables are the number of splices or connections in each cable and the occurrence of cable bending greater than 45°. To overcome attenuation values that exceed the specified tolerance range, fiber optic cable with attenuation of 0.35 dB can be turned off for fiber optic cable with attenuation of 0.22 dB. This will bring the attenuation of the fiber optic cable within the specified appropriate range.

Keywords: Fiber Optic, FTTH, GPON, Attenuation