

Performance Test and Analysis for Fiber Optic Network UiTM Pulau Pinang Campus: A Case Study

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ABSTRACT

Fiber optic cables are being increasingly employed in industrial and universities in a host of communication applications. Fiber optic cable permits transmission over longer distances and at higher data rates than other forms of communication media. Fiber optic networks in Universiti Teknologi MARA (UiTM) Pulau Pinang campus is used for data and computer links. The performance maintenance was not being done in a proper manner since the network was installed in the year of 2002. Optical Time Domain Reflectometer (OTDR) is a sophisticated instrument which provides a graphical trace to measure the fiber optic cable performance (Coulombe, 1988). Before any measurement is done, fiber optic network links for vertical and horizontal links are identified. The main objective of this case study is to measure, evaluate and analyze the network link performance of fiber optic cable in Kompleks Perdana building and the links to adjacent buildings. The measurements were done using OTDR. From the measurement and evaluation done, it is found that even though the type of fiber cable used is the same for all paths, the loss involved are different, depending on the terminations, connectors, cleanliness of the terminals, cable looping and the condition of the room where the terminals are located.

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