

OPTICAL FIBER LINK LOOP IN MALAYSIA

FTTO : Sungai Renggam Exchange and  
FTTS : Tanjung Karang Exchange

Thesis is presented to fulfil the  
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# **Optical Fiber Link Loop In Malaysia**

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## Abstract

Optical fiber system for telecommunication local network is a new concept of feeding subscriber. In optical fiber technology, light wave being use as information carrier instead of current' and microwave carrier in conventional copper pair cable and multi access radio system (MARS) technology respectively. This system promises a better alternative in term of effectiveness in investment cost and service quality over copper pair cables and other services methods. Due to various reasons, only single mode fiber being used for the purpose of local network telecommunication services. Since optical fiber acts as a waveguide to the transmitted light pulses which carry information, the quality of this medium determines the quality of reception. Most of the material problems are due to manufacturing problems which the modern manufacturing technology has significantly reduce to almost negligible. However there are constrain to present system which mainly due to sensitivity of terminal equipments and outside plant path loss.

The main objective of this project is *"to study the system operation and the feasibility of implementing the system for telecommunication local network in Malaysia"* This paper provide information on complete system, from the planning of the networks up to the acceptance test of the system. The system discussed in this paper mainly based on fiber to the office (FTTO) of Sungai Renggam exchange and fiber to the street (FTTS) of Tanjung Karang exchange. For the purpose of comparison between optical fiber system and conventional copper pair method, few planning alternative has been designed and discuss in chapter 3. The comparison between these two mediums are made by purpose since the existing local networks are copper cables. The methods and procedures of system installation and acceptance test are discuss in later chapter.