ABSTRACT

The requirement of information services will enter the 21st century, it will progressively increasing with level and kind of service of the desired by customer which complex progressively. Specially at link Medan – Padang which still be served by microwave estimated will not able to accomodate the amount of requirement that progressively increasing in the years to come. In consequence these problems will be overcome by developing fibre optic link that will connecting both of the city and the cities between them.

This Final Project is trying to make a network planning of fiber optic communication system among both cities. The configuraton of network is point to point using fibre of optic of single of mode with wavelength operate is 1550 nm. format of signal is NRZ with source of optic is Laser Diode (LD) And the fotodetector is Avalanche Photodiode (APD). Type of land cable used is direct buried cable, calculation conducted with two type of different cable that is the Non Dispersion Shifted Fiber (NDSF) and Non Zero Dispersion Shifted Fiber (NZDSF). Both types of the cable need the same amount of regenerator that is 5 pieces. Other peripheral needed is 16 pieces of peripheral of ADM-1 and 5 pieces of peripheral ADM-16. This Network does not require special peripheral for compensation dispersi.