

## **ABSTRACT**

Link of telecommunications exist in this time have to able to fulfill the new technological request as does improvement in measurement, flexibility, and amenity in information transmission. This network link is important to fulfill consumer request. One of technology capable to give the amenity communicates widely and flexible is use of fiber optic in network link extendedly. The function of fiber optic is to know the characteristic and function of fiber optic so that effectively earn the implementation into system of optic network.

This final project will make a measuring instrument OTDR ( Optical Time Domain Reflectometer) being based on software by using software Matlab that can show of value measurement of link communications of fiber optic single mode where other parameter represent the variable which its value can be assumed and or pursuant to data which there have. From this value, knowable long of link fiber optic and also existing variable relation to the length of fiber optic link and presented in the form of graph.

From this Final Project can water down the calculation and analyze the long value an single mode fiber optic, and also can compare it to calculation theoretically and with the measurement by OTDR too.