

## **ABSTRACT**

Optical fiber communication system is a communication system that using fiber optic as transmission media. In fiber-optic link system there are several parameters such as optical fiber length, attenuation, send power, reflected power, and others. In the measurement of parameters that are used a measure of OTDR (Optical Time Domain Reflectometer), OTDR can evaluate an optical fiber in the time domain.

In this final project will be a simulator of the OTDR measurement using matlab software. Simulator that will be able to simulate the measurement of the reflected power values in single mode optical fiber where the other parameters is a variable whose value can be assumed or based on existing data. Input value of this variable will be obtained magnitude of the reflected power and will also get a variable effect on the value of the reflected power by varying the value of the variable. So in addition to getting the value of the reflected power, will be obtained also the relationship existing variable to the value of the reflected power is displayed in graphical form.

This final project may facilitate the calculation and analysis of the reflected power on a single mode optical fiber without having to perform calculations manually (theoretical).