

### **ABSTRACT**

*Fiber optics is a channel used from inside or small (in units of micro meters) that can channel information using light media from one place with larger data than other media. The optical cable structure consists of Core Cladding and Coating. The core is part of an optical cable that can determine the direction of propagation of light. Cladding and Coating can be used for Core. Communication is a component that provides capacity, large bandwidth, and has good performance. Optical fiber communication systems also cannot be used to transmit large amounts of data which can cause disruption of the transmission process, using red cables. Such attenuation is usually available in fiber optic connectors, opaque fiber joints and curves, attenuation that will affect the transmission process. Thus a technique is needed to reduce connection attenuation from a fixed transmission quality, therefore fusion splicing is a fusion splicer that allows to reduce the damping that occurs in the connection. Besides that to look for networks that are needed to use OTDR to find out many things that happen between fiber optic networks.*