

## **ABSTRACT**

The development of communication technology today is advancing, especially in the field of telecommunications using fiber optics. With the development of technology using optical fiber to make the network vulnerable to attack from the outside, especially in the physical part of the optical fiber, such as tapping into the physical part of the optical fiber. By tapping on the physical part of the optical fiber, the eavesdropper can view any data transmitted.

In this final project, the author uses optical CDMA method to prevent attacks on the fiber-optic network. By using optical CDMA any data transmitted will be given a code that serves as an address assigned to the various user, by using the code, the information sent can only be received by users who have the same code. In this case study, the authors using optisystem that serves as the application to run every design and test of which is done in developing security techniques of optical CDMA

Keywords: Fiber optic, Optical CDMA, Optisystem