

## ABSTRACT

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*As the communication systems develop, optical fiber media is currently used on almost all internet networks because of its capability to distribute data faster than other medium. However, the mentioned transmission media still need a security system to avoid data collisions or data thieveries. In this final project, the Anti Jamming method is used to prevent collision. In this case, the anti jamming method undertakes the construction of the new wave path in the fiber-optic network to prevent collisions. anti-jamming method can be simulated on Optisystem. Optisystem is a design software that allows users to plan, simulate, and test an optic link in modern optic network transmission layer. In addition to building the circuit design to avoid data collision, anti-jamming method also measures LOSS and BER. The results of tests performed showed that the anti-jamming methods have an influence on the fiber optic network security to prevent data collisions and secures the data transmission.*

*Key Words: Fiber Optic, Anti-Jamming, Optisystem.*