ABSTRACT

Mach Zehnder modulator is an integrated device and ables to support optical fiber network to be a better one. The device has large bandwidth capacity. Its modulation velocity is up to giga.

In the fast growth era of information and communication technology, modern people need communication device that is very reliable and sophisticated. Optical fiber network system is a network that was trusted to solve the problem. Optical fiber network system today will be more reliable if it is supported by a device, called Mach Zehnder modulator.

Procedure of research that will be held. The researcher tries to simulate Mach Zehnder modulator on LAN STTTelkom from B building to A building. This Mach Zehnder modulator was simulated in Matlab version-7. The work analysis is work analysis of Mach Zehnder modulator (BER and it's noise).

Nowadays, the Mach Zehnder modulator hasn't been used in the general optical fiber communication system. This simulation will help the Mach Zehnder modulator application in the future and show the increasing of sending information quality. Finally, researcher hope that the result will show the low noise with good BER ($\approx 10^{-9}$)