

ABSTRACT

Communication system is a transmit information process, which is data, voice or video from transmitter to receiver through a channel. Basically, the process happened on transmitter is a modulation process. Based on the happened place, in optic communication, modulation is divided into two parts, which is internal modulation and external.

Video signal that will be transmitted to receiver must be readable by external modulator, in this case, machzender modulator as binary bits. Then, by using NRZ unipolar modulation format, video signal is carried on continous wave, in this case red light which is spouted into Mach Zehnder modulator.

This research try to make simulator of real visible light modulator where the input signal is video. The simulation uses Matlab 2007 and GUI also. From this simulation, it is hoped that the signal changing can be watched for modulation process.

By undisturbed the original light intensity from video, this signal is tried to be processed in Mach Zehnder modulator, so the output from modulator with visible light at 650 nm as a carrier is the maximum intensity at point 0.30057 mW and the power can be known at -10.441 dBm.