

ABSTRACT

Optical communication system is a technology that is currently developing quite rapidly in the present and the future, one of which is developing rapidly is underwater Visible Light Communication (VLC) technology, where VLC uses visible light and water communication as its propagation media. One example of its development is tsunami detection using VLC. The development of VLC technology is believed to be able to perfect the previous technology, namely Radio Frequency (RF) waves and acoustic waves.

In this study the analysis process was carried out using the VLC system, where LASER as a source of visible light is placed on the ocean floor. The modulation used is On-Off Keying Non Return to Zero (OOK-NRZ). The scenario taken is to observe the height and angle ratio to the quality of the Bit Error Rate (BER) that will be used to detect tsunami waves.

This Final Project contributes to determine the effect of receiver height from the seabed and the effect of angles formed, on the quality of the resulting BER. BER value when the receiver height from the seabed is 8 m, when the angle is 20°, the BER value is 0.1622. Then when the angle is 40°, when the receiver's height from the seabed is 8 m the BER value is 0,7215.

Kata Kunci : *Visible Light Communication (VLC), LASER, OOK-NRZ, Bit Error Rate (BER).*