ABSTRACK

Nowadays, the communication system that uses light in its propagation system is growing, the technology called Visible Light Communication (VLC) is increasingly researched and expected to be able to replace radio-based technology because of the increasing number of violations in the use of spectrum of radio waves in certain places, the width of the wave spectrum limited radio, and the increasing use of LED lights in the community. Some of the advantages of using LED as a medium of communication are not to interfere with human health, the use of very small power, and has a very high frequency that allows to send large information.

In the Final Project, developed visible light communication system to transmit video. In this research, a prototype VLC with transmitter side uses LEDs to transmit data and on the receiver side using an array photodiode, in hopes of enlarging the optimal range and receiving angle range in sending video data. The prototype testing scenario is done by changing the distance and receiving angle of the sender and receiver prototype of visible light communication.

In this study, the prototype has been made capable of working up to a distance of 50 cm. The prototype receiving corner range is 0^0-30^0. The video delay gets bigger as the receiving distance and angle increases between the transmitter and receiver.

Keyword : VLC, LED, *photodiode, array*