

ABSTRACT

Visible Light Communication (VLC) is a communication system that uses visible light as a transmission. One of the light sources Used in VLC is Light Emitting Diode (LED). LED location Position On VLC system will affect the receiving power received by the detector. In the process of transmitting data, VLC transmits information signals with excellent speed and delivery capacity.

In this final project analysis on VLC system by using an LED light of 8 pieces with several attempts to position the lamp on room dimensions are $5 \times 5 \times 3$ meters and $6 \times 5 \times 3$ meters. Two scenarios are performed, the first and second scenario performs several positions with the lamp coordinates different. The positioning of the LED lights strongly affects the power received by the detector, the closer the LED to the detector, the more good received power.

The final result indicates that the system is VLC scenario 1 at the coordinate position third in the room dimension $5 \times 5 \times 3$ meters with LED coordinate position (0, 2.5, 3), (2, 2, 3), (2.5, 0, 3), (2,-2, 3), (0,-2.5, 3), (-2,-2, 3), (-2.5, 0, 3), (-2, 2, 3) generates the highest minimum receive power of $9,6629 \times 10^{-06} Watt$. It is due to the LED hoe with the information signal sender coordinate will be received by the detector located at (0, 0, 3) meters so that the power received will be greater.

Kata Kunci : VLC, LED, Power Receive