

## ABSTRACT

*Visible Light Communication (VLC) is a communication system which use visible light as one of the information carrier media. At the sender side the Visible Light Communication (VLC) using an LED light that widely used nowadays to replace street lighting, park lights, and vehicle lights. Technology from VLC itself has advantages, such as better security, speed, and ease of application for user to transmit various types of information including digital data such text and images.*

*In this final project, a data transmission system for blind-stick using visible light has been designed and implemented. This system is designed to help guiding blind people to determine the direction of places they want to go to. This tool consist of two sides namely Tx and Rx. The components used on the sender side (Tx) are HPL lamps and mosfet irf 540 connected to Arduino Pro Mini. While on the receiving side (Rx) the components used Photodiode and Vibration Coins.*

*From the results of testing that has been done with distance Tx to Rx of 40 cm, 60 cm, 100 cm, 120 cm, 125 cm and 130 cm, it was found that the maximum distance of delivery where the data can still be well received by the receiver is at 120 cm with a lux value of 66 lx. Then in the trial it was found that the 100% system succeeded in providing information sent by the LED lights to the guide stick for the blind just as expected. Vibrating coins used on the receiving side to signal the blind also succeed in being active according to the data sent from the lamp to the guide stick.*

**Keywords : Visible Light Communication, LED Lighting , Vibration Coins, Steering Wheel for Blind, Indoor VLC.**