ABSTRACT

One of kind the information transmission that is a lot of used in telecommunication technology is to use radio frequencies. Using radio transmission is considered effective, but many of it's having deficiency include a limited range of frequencies used, for example: FM radio range (*80-108 MHz*), as well as in terms of health give rise to Radio Frequencies radiation for the human body.

In this final project implements transmitting and receiving audio signals through the transmission of visible light, this hardware consists of LEDs as a light to electrical converter and Photodioda as a modifier to the electric light. Through the implementation of these hardware, we can knowing the voice transmission over visible light can be realized. The signals transmitted in this final project is an audio signal, from Audio connector RCA 3,5mm output. And the receiver is used to play audio on the speaker.

This Hardware is designed capable of transmission audio signal transmission through the visible light with small noise at a distance 3 meters. And based on the results of this final project found that a comparison of distance (meters) and received power (dB) is inversely proportional, if the distance so far between the transmitter and the receiver, the received power will be smaller and the effect on volume. This hardware is designed as a wireless speaker applications (*wireless*). This hardware is potentially opening the technology implementation Visible Light Communication (VLC) in the future.

Keywords: ***Visible light, Audio Transmission, LED, Photodiode.***