

ABSTRACT

At present, technological developments have shown a significant increase, especially in the field of communication. With the technology that utilizes visible light as a communication medium. With technology like this using visible light as a transmission medium, light can be easily affected by ambient conditions such as other light entering the photodiode, the distance from the led lamp to the photodiode and the brightness of the led light used as a transmitter.

In this final project, data transmitters and receivers will be implemented through light transmission, and using USB OTG to connect from the receiver to the android device with a sample smart kitchen case. In this final project, the quality of VLC itself will be examined by exploring from a distance and angle, the light from the transmitter, and other light sources or outside light. The data transmitted in this final project is the result of three sensors, namely a temperature sensor, a gas sensor and a fire detection sensor.

From the results of the test that will be carried out, it can produce parameter values such as distance with a maximum distance of data that is accepted either 50cm and 55cm of data is not accepted.

Keywords: Smart Kitchen, Sensor, Android, Visible Light Communication, Firebase, Visible Light