

ABSTRACT

At present there are many types of transmission media, ranging from cable transmission media, wireless transmission media (wireless) and we all know that the development of the era is increasingly sophisticated. Technology is progressing and all technologies are now automatic. Behind the advancement of technology, there must be more innovations, one of which is transmission media using visible light (VLC). Visible light transmission media uses Light Emitting Diode (LED). As is well known, LEDs can not only be used as lighting, but can also be used as transmission media or information delivery media.

In this final project an automatic gate automation controller system will be realized using Visible Light Communication (VLC) to help people who use vehicles by not having to get out of their vehicles. As a transmission device that consists of an LED as an electric to light converter, a photodiode as a light converter to electric and data receivers. The LED sends binary data to the transmitter received by the photodiode on the receiver and servo as a motor for the automatic gate door control system.

The existence of VLC based automatic home fencing aims to facilitate daily activities and this tool has used a security system using number plate identity, whether the vehicle is allowed to enter or not

Keywords: Visible Light Communication (VLC), design, implementation, measurement and data receiver