ABSTRACT

Parking doorstop systems in various locations, on average using a cable or Bluetooth that is connected to a button or switch to open and close the parking doorstop, and for those who use the ticket button to record vehicle identity, issue a ticket, then open the parking door challenging problems, such as the queue of vehicles which is quite dense because of the parking system process that takes a long time.

Because the Parking system above cannot be relied on for a faster parking system, in this final project research has been carried out regarding the characteristics of several vehicle lighting lamps on the market that have been used as a visible light communication sending system. The type of vehicle lighting that has been used to transmit text data through Visible Light Communication (VLC) is a Light Emitting Diode (LED) lamp front and rear of a motorcycle. From this study, the characteristics of each type of motorcycle lighting used in the actual conditions inside and outside the room taking into account the influence of other lights, so that the results of VLC implementation on the motor LED lights can transmit text data at a considerable distance, which is more than 150 cm using Communication Pulse Width Modulation (PWM) with a frequency of 490 hz with efficient time.

The results of research and selection of vehicle LED lights that have been used by the author to transmit data or information using PWM communication with two 0 dutty cycle bits of 40% and 1 bit of 80% by sending a number of bits 1 and 0 which are quite optimally converted characters in beside the lighting function as a tool to transmit / send data that is more than 150 cm apart. Then the PWM communication has a frequency of 490 Hz. The characteristics of recipients have been examined by other members of the team of writers.

Keywords: VLC, vehicle lights, LED, environmental interference, PWM