

ABSTRACT

Increase in the number of the use of motorcycle is one of the factors the proliferation of motorcycle theft crime. Various forms of motorcycle theft crime, both on the streets, when in the parking lot, or when the motorcycle is being leased. This motorcycle theft is due to irresponsible people and also weak security supervision of the motorcycle, because in general the motorcycle have not been completed with a GPS device. In the use of the GPS to a motorcycle exist this time, is relatively expensive and not optimal. Some research has been done to find tools that will be more optimal, but can still be reached by the community. The application of Internet of Things technology can be applied to overcome the problems of monitoring motorcycle.

motorcycle monitoring system in this research was developed through the Internet of Things technology that are implemented using also included arduino, GPS module, GSM/GPRS module, module regulator, buzzer, and firebase for monitoring. GPS which are the positioning of the motorcycle. This system will send a message in the form of longitude and latitude to firebase that is going to be projected into the website. And it shall be that of admin will know the location of from motorcycle. The system also use the buzzer as a medium to give reminder notification people who use to immediately return motorcycle hired when have overstepped the mark time rental.

This tool is specifically designed to be able to overcome the problem of losing a motorcycle. The level of average accuracy generated from this tool is 83% based on the comparison of the results of longitude and latitude obtained from GPS Mobile Phone. From the test results, the data is displayed on firebase with a delay or average data transmission time of 4 seconds.

Keywords: *Arduino, GPS, GPRS, Internet of Things, motorcycle.*