ABSTRACT

Dicka Ariptian Rahayu. 59413973.

PROTOTYPE OF VEHICLE TRACKING SYSTEM USING ARDUINO UNO WITH SIM808 MODULE AND APPLICATION BASED ANDROID WITH THE IONIC FRAMEWORK.

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(xix + 114 + Appendix)

Frequent occurrence of motor vehicle theft makes the owner growled against thieves. The owner was not able to find out where the vehicle was taken away the thief and had to report to the police. So required Vehicle Tracking System to track the position of the vehicle that has been stolen. This research was made in the form of a prototype vehicle tracking system consisting of tracking devices, mobile applications and web servers. The tracking device for tracking positions on motor vehicles connected to web servers and mobile applications displays data information from the web server on the owner's smartphone. The tracking device consists of 2 main components: Arduino Uno and SIM808 Module. This tracking device receives data from satellites and sends the data in the form of latitude and longitude coordinates to the web server via the HTTP protocol with the internet network. Web servers store and process data into JSON forms and provide web services API services created using PHP Native as well as used by mobile applications. Mobile apps are built on Android and use the Ionic framework. Components for creating this application are HTML, CSS and JavaScript. HTML and CSS languages for building views, JavaScript on Ionic wrapped by the Angular framework. The Angular Framework on Ionic serves to regulate the templating and action of each view. In this application, the latest vehicle position data can be automatically updated if the data API of the web server is new data. Based on the results of implementation that has been done that Prototype Vehicle Tracking System can be implemented on vehicle owners and vehicle owners can get vehicle position information and track the position of vehicles that have been lost or stolen.

Bibliography (1992-2017)