ABSTRACT

The crime of theft of motorbikes, especially two-whellers, is included in the high category in the police. The rate of vehicle theft in the city of Jakarta is still relatively high. This study was made aiming to develop previous research which was considered to still have shortcomings in terms of vehicle monitoring that still uses the Android application as a monitoring system. Neo 6M GPS module and SIM800L module can wok optimally when outdoors. A motorcycle tracking device has been successfully designed using a Neo 6M GPS module, Relay, SIM800L, and RFID controlled by Arduino Nano V3 motor which is equipped with a Relay module as a support for turning the motor off or on and a web-based application aimed at displaying the location lates motorbikes and motorbikes status. The NEO 6M GPS Module can lock GPS Signals with an average lock-in time delay of 1695.53 secibds during the day, and 5426.38 seconds at night. Sending location ad motor status data with the SIM800L module has an average time delay of 14.5 seconds during the day and 56.25 seconds at night and has a 100% accuracy rate in determining the coordinates of the vehicle even if the position is blocked by buildings or trees as long as the SIM800L module continues to capture signals to connect to the internet.

Keywords : *Arduino Nano V3, GPS Neo 6M, RFID, Relay, SIM800L.*