ABSTRACT

Today the rate of growth of vehicle ownership in Indonesia has grown substantially, so that no doubt frequent traffic accidents and even crime in the way of the higher in ways that increasingly varied from year to year. Accidents and crime levels are rising due to several factors, including lack of discipline level of highway users, who are always lurking evil wherever we are and the lack of observation of patrol officers in minimizing crime and accidents on the highway.

By utilizing GPS (Global Positioning System) technology attached to each patrol vehicle we can locate the position of the vehicles monitored, thus the system at the highway patrol would effectively applied. GPS HOLUX GR89 installed to provide information where the position of each patrol vehicle in the highway, the delivery location of the position are performed automatically by the module SIM 900 based on a GSM, both are connected into a control system that uses a microcontroller ATmega16. At the receiver (computer) used a program interface that is made with Borland Delphi 7, the program will process, display the data in the form of maps and store data sent by the GPS information.

The results of the design conducted in this study proved to be quite good in terms of sending and receiving data with a distance patrol vehicle information and predetermined location.

Key words: GPS, SIM 900, ATmega16, Delphi 7