

## **Abstract**

Nowadays GPS Application has been growth in Indonesia such as position monitoring system, navigation system, military, etc. GPS application that being popular in Indonesia are Vessel Monitoring System and Vehicle Monitoring System. Vessel Monitoring System is monitoring system that used by Indonesia Government to monitor vessel that sail in Indonesia territory, it's being popular because many illegal vessel that sail in Indonesia territory. Another system is Vehicle monitoring system, this system used to monitor companies vehicles or personal's vehicle. System application that used by personal such as Car Security System, this system needed to avoid car's thief. The company need this system to get route or position vehicles in their area operation, so they can be easily to manage, application that used this system such as Fossil Fuel Distribution Monitoring System, Taxi Monitoring System, etc.

In this final assignment has been designed and realized GPS application for Vehicle monitoring. This device divide to two part, the first part of this device placed on vehicle that be tracked That consist of GPS engine, Microcontroller and a Handphone. This device used to record position and time vehicle that be tracked from GPS, The data is saved to microcontroller memory for certain time. SMS used to transmitted data from first device to second device. The second part of this device consist of handphone as receiver and PC used to display vehicle that be tracked on PC monitor as map.

After Several test in real condition, the system was work properly, the map that taken from Google Earth (Mapping Software) is suitable for this system, system can give position information to user in map format. The system need improvement such as additional memory for unpredictable condition, efficiency program, two way system communication, and addition future such as sensor or other system that can be embeded.