

## **ABSTRACT**

Global Positioning System or commonly known as GPS is a system that determines its location on the surface of the earth by use of satellite signal alignment. In this context, GPS (Global Position System) is used in public vehicle position monitoring systems. The system is a technology that has been developed before which has functions to monitor the position of data or to monitor the results by SMS (Short Message Service) on each user's cellphone.

In this day, it seems that vehicle position monitoring system technology need to be made easier for users to find out the position of the public vehicle when instantaneously they want to use it. It is also easier to control the vehicle when it is misused by driver. Therefore, a public vehicle position monitoring device is made using several components such as GPS modules and GSM modules to achieve a solution to this problem. In this system, 800L SIM module or commonly known as a GSM (Global System for Mobile Communication) module is added. The module's function is to find out its location with the instruction of the users. It is usually used by public transport vendors.

In this study, it was found that in the bus position monitoring system employees can find out the location or position of the vehicle with the help of the uBlox NEO-6M gps sensor which functions to find locations with latitude and longitude values, then the 800L SIM module as an intermediary for processing gps data to the user's cellular phone, which will bring up the latitude and longitude values with the form of a link directed to google maps. From this experiment also tested the performance of uBlox NEO-6M gps compared to gps in cell phones as a reference to get the error value at the latitude point of 0.059% while the longitude value is 0.0023%. In testing the SMS gateway system there were no errors or packet loss

Keywords: GPS, GSM, SMS, Monitoring System.