ABSTRACT

Along with the progress of time, the level of human needs will also grow. Similarly, in the field of transport, particularly public transport buses. Sometimes, the bus departed from the terminal, but not in full condition. It must have been a risk of the bus company for damages to be suffered. But we don't know how the transport process after departing from the terminal.

But we don't know how the transportation process takes place after the buses go from the terminal. It could be that the driver of the bus passengers in the middle of the journey take the passenger illegally without being noticed by the owner of the company. Other disadvantages are the income should have been more than the company has at the moment, taking illegal passenger will take additional time, and the arrival time will be irregular and unpredictable.

In this final project,a tools is designed that is able to minimize fraud cases. Every time the bus stopped, the GPS module will update the location of the car and save the data. Data from GPS module can be displayed on a PC(Personal Computer) through the serial communication with the help of software gobetwino. At the moment, the PIR sensor will detect whether the person would go up to the bus. If it turn out there is one, then the smartphone will take picture and update the position with online GPS from smartphone. The data will be stored in the smartphone storage. Thus cheating that occurs will be minimal. The monitoring system is designed based in microcontroller, GPS module, PIR sensors, Limit switch, PC and smartphone.

Keywords: GPS, limitswitch, microcontroller, PIR, smartphone.