ABSTRACT

Checking the number of passengers in a bus is part of the policy implemented by the management bus. Bus companies need to do this policy to prevent mismatches between revenue by the number of passengers. Bus management greatly helped with the implementation of this policy. The control is done by two or three times in one trip so as to make passengers feel less comfortable. Although this policy has been implemented, there are still frequent counting errors by the person who checked the number of passengers.

The working principle of this final project is to count the number of push-button switches that are connected to the microcontroller8515. Push button switch will change the value of the input pin microcontroller ATMega8515 voltage from 5 volts to 0 volts when pressed. Voltage change is described as the increasing number of passengers. The result of this sum will be sent via sms. Determination sms delivery location coordinate data generated from the comparison of the results of the module gps PMB648 coordinates are specified in the microcontroller Atmega8515 as a trigger to run the program sms.

The results of this final output project is application successfully detect the presence of passengers carried in 10 attempts. The percentage of success of this system is 100%. Average time delivery of data on the number of passengers and the coordinate location of the microcontroller ATMega8515 check points to phone is 2 seconds.

Keywords: **SMS GATEWAY, GPS system.**