

ABSTRACT

The growth of users of train transportation modes that occur every year, makes developments in terms of the development of trains and the services provided by train companies for train passengers. One of the improvements made by the train company is to provide information services for train passengers. By using PIDS, it is hoped that it will be able to meet the needs of users of train transportation modes for information on train transportation. The information is in the form of the train name, train number, train car number, train number and the station that the train will pass. The goal is to provide information to train passengers so that errors do not occur when the user of the train transportation mode when boarding the train and is wrong about the route taken by the train and train passengers can be ready when they will reach the destination station.

To display this information, PIDS uses components such as GPS, LED Matrix Display, Micro SD Card, which are then controlled by an algorithm using a microcontroller. The use of GPS so that PIDS get coordinate data from the train location in real-time, so users of transportation modes can get the latest information about the train's position. Micro SD functions to store coordinate data that will be used as the location of stations to be passed by trains, so PIDS will display information about stations on the LED Matrix Display based on coordinate data stored on the Micro SD Card.

Based on the results of several tests conducted using PIDS, the results obtained that PIDS can display information in accordance with the change of location. In the test, PIDS can display all the information needed by passengers, although there are still some shortcomings. The drawback is that the amount of data that can be accessed from a Micro SD Card is only limited to 30 coordinate data. With the limited data that can be stored, it is very possible the occurrence of limitations in the number of coordinates of the station to be passed by the train in accordance with the route of the train.

Keywords: PIDS, Microcontroller, GPS, Micro SD Card