

## ***ABSTRACT***

### ***INTERCITY BUS MONITORING SYSTEM USING IOT***

Bus consumer in Indonesia between year period of 2017-2018 in a normal rate is 116.989 passenger. It is a good marketing object but also create some problems, one of it is illegal passenger transport that can inflict financial loss of the bus manager and disturb legal passenger. This problem caused by lack of supervision by the bus manager while the bus is operating.

Lack of supervision caused by distance that make bus manager can't monitor their bus directly. That distance can be negated if there is a supervisor in the bus or there is a data communication system to know exact information of the bus while it operate. One example of that system is Internet of Things (IoT).

In this final project a system is created to solve that problem by using IoT that can monitor bus while it operate by knowing the amount of passenger, the legality of the passenger, and the location of the bus. This system use Occupant Detection System (ODS) and Data Collector to gather needed information in the bus, use Firebase Database as the cloud service, Google Spreadsheet and maps as the data processor, and website created using Wix.com used to represent the processed data. With that specification, this system can monitor amount of passenger without any error, can determine bus location and track because error of the GPS is only 0,0006191% or only 4,7 meter, and the processed data can be displayed well in previously created website.

**Keywords:** *Internet of Things, illegal passenger, internet, bus*