

Abstract

Since 2004, the government of DKI Jakarta Province has made a new innovation in attempt to decrease the rate of traffic jam by launching a new transportation mode called the Transjakarta. This transportation is completed by a set of equipment that informs the next shelter will be passed by the Transjakarta bus. However, this equipment is still operated manually by the driver. On the other hand, the lack of armada in certain corridor causes many bus operations which is not suitable with its corridor. The effect of this problem is the stoppage information system which have been set before is not working. This encourages the newest stoppage information system which is more effective and flexible to be made.

This system is using a transmitter which is placed on the shelter and the receiver is set on the Transjakarta. There is a microcontroller and Zigbee Pro to send the signal containing the shelter code at the transmitter on the shelter. While on the bus there is an RF Zigbee Pro which is supported by microcontroller, dot matrix and a speaker for audio visual output.

This equipment can ease the driver's duty so he still can concentrate while driving because this equipment can be active while bus is 140 meter from the intended shelter and the maximum speed about 60 km/h. In addition, this equipment will make bus usage be more effective and flexible. So, even though the bus is not providing the supposed shelter, every bus still can give stoppage information audio-visually to the customer.

Keywords: Transjakarta Bus, Microcontroller, Zigbee Pro