

ABSTRACT

Everyday we often see some driver, especially cars (city cars) and motorcycles used Transjakarta line to accelerate their vehicle or even passing other driver. They do it because some reason such as they do not want them stuck in traffic jam and do not want to waste time to their destination. Yet we have seen that the rules governing such as on the Traffic Law No. 22 of 2009 part 287 paragraph 1 of the traffic signs. It cause the danger to the passengers and the driver's lane Transjakarta offenders as well as accidents and traffic jam at Transjakarta line.

At this final project will be make atype vehicle detection system based on microcontroller at Transjakarta Line. Vehicle types were detected among other Transjakarta bus, motorcycle, and city cars. The system uses a ultrasonic sensor that send the respond of city cars and motorcycle in Transjakarta line. It placed vertically stratified between the sensor with other sensors. Action of the sensor response is sent through the serial communication applications that have been created using Visual Basic. The action from the respond is webcam will capture the picture automatically and save the warning data at database and the picture at PC admin which is connected with the application.

The result of this final project is a vehicle type detection system prototype which is hope will press the violationby non Transjakarta vehicle which is passed in Transjakarta line. The fast of warning execution in this application, the fastest is 1 second and the slowest is 2 second. Ultrasonik sensor used in this final project for prototype condition with the far until 30 cm. far which is measured by ultrasonik sensor have tolerated until 0.2 cm.

Keyword: Webcam, Ultrasonic Sensor, Microcontroller, Visual basic