

ABSTRACT

Traffic Jam in Indonesia from year to year is increasing because of the continuous increase in vehicle volume while the road is not increased. One of the points that are prone to congestion conditions is the crossroads. At the intersection of roads installed traffic lights to regulate the density of vehicles. However, currently the traffic lights work with the time set without regard to the conditions that occur in the field. As a result there is accumulation of vehicles on the road.

In this Final Project, Design Automatic Traffic Light Under Vehicles Queue Based on Digital Image Processing. The workings of this system are cameras installed to take pictures at the intersection and the results become input for the system. After that is done digital image processing that has an output that road conditions have passed the congestion limit or not. Arduino Uno will set the time of traffic lights on based on input from the system.

From the results of the tests performed obtained the average value of the system detects the object of 98%, the use of appropriate threshold value on the system 140, the average time to detect the object is 2.5 seconds and is not influenced by the amount Detected object. While the value of the system success rate of 80% with the average value of time the process of system success rate is 3.4 seconds.

Kata Kunci: traffic light,digital image processing,opencv,microcontroler