ABSTRACT

Traffic Light system is one of the important components in the management of transport. Traffic Light controls the amount of volume of vehicles at every intersection so as to maximize the use of the highway that aim to minimize congestion. Time traffic lights are generally controlled by the number of vehicles which are in one of the crossroads, controlling the present time there are conventional, the time the flame lights remain on solid state or leisure. Another method used for collecting traffic light data such uses vehicle sensors and detectors. The system study the current conditions and characteristics of the vehicle in each lane.

In this final project discussed the use of the camera sensor to obtain data on traffic conditions, the data is an image form will be processed using image processing techniques . The goal is to detect how many objects the vehicle through contour extraction process. The number of objects becomes the input for the calculation of the traffic light active time using fuzzy logic algorithm, by classifying the density in each track.

Test results in the form of a system to detect objects in a car vehicle lane is obtained in the form of an average accuracy of the system detects an object from a range of one to eight cars are 100%. Klasifikasikasi mamdani density method, the result of the calculation error calculation program manual is 0%. Active time fast green light if the classification of the density of leisure, active when the green light to normal if the classification of normal density and long time active green light if the classification of solid density.

Keywords : Traffic Light, Image Processing, Fuzzy Logic