ABSTRACT

Digital image processing technology is growing very rapidly in various fields. In particular can be used to classify the types of vehicles that crossed into toll gate. Until now the classification of the vehicles is still manually, it is not effective and efficient.

Because of that it is necessary an application to classification of the vehicle with ease, using video footage of vehicles crossed at toll gate as input. Then the video was processed on a Single Board Computer based on fuzzy logic to classify the vehicle. The result is the types of a vehicles that has been calculated according to its kind, namely Short Vehicle, Vehicle Medium and Long Vehicle.

The results of this study is an application that be able to classify the type of four-wheeled vehicles or more across at toll gates more efficiently. This study has been conducted testing with video recording vehicle out of the Tol Buah Batu with highest accuracy for MEDIUM VEHICLE is 83.33% of the six vehicles tested and for LONG VEHICLE is 100% of the 2 vehicles tested. Video was captured when the weather is good.

Keywords : Image Processing, Fuzzy Logic, Single Board, Vehicle, Digital Video.