

ABSTRACT

Vehicle license plat is one of means that used to identify vehicle so it can be used as identity that can differentiate between one vehicle and the other. This identity will be used in parking and toll road system registration, but this way still doing manually. Now, the majority of manual system has changed to be automatically system with image processing technology. With this technology, digital image that contains of picture characteristic can be taken and converted into writing or text.

In this final project, character recognition system of license plat developed by taking image of license plat with webcam then doing the coordinate searching process of license plat on image so characters on that license plat can be identified. The result of this image processing created in binary code, this code will be act as input for back propagation neural network that have function to take decision with goal to acknowledged that writing. Identification character process also use template matching method where this method procedure is doing pattern recognition to character that want be known and compare between input pattern with template which keep. Extract characteristic method that used is one quadrant function.

Previous research that applied the histogram 4 quadrant feature extraction method and NN-LVQ method resulted in 64,61% and 68,00% of accuracy. As a comparison, this project, which is applying the Template Matching method gives 100% of accuracy for training data set and 85.71% accuracy for testing data set, while the automatic cropping system gives 53,33% of accuracy.

Keywords: *Image processing, Back Propagation Neural Network, Template Matching, License Plate Recognition*