

## Abstract

In recent years, the number of vehicle in Indonesia has increased drastically. This phenomenon will bring difficulties to law enforcement in identifying and tracking the identity of vehicles violating the laws if it is done by using conventional method. The main objective of this research is to develop a system which can be used to identify license plate automatically. Sliding concentric windows (SCW) and connected component labelling (CCL) are the two methods which are used to detect and segmenting each character from the license plate. Then, *multi layer perceptron neural network* is used to identify each character on the license plate. The system has been tested using various license plate and 180 of 224 input images have been successfully recognized (80.35%). In addition, for identifying every character on every license plate, 1509 of 1577 characters, which are obtained from the entire set of license plate, have been successfully recognized. A test which is done to the system shows a promising result, therefore, hopefully the techniques which is used in this research can be implemented in license plate recognition system, especially in Indonesia.

**Keywords:** recognition, image, license plate, sliding concentric windows, connected component labelling, multi-layer perceptron neural network.