

# Vehicle License Plate Recognition System Design

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## Abstract

License Plate Recognition system is constructed by using image processing technology on a personal computer. A new character structure hierarchy is proposed and the correlated character properties and character coding are defined. Also, character thinning process is applied in the system to identify letters and digits on the vehicle license plate.

The results of this paper include two parts. The first part is to locate the license plate in images and separate characters on the plate. By using the following techniques, such as Sobel edge detection, noise filters, threshold, and projection, to the captured images; characters and dash on license plate are located and divided. The second part is character recognition. Characters are recognized by using the character end-point position, direction of end points, four quarter locations, and vertical as well as horizontal characteristic categorization. The experiment results demonstrate that the system attains satisfied performance requirements for recognition speed and correct ratio.

Keyword : Image Processing, Recognition of license plate, Threshold