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A position-varied plate utilized for a Thai license plate recognition

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Abstract
This paper presents a position-varied plate utilized for Thai license plate recognition using back propagation neural network (BPNN). In this method, a dimension image of the car is suitably decreased by image resizing (e.g. interpolation method), and then they are converted to gray images for inputs to plate localization process. The plate localization process is used to find the area position of the license plate for inputting to image segmentation process which is used to find edges of main characters in the license plate. After that, each of image characters received from character segmentation process is inserted into neural network to analyze the probable characters and numbers. In this experiment, the images of numbers and Thai characters are cross-validated by BPNN (training, validation and testing sets), and then 100 images of Thai license plate are used for testing. The results reveal that an accuracy of analysis is at approximately 97 % for the distance of the car and camera between 0.5m to 1m, and the angle of inclined plate varied from ±13 degrees. © 2010 SICE.

Author Keywords
Backpropagation neural network; License plate recognition; Thai characters

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