

ABSTRACT

Plate identification and recognition is the most important things in traffic scope. It's happen because vehicle plate has unique variable that cause each of vehicle has different plate. Plate identification and recognition have a function to be the input of access control system. The same as human face that has different contour for every human although for them who was born identically. Plate detection depend on the thesis about "Design and determination of the vehicle license plate identification system by using Principal Component Analysis." The tests result has the success rate up to 40%. For the accuracy of vehicle plate recognition and the accuracy of segmentation could be up to 100%. [1] Whereas for the face detection based on the thesis about "Face Recognition System by using webcam for attendance list and template matching method. The result tests has the success rate up to 65%. [2]

Because of the unique variable of plate for every vehicle. So that the writer has an idea for making a kind of tool that called Vehicle Plate Recognition (VPR) by using OpenALPR and OpenCV method and Face Matching tool by using SSIM method that will be implemented by the writer on the parking gate. VPR is a device used to identify the character on the plate. While the face matching is to compare the face and the other face by using SSIM method.

The result of this final assessment we can conclude that the highest accuracy of VPR is 73%. The matching accuracy between plate in and plate out is 80%. The duration process of VPR to recognize plate is 76,67 second. At the same time the accuracy of face matching is 76,67%. The value of this experiment obtained from 30 times test for every parameters.

Keyword : Vehicle Plate Recognition, Face Matching, Image Processing, OpenCV, OpenALPR, MSE, SSIM.