ABSTRACT

Monitoring system based on camera is a system which using camera to monitor certain area. However, the static monitoring camera causes information which is needed can’t be optimal. By expanding monitoring area, the object that will be capture is better than monitoring system with static camera. By expanding monitoring area, image captures by dynamic camera, will have better quality than image captures by static camera.

This final project is studied concerning design and implementation the dynamic monitoring system which using PTZ camera as license plate detection on vehicle, especially motorcycle. PTZ camera, as visual sensor, will be capture movement of position of motorcycle and changed its position following the direction of movement of a motorcycle and read its license plate by using image processing. Motorcycle runs straight toward the camera and stops at a particular region. After a motorcycle entering the area, position of motorcycle will be known and the software will give command to the camera to move to the position of motorcycle. License plate number will be detected by using Haar Cascade and read by using Optical Character Recognition (OCR).

On this final project, license plate detection system by using PTZ camera has accuracy 60% from 50 samples. Meanwhile, License plate reading has accuracy rate 38.33% from 30 samples which get from license plate detection.

Keywords: dynamic monitoring system, vehicle movement detection, PTZ camera, license plate reading, Haar Cascade and OCR.