Abstract

Vehicle number plate recognition is important, both for the process of tracking, identifying, and parking systems. Although the use of recording license plates of vehicles is increasingly important, but the process is still often used as a process of human input, where people have limited resistance levels that can lead to errors in the input process. To overcome the weaknesses of the system input is done manually by humans it is necessary to develop a system of automatic number plate recognition, or commonly known as automatic number plate recognition system (ANPR).

This final project focused on the process of number plate recognition using template matching. Sobel Edge, Horizontal Vertical Projection and Spectral Analysis by Fourier Transform is used in the implementation of license plate recognition system location of the vehicle that will generate power spectrum which is processed by Spectral Analysis to get the location of a vehicle plate number. Data inputs used in the form of images of vehicles with different types and conditions.

From the experiments that have been carried out, the accuracy of the system in recognizing license plate location is quite good. Best accuracy result in sufficient lighting is 85%, while the character recognition using template matching can achieve 100% accuracy in the input conditions are perfect number plate with an average accuracy of 89%.

***Keywords** : APNR, kendaraan, plat nomor kendaraan, Fourier Tranform, Spectral Analysis, Sobel Edge, Horizontal Vertical Projection, Template Matching*