ABSTRACT

Traffic sign is the important thing to note for road users to keep security and comfort. If there are no traffic signs, the road users will not know the road conditions, road situations and the action that must be done when driving. Some facts prove that there are road users that still do not understand the mean of traffic sign. To help them, a prototype of translator traffic sign system was developed that using active contour as segmentation algorithms. That algorithm was researched as the main study of this project because segmentation can increase the accuracy of traffic sign classifications.

This final project analyze regarding the parameters of active contour that will produce an accurate segmentation. This model uses a curve contour that can adjust its shape according to pattern the object examined. Then the program will do the extraction of characteristic using gabor wavelet of segmentation and compared to the feature database. For the classification this project will used the K-NN method. Salt and pepper noise will be used to test the reliability of this algorithm.

This project produce results the average accuracy of segmentation 55,83% and average time of computation 8,9546 seconds. For classifications, the best average accuracy is 77,5%. This system is still not quite good because the accuracy is low in the certain time so it still can not be implemented.

Key Word: Image Segmentation, active contour model, traffic signs, *K-nearest neighbor*, *Gabor wavelet*, histogram