ABSTRACT

Signature is a form of identity verification of a person. In daily life, particularly in legal transactions, the use of signatures as well as legal evidence in the transaction process. But often acts signature forgery. This of course is very detrimental to the parties concerned. A signature recognition system would be needed to detect a signature is genuine or fake.

Feature extraction methods such as Scale invariant Feature Transform (SIFT) and Speed Up Robust Feature (SURF) would be appropriate if it is used to support the signature recognition system. Steps being taken to get started on the collection of data descriptors signatures, scanning, pre-processing, feature extraction using SIFT and SURF, until the matching process at the time of testing. Comparisons are both viewed from the aspect of accuracy.

The process of determining the classification and grade using the algorithm k-Nearest Neighbour (k-NN). By utilizing the Euclidean Distance formula, Cityblock Distance, and Cosian Distance is used to calculate the distance of the object being observed with dots number k is chosen to be obtained groupings based on distance. The output will be a research data in this thesis. The results obtained from testing is the number of points = 100 using SIFT feature extraction, the average percentage of correct image is 68% of the 200 test data are divided into 10 classes. While the SURF feature extraction with the number of points = 125, the average percentage of correct image is 68% of the 200 test data are divided into 10 classes.

Keywords*: Signature recognition, feature extraction, descriptor, SIFT, SURF, k-NN*