ABSTRACT

Increasing levels of crime rife, such as forgery of important documents, forgery of signatures, and so forth. Therefore, in order to avoid crime, handwriting began to be involved to prove the authenticity of a document or to show the authenticity of the document owner.

With the exclusion of handwriting, written directly by a person, it will be very difficult for criminals to forge vital documents, including the falsification of handwriting, because handwriting everyone has different characteristics, both from the type of literature as well as curves formed by hand to engrave the text. The application of handwritten character recognition technology will be useful, such as to prove the authenticity of the handwriting, for the purposes of forensic analysis and banking purposes.

In this final duty conducted the research process handwriting (handwriting recognition) using the method of transformation Curvelet and character recognition processes using K-Nearest Neighbor method that can distinguish one's writing with the writing of others. Input image that will be input in the form of images. Jpg format. Once that was done by using a feature extraction transformation Curvelet. The output of the Curvelet form that will be the input feature for the K-Nearest Neighbor.

To improve the performance of the system, then testing the system. Testing is done by analyzing several parameters. These parameters are trained to use the amount of data, normalization, block size and the overlap on the block overlapping, scale and orientation on curevelet, distance and value of K in the KNN that produces the best accuracy on the system.

From the results of performance testing system, it is known that the performance of the system to achieve the highest accuracy when using the parameter amount of data to train 30 and 9 samples, normalized to the size of 200 x 50, 10x10 block size, the overlap 7, 2 orientation scale 8, the city block distance and the K = 7, so that the obtained accuracy of 96.30%.

Keywords: Handwriting, Transformation Curvelet, K-Nearest Neighbor, Accuracy