ABSTRACT

Batik is a traditional heritage that has become part of Indonesian society. In addition to having a wide variety of motifs and colors are different, each motif also has a meaning and usage of each. Because of the uniqueness and value of philosophy is high on every motive that prompted the authors to create a simulation system that can detect the type of motif and function usefulness in everyday life.

On this system simulation using MATLAB R2009a. The process is carried out by acquiring the image of the motif with a digital camera, then do preprocessing. Results from the image that has been in the preprocessing later in the extraction characteristics by using the filter 2D Gabor Wavelet because of the frequency and orientation of the representation of the filter 2D Gabor Wavelet similar to the human visual system that is suitable for the representation of the pattern, then classified the results of feature extraction image of the particular pattern is using Network Kohonen Neural system to determine the level of accuracy in detecting the image of the motif.

The test results obtained accuracy rate of 90,86%. The best accuracy is obtained of 210 test images with the orientation of the combination of 30^0, 60^0, 90^0, 120^0, and 150^0, 8 the first power. Epoch equal to 300 and the Learning Rate equal to 0.1. The average computation time in recognition motif is 14,90 seconds.

Keywords: Extraction characteristics, Filter 2D Gabor Wavelet, Neural Network Kohenen