Abstract

Batik is part of the richness of Indonesian culture. With so many motifs of each region in Indonesia and the preservation of cultural heritage of Indonesia, inventory data from each motif is required. However, search for and retrieve the desired image of batik motif on a large data set is not easy.

Content-based image retrieval is a method for batik image recognition through the contents of the image feature extraction to view, search, and rediscover the image of a great collection. To solve the above problems, this final project propose image retrieval system that implemented effectively and efficiently using Curvelet Transformation and HSV color space. Curvelet transformation is a new multi-scale representation suitable for objects with curves. HSV color space is consistent with human perception because HSV represents color in a way similar to how humans think. Of each image will be taken batik texture feature of the energy and standard deviation of curvelet coefficients with curvelet transform each wedge on each scale. Color feature take the color histogram feature HSV color space that has been quantized into 72 bins color. From the feature above, similarity of each batik image calculated using Canberra distance.

Based on the results of experiments performed on a dataset of batik, this method resulted in an average precision of 96.85% using 4-scale Curvelet transform and quantization histogram of HSV color space. This indicates that the Curvelet Transform and
HSV color space is a promising method in the process of batik image retrieval.

Keywords: Batik, Canberra Distance, Content Based Image Retrieval, Curvelet Transformation, HSV Color Space