

Abstract

Content-based image retrieval is an image search using feature extraction of image characteristic. The Image characteristic is defined by shape, color, texture, and else. Feature extraction that required is different depends on the image domain. Using the right feature extraction of image could obtain a better result. For images which contain flora and fauna, the feature extraction that could be use is edge extraction and color extraction.

From the problem that explained above, thus, is built an image retrieval system using color extraction and edge extraction from image. Color feature of image is extracted by using color histogram. Whereas, the edge feature of image is extracted by using multi-scale detection. Afterwards, from the system which built, the performance of image retrieval along with the factors that affect the image retrieval can be yielded.

Multi-scale detection algorithm is a searching method to represent an edge of image using edge detection operator, however, edge detection process retrieved several time with the different value of Gaussian blur, so the better edge extraction is obtained. Color Histogram that used based on color space and histogram representation. By using edge detection and color histogram, the image retrieval is expected better.

From a trial which had done, combining edge extraction and color extraction could enhance performance of image retrieval. This enhancement is perceived by the improvement of precision value. The precision value is affected by of several factors such composition of image color and background, edge detail, distance measurement between query and database, and weight of similarity that given for feature extraction.

Key word : image retrieval, feature extraction, multi-scale edge detection, color histogram