Abstract

In this paper a fast and effective noise-resistant method for image retrieval has been proposed. In this method, first, the image is decomposed into different frequency layers using complex wavelet transform so as to make it possible to extract the texture features of the image. Thereafter, in the HSV color space, each layer is quantized into 166 different colors and the color histogram is calculated for each layer. Furthermore, a number of statistical features are extracted from each sub-image using complex wavelet transform, which are used along with other features for image retrieval. In order to verify the effectiveness of the proposed method, it has been evaluated using a dataset containing 3000 images and compared to a competent method in this field. The results prove the superiority of the proposed method.

References


Index Terms
A Method for Image Retrieval using Combination of Color and Frequency Layers

Keywords

Color feature    complex wavelet transform    Content-based image retrieval    feature extraction

histogram

image processing and texture feature.