Abstract
In recent years, the accelerated growth of digital media collections and in particular still image collections, both proprietary and on the Web, has established the need for the development of human-centered tools for the efficient access and retrieval of visual information. The need to manage these images and locate target images in response to user queries has become a significant problem. Image categorization is an important step for efficiently handling large image databases and enables the implementation of efficient retrieval algorithms.

Image Classification refers to grouping of a digital image into different classes within a particular dataset, based on attribute values. It is done to replace visual analysis of the image data with quantitative techniques.

This paper presents the image classification techniques based on feature vectors of transformed images using Discrete Cosine Transform and Walsh Transform. The various sizes of feature vectors are generated such as 8X8, 16X16, 32X32, 64X64 and 128X128. The proposed algorithm is worked over database of 1000 images spread over 10 different classes. The Euclidean distance is used as similarity measure. A threshold value is set to determine to which category the query image belongs to.

Reference

- F.Mokhtarian and S.Abbasi, “Shape similarity retrieval under affine transforms”, Pattern
Performance Comparison of Image Classifier Using Discrete Cosine Transform and Walsh Transform

Performance Comparison of Image Classifier Using Discrete Cosine Transform and Walsh Transform


Index Terms

Computer Science

Wireless

Key words

Discrete Cosine Transform (DCT)
Walsh Transform
Image Database
Transform Domain
Feature Vector