Abstract

This paper uses the sectorization method on DFT and Hartley transforms along with sectorization of the DFT and Hartley wavelets over 3 different color spaces namely RGB, LUV and YCbCr. A comparison and evaluation of these methods is carried out and the results are drawn based on the retrieval rates of each class of images from the database. Three different similarity measures such as Precision, Recall, Precision-Recall Crossover are used for the matching the feature vectors of the query image with that of the images in the database.
Euclidean distance and sum of Absolute difference are used for measuring the distances between the images. The average precision-recall cross-over point plot (PRCP) and the overall average PRCP performances have been compared for all the methods.

References

- John Eakins, Margaret Graham, University of Northumbria at Newcastle "Content-based Image Retrieval", JISC technology applications, October 1999.
Performance Comparison of DFT and Hartley Plane Sectorization with its Wavelets across RGB, LUV and YCbCr Colour Planes in CBIR

- H. B. Kekre and Dhirendra Mishra, "Colorization of gray scale digital image using Kekre's LUV Color space", International conference on managing next generation of computer applications, 5th and 6th December, 2008; Karunya University, Tamilnadu, INDIA

Index Terms

Computer Science
Image Processing

Keywords
CBIR Wavelet DFT Hartley RGB LUV YCbCr Euclidean Distance Absolute Difference
Precision Recall Cross Over Point