A Collaborative Approach to Enhance CBIR Performance using DCT, DST and Kekre's Transform

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Abstract

Content based Image retrieval is a process which will enhance the image searching accuracy. Many researchers are working on image processing. CBIR approach uses different techniques such as colour, texture and shape, by processing this feature vector is generated and comparison is done. CBIR approach can be used in many places such as search engines, patent registration, face detection etc. CBIR approach can also be used for security. It can encrypt and decrypt the image content to provide security. Stenography along with CBIR can generate algorithm which makes data more secure. CBIR can help in many fields only by referring image content. In this paper new approach "Hybrid approach" is implemented. Hybrid approach is a combination of different transforms. Combination of DCT, DST and kekre's transforms are used for feature vector generation. For image matching and distance calculation, two methods are used in this paper known as Euclidian distance and absolute distance method. In this paper, different transforms are combined to generate a hybrid approach. Results of different hybrid approaches are compared in this paper. It includes comparison of all the algorithms based on their performance by comparing different performance parameters such as precision and recall to determine which algorithm is providing the best result.
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References

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Index Terms

Computer Science
Image Processing

Keywords
CBIR Feature Vector Transform Sectorization Spatial Domain Frequency Domain Similarity Measures

Hybrid transform

Collaborative transform

combining different transforms