Abstract

In this paper, a novel image retrieval technique based on the combination of Haar wavelet transformation and CIECAM02 color histogram (CH) have been proposed. In color based image retrieval, color histogram is one of the most repeatedly used image features and it is used at a great extent in content-based image retrieval (CBIR) systems as a significant color feature. The color histogram unchanged by translation and rotation. The local characteristics and texture features of an image are extracted by wavelet transformation. On conflation of wavelet transformation and color histogram new algorithm has been proposed. One may select a query image perceived to be similar to the visualized target image. A set of images similar to the query is then returned from the database. The final experimental results show that the proposed technique gives better performance than the other schemes, in terms of retrieval time.


10. Xuanping Zhang, Liang Cui, Liping Shao, “A Fast Semi-fragile Watermarking Scheme Based on quantizing the Weighted Mean of Integer Haar Wavelet Coefficients, Xi’an Jiaotong University Xi’an, China.


15. Adnan Abou Nabout, Bernd Tibken, “Object Shape Description Using Haar Wavelet Functions”, University of Wuppertal, Wuppertal, Germany.


17. R. Missaoui, M. Sarifuddin and J. Vaillancourt, “Similarity measures for efficient
content-based image Retrieval", IEE Proceedings online no. 20045192.


20. Olivier Tulet, Mohamed-Chaker Larabi and Christine Fernandez-Maloigne, “Image Rendering Based on a Spatial Extension of the CIECAM02”, SIC lab, University of Poitiers.


23. Mark D. Fairchild, Color Appearance Models: CIECAM02 and Beyond", IS&T/SID 12th Color Imaging Conference.


Index Terms

Computer Science Image Processing

Keywords

Color Histogram, Haar wavelet Transformation, Content-based image retrieval (CBIR), Color histogram, CIECAM02.