Abstract

The paper portrays comprehensive performance comparison of image classification techniques using block truncation coding (BTC) with assorted color spaces. Overall six color spaces have been explored which includes RGB color space for applying BTC to figure out the feature vector in Content Based Image Classification (CBIC) techniques. A generic database with 900 images having 100 images per category spread across 9 different categories have been considered to conduct the experimentation with the proposed Image Classification technique. On the whole nine hundred queries have been fired. The average success rate of class determination for each of the color spaces has been computed and considered for performance analysis. The results explicitly reveal performance improvement (higher average success rate values) with proposed color-BTC methods with luminance chromaticity color spaces compared to RGB color space. Best result is shown by YUV color space based BTC in content based image classification.
Image Classification using Block Truncation Coding with Assorted Color Spaces

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Index Terms

Computer Science Image Processing

Keywords

Cbic Btc Color Space Rgb Kekre's Luv Ycbcr Yuv Yiq Kekre's Ycgcb