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.
References

- Yung-Chen Chou, Hon-Hang Chang, "A High Payload Data Hiding Scheme for Color Image Based on BTC Compression Technique," Fourth International on Genetic and Evolutionary Computing (ICGEC), 2010 Conference
- Yung-Chen Chou, Hon-Hang Chang, "A Data Hiding Scheme for Color Image
Based on BTC Compression Technique, 9th IEEE International Conference on Cognitive Informatics (ICCI), 2010, pp- 845 - 850

- Image Database http://wang.ist.psu.edu/docs/related/Image.orig

Index Terms

Computer Science  Image Processing

Keywords

Cbic  Btc  Color Space  Rgb  Kekreapos;s Luv  Ycbcr  Yuv  Yiq  Kekreapos;s Ycgcb