Abstract

In recent years there has been an astronomical increase in the usage of computers for a variety of tasks. With the advent of digital cameras, one of the most common uses has been the storage, manipulation, and transfer of digital images. The files that comprise these images, however, can be quite large and can quickly take up precious memory space on the computer’s...
Color Image Compression using SPIHT Algorithm

hard drive. In multimedia application, most of the images are in color. And color images contain lot of data redundancy and require a large amount of storage space. In this work, we are presenting the performance of different wavelets using SPIHT[1] algorithm for compressing color image. In this R, G and B component of color image are converted to YCbCr before wavelet transform is applied. Y is luminance component; Cb and Cr are chrominance components of the image. Lena color image is taken for analysis purpose. Image is compressed for different bits per pixel by changing level of wavelet decomposition. Matlab software is used for simulation. Results are analyzed using PSNR and HVS property. Graphs are plotted to show the variation of PSNR for different bits per pixel and level of wavelet decomposition.

Reference

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Index Terms

Computer Science    Signal Processing
Key words

Wavelet
  luminance
  chrominance

SPIHT

Color Image