Abstract

Compression is performed to reduce the redundancy and retain information pertaining to data. In this paper, five image compression techniques have been simulated. The techniques are baseline Joint Photographic Experts Group(JPEG) , Block Truncation Coding (BTC) , Hybrid Discrete Wavelet Transform- Discrete Cosine Transform (DWT-DCT) method, Pyramid and Set Partitioning In Hierarchical Trees (SPIHT) methods. The aim of this paper is to find the best compression algorithm which satisfies our requirements. The results of simulation are shown and compared for different quality parameters of it by applying on 512x512 sized color images of Lena , Baboon and Goldhill and satellite images of earth. CPU time utilization, entropy, Peak
Signal To Noise Ratio (PSNR), bits per pixel are some of the factors considered to distinguish between the different methodologies. The results show that the best method for compression which yields a better outcome for standard images is hybrid dwt-dct method whereas for satellite images the best method is SPIHT. Considering CPU computation time, the fastest method of compression is Pyramid method. On the basis of requirement one of the above mentioned algorithms can be used.

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Index Terms

Computer Science
Hpc Applications
Keywords
Btc  bits Per Pixel dwt dct entropy image Compression Jpeg pyramid psnr spiht