Abstract

The high quality of the image produced by CT scan and MRI techniques is required to be maintained in order to avoid wrong diagnosis along with reduced file size. A lossless compression technique retains the image quality but achieves low to moderate compression ratio. Lossy compression, on the other hand, provides higher compression at the cost of degraded image quality. Thus there is need of intermediate method that can satisfy both the requirements. One such approach is the region based hybrid compression in which both lossless and lossy techniques are integrated to obtained better results. Present work comprises region based hybrid compression using Huffman coding and SPIHT. First the diagnostically important region is separated from the rest of the image by a segmentation procedure. The extracted ROI is coded using lossless Huffman coding and SPIHT compression is used for rest of the image also called as background. Performance of the proposed method is evaluated in terms of full reference and no reference parameters.

References
18. Saluja, Nitin, Anoop Kumar, Dr Amisha, and Rajesh Khanna. "CROPPING IMAGE IN RECTANGULAR, CIRCULAR, SQUARE AND TRIANGULAR FORM USING MATLAB."


Index Terms

Computer Science Image Processing

Keywords

BRISQUE, FSIM, Hybrid Compression, ROI, SPIHT, SSIM, VIF.