A Novel Medical Image Compression Technique based on Structure Reference Selection using Integer Wavelet Transform Function and PSO Algorithm

Abstract

The utility of medical image increases due to serious disease prediction such as brain stroke and lung cancer. The size of medical image required large amount of memory and bandwidth for storage and transmission. For the lossless compression of medical image some standard algorithms are used such as JPEG, composite and Wavelet based. These entire algorithms perform good compression ratio and PSNR value. But the redundant structure of medical image reduces the compression ratio and decreases the value of PSNR and suffered quality of medical image compression. In this paper we proposed a structure reference selection process for collecting redundant frame of structure for compression. The collection of redundant frame structure is performed by particle swarm optimization algorithm. Particle swarm optimization is searching technique. For the generation of structure of frame we used integer wavelet transform function. The proposed algorithm is implemented through MATLAB software and is compared with composite algorithm, SOM algorithm and JPEG compression technique.
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- S. Bhavani, K. Thanushkodi "A Survey on Coding Algorithms in Medical Image
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**Index Terms**

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Wavelet and HCC.