Lossless Grayscale Image Compression using Block-wise Entropy Shannon (LBES)

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Abstract

This research paper based on the probability based block wise Shannon Entropy method applied in grayscale image based on frequency occurrence of each pixel value. Then the LBES method divide the pixel with frequency of each set as assigned either 0 or 1 coding. This successful compression algorithm for utilizing optimum source coding. This theoretical idea can be proved in a range of , where H is the entropy of the source. The main Analysis of this paper is to show the better compression with other Lossless methods, with the proposed algorithm Lossless Block-wise Entropy Shannon (LBES) is suitable for produce high compression ratio 19.54 compared to other standard methods. Compression ratio is determined for all sub blocks. This process repeats for all components wise. The proposed Lossless Block-wise Entropy Shannon (LBES) is tested and implemented through quality measurement parameters such as RMSE, Entropy, PSNR and CR by using MATLAB..

References
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Index Terms

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Image Processing

Keywords

Compression, Decompression, Entropy, MSE and PSNR.