Abstract

In the age of digital medical imaging communication and robotic transmission of real-time image for robot guided operations in constrained bandwidth is a challenging task. The issue of compression, in medical images, is the prime focus of this study. The study has aimed to perform an investigation on the frequently adopted region-of-interest scheme called as MAXSHIFT. The design principle of this standard encoding technique allows encoding and highly prioritizing only the region of interest and then emphasis on the background (non-region of interest area). The system allows the deployment of multiple and randomly shaped region of interest within the medical images using randomized weights for emphasizing each element of ROI. Supported by the discussion on some of the prior research work, and how this study is motivated, the present manuscript illustrates the experimental phases of implementing MAXSHIFT on two dimensional medical images. In order to check the robustness of the algorithm, the performance parameters such as bit per pixel (BPP) and Signal to Noise Ratio (SNR) is being evaluated on enormous medical images.
Computational Modelling of Image Coding using ROI based Medical Image Compression

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**Index Terms**

Computer Science
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**Keywords**

Medical Images, Compression, JPEG2000, MAXSHIFT, Region of Interest