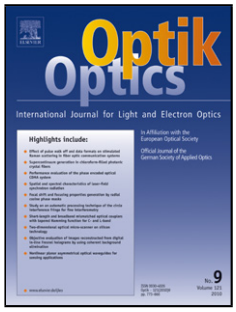

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An Improved Medical Image Compression Technique with Lossless Region of Interest

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Abstract—Hospitals and medical centers produce an enormous amount of digital medical images every day, which are used for different purposes such as surgical and diagnostic plans. The ease of storing and transmission of digital medical images is a boon to patients and medical professionals. Due to the large volume of images, image compression is required to reduce the redundancies in image and represents it in shorter manner for efficient archiving and transmission of images. However, compressing digital medical images as the region of interest for diagnosis is generally small when compared to the whole image. Lossless compression techniques compress without loss of any information but have low compression rate, and lossy compression techniques can compress at high compression ratio but with a slight loss of data. Using lossless techniques in medical image does not give enough advantage in transmission and storage and lossy techniques may lose crucial data required for diagnosis. In this paper, an improved medical image compression technique based on region of interest (ROI) is proposed to maximize compression.