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Abstract	<p>The discrete cosine transform (DCT) is a method for converting a signal into plain frequency components. It is extensively used in image compression. In this paper a new technique is proposed, namely SRLE (Sliding Run Length Encoding) which is based on a lossy compression, and used to enhance image data compression. Image quality is measured impartially, using peak signal-to-noise ratio (PSNR) or picture quality scale, and individually using perceived image quality with compression factor (CF) being the main theme of this paper, taking into consideration the preservation of well PSNR outputs.</p> <p>The performance of DCT compression generally degrades low bit-rates mainly because of the underlying block-based DCT scheme. Experimental results demonstrate the effectiveness of the SRLE approach, in terms of PSNR, CF and execution time, over different mechanisms used with DCT image compression. The new technique also proved to have favourable results in terms of PSNR and CF when compared with some wavelet based image compression.</p> <p>Keywords: Discrete Cosine Transform, Sliding Run Length Encoding, Image Compression, Peak Signal-to-Noise Ratio, Compression Factor.</p>		