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Abstract	<p>A number of compression schemes were put forward to achieve high compression factors with high image quality at a low computational time. In this paper, a combined transform coding scheme is proposed which is based on discrete wavelet (DWT) and discrete cosine (DCT) transforms with an added new enhancement method, which is the sliding run length encoding (SRLE) technique, to further improve compression.</p> <p>The advantages of the wavelet and the discrete cosine transforms were utilized to encode the image. This first step involves transforming the color components of the image from RGB to YUV planes to acquire the advantage of the existing spectral correlation and consequently gaining more compression.</p> <p>DWT is then applied to the Y, U and V color space information giving the approximate and the detail coefficients. The detail coefficients are quantized, coded using run length encoding (RLE) and SRLE.</p> <p>The approximate coefficients were coded using DCT, since DCT has superior compression performance when image information has poor power concentration in high frequency areas. This output is also quantized, coded using RLE and SRLE. Test results showed that the proposed DWT DCT SRLE system proved to have encouraging results in terms of Peak Signal-to-Noise Ratio (PSNR), Compression Factor (CF) and execution time when compared with some DWT based image compressions.</p> <p>Keywords: Image Compression, Discrete Cosine Transform, Discrete Wavelet Transform, Run Length Encoding, Peak Signal-to-Noise Ratio, Compression Factor.</p>		