# MODIFIED QUANTIZATION BASED STEGANOGRAPHY FOR COLOR IMAGES

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## ABSTRACT

The growth of high speed computer networks and that of the Internet, in particular, has increased the ease of Information Communication. In comparison with Analog media, Digital media offers several distinct advantages such as high quality, easy editing, high fidelity copying, compression etc. But this type of advancement in the field of data communication in other sense has hiked the fear of getting the data snooped at the time of sending it from the sender to the receiver. So, Information Security is becoming an inseparable part of Data Communication. In order to address this Information Security, Steganography plays an important role.

This paper proposes a novel and high capacity steganographic approach based on Discrete Cosine Transformation (DCT) and JPEG compression. JPEG technique divides the input image into non-overlapping blocks of 8x8 pixels and uses the DCT transformation. However, our proposed method divides the cover image into nonoverlapping blocks of 16x16 pixels to embed secret information.

Here we have considered color images and investigated the feasibility of data hiding. Four performance parameters namely Capacity, MSE and PSNR and NC have been compared on different sizes of standard test images. In comparison with Jpeg-Jsteg and Chang et al. methods based on the conventional blocks of 8x8 pixels the proposed method shows high performance with regard to embedding rate and PSNR of stego image. Furthermore, NC shows that the produced stego-images are almost similar to the original cover images.

**KEYWORDS:** Capacity, DCT, JPEG, PSNR, Steganography