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## Abstract

Secret communication over network has captured the imagination of researchers for many years. Steganography and Digital watermarking techniques are used to protect copyright information, address digital rights management, and conceal secrets. Secret data hiding techniques provide an interesting challenge for digital forensic investigations. Research into steganalysis techniques aids in the discovery of such hidden information as well as leads research toward improved methods for hiding information. This paper presents a new approach of steganography based on Wavelet transform technique on raw images to enhance the security of the secret data. Steganography is a technique to hide secret information into the image so as unknown to an attacker. The proposed method has ability to hide secret message in a digital color image. In this technique, the bits of secret information are embedded in the coefficients of the Haar Wavelet Transformed cover image. Haar wavelet transform is applied for the separation of different frequency components of image i. e. Low, medium low, medium high and high frequency components of image and these are called sub bands of image. After forming these sub bands we can select high frequency component band from the above four sub bands and embed the bits of secret information into the high frequency coefficient of the selected sub band. To extract secret information apply wavelet transform on

stego image, then select the embedded coefficients and extract the secret information bits from the high frequency coefficient. Without secret key nobody is able to extract the secret information from the stegoed image or even not proves the secret information present in the image. An experimental result shows that this approach perform better and improves the data embedding capacity by 15% approximately than 1-level,2-level haar wavelet methods.

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### Index Terms

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