DATA HIDING IN SKIN TONE OF IMAGES USING STEGANOGRAPHY

RAKHI[1] & VIJAY PRAKASH SINGH[2]

[1]Department of E. C, Bhabha Engineering Research Institute, Bhopal, Madhya Pradesh, India

[2]H.O.D. Department of E. C, Bhabha Engineering Research Institute, Bhopal, Madhya Pradesh, India

ABSTRACT

Steganography is a method of data hiding from its existence to another transmission medium for secret data communication [1]. This paper is based on the skin tone region of the images [2]. Here, hiding of the data is done in skin tone region of the image that will provide an excellence in data hiding. This skin tone detection is performed using HSV (Hue, Saturation and Value) color space. The embedding of secret data is done by using frequency domain approach of DWT (Discrete Wavelet Transform). The DWT having four sub bands of frequency in which high frequency sub band is used for secret data hiding by tracking skin pixels in that sub band. We shall use digital images as the cover object in this paper in which we embed the hidden information.

The challenge of using steganography in cover images is to hide as much data as possible with the least noticeable difference in the stego-image. Steganographic algorithms operate on basically three types of images: Raw images (i.e., bmp format), Palette based images (i.e., GIF images) and JPEG images. JPEG images are routinely used in steganographic algorithms due to the most popular lossy image compression method. Here, another feature used in data hiding i.e. cropping of image. The cropped image is used in different steps of data hiding. This cropping feature increased the security than the use of whole image. So, this cropped region used as the key at decoding side. This shows that the mechanism of hiding the information in skin tone region of images gives higher security and satisfactory PSNR.

KEYWORDS: Cropping, DWT, PSNR, Skin Tone Detection