

## Secure Message Transmission Using Meaningful Shares

**Authors :** Ajish Sreedharan

**Abstract :** Visual cryptography encodes a secret image into shares of random binary patterns. If the shares are exerted onto transparencies, the secret image can be visually decoded by superimposing a qualified subset of transparencies, but no secret information can be obtained from the superposition of a forbidden subset. The binary patterns of the shares, however, have no visual meaning and hinder the objectives of visual cryptography. In the Secret Message Transmission through Meaningful Shares a secret message to be transmitted is converted to grey scale image. Then (2,2) visual cryptographic shares are generated from this converted gray scale image. The shares are encrypted using A Chaos-Based Image Encryption Algorithm Using Wavelet Transform. Two separate color images which are of the same size of the shares, taken as cover image of the respective shares to hide the shares into them. The encrypted shares which are covered by meaningful images so that a potential eavesdropper wont know there is a message to be read. The meaningful shares are transmitted through two different transmission medium. During decoding shares are fetched from received meaningful images and decrypted using A Chaos-Based Image Encryption Algorithm Using Wavelet Transform. The shares are combined to regenerate the grey scale image from where the secret message is obtained.

**Keywords :** visual cryptography, wavelet transform, meaningful shares, grey scale image

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