Abstract

As there is rapid growth in the digital world, security becomes a major concern for data transmission using image techniques. Visual cryptography (VC) is recent technology in the cryptographic scheme, which is utilized them secret images to be shared securely and also its data is preserved with higher confidentiality. In general, when sender the forwards the secret images which is split into several images and keeps its hidden data in it, so when all the distributed images are aligned and stacked unitedly, they incline to exhibit the secret image data to the receiver. Previous visual cryptography technology, privacy of the share images is not preserved because of the other duplicate shares which can so easily alter or insert some other images, it remains to be the major challenge in the VC. The shared images are obtained by using the basic knowledge of visual (2,2) scheme. To overcome those kind of security issues, we propose the advance halftone secure secret sharing scheme with error diffusion techniques in the visual cryptography.

At first, the visible images is translated into halftones shares by employing halftone error
diffusion scheme. Next, the secret image is converted into halftone shares containing efficient visual information. Thus the shared images are disseminated to particular participants and then they are extremely enforced to reveal the secret images. When the shares are generated, it is uses the halftone processing, which first the encryption the images with high quality secret images and then decryption the secret images with same image quality by using diffusion methodology with high quality images. Form the experimental results, it is illustrated that the secret images have very minimum error difference, secret images data is highly impossible to be retrieved by fraudulent shares. Thus the proposed method a provides higher security with quality secret images for the encryption and decryption of the images, which contains fast execution, accuracy and minimum error value.

References


Index Terms

Computer Science, Networks
Keywords

Advance Halftone, Error Diffusion, Secret Sharing Scheme, High Quality and Visual Cryptography.