Abstract

The efficient algorithms require correct protocols for authentication and key management. It is intended to design the available cryptographic algorithm to achieve more security and this will be done by incorporating visual cryptography. The visual cryptography is an efficient method to share our data in secured manner. Conventional Visual Secret Sharing (VSS) schemes hide secret images in shares that are either printed on transparencies or are encoded and stored in a digital form. Natural visual secret sharing (NVSS) in which various carrier media is used to carry secret images Natural visual secret sharing (NVSS) in which various carrier media is used to carry secret images by a share to protect the secret and the participants during the transmission phase has been proposed. The proposed \((n, n)\) - NVSS scheme shares one digital secret image over \(n-1\) arbitrary selected natural images and one noise-like share. The above work have its utility to transfer secret information over web, so that, intruder couldn't detect it. Our aim is to use visual cryptography for transmission of the secret image and to protect the network in order to keep the data confidential. The image is preprocessed, and then feature extraction has been done. The PSNR values of digital and handmade image are 33.04 and 32.93 respectively. In
feature extraction process thresholding, binarization and chaos process has been done. The median values of digital and handmade image come out to be 205 and 162 respectively. All the pixels are being arranged with respect to median values. Some more techniques like encryption and pixel swapping has also been used. And at the end, to give our information more security, steganography is used. The PSNR and elapsed time of the images is also been analyzed.

References

Index Terms

Computer Science  Security

Keywords

NVSS, encryption, image and cryptography.