ijournals International Journal of Software & Hardware Research in Engineering
ISSN No: 2347-4890 Volume 2 Issue 5, May 2014

An Enhanced Embedded Extended Visual Cryptography Scheme

Navjot kaur; Dr.Rajiv Mahajan

M.Tech Student (CSE) & GIMET ; Professor in Dept. of CSE & GIMET

ABSTRACT

The Embedded Extended Visual Cryptography Scheme is a scheme which is capable of generating meaningful shares. This scheme ensures that the secret image can be visually observed by stacking or overlaying the subset of shares. This paper analyse the results using different visual quality shares' metrics like PSNR, MSE, MAXERROR by taking more than one secret and input image and these values are calculated between each segment and a here also a user defined matrix dimension is also defined to compute halftoning.

Keywords

Halftoning, Embedded Extended Visual Cryptography Scheme, Secret Sharing.

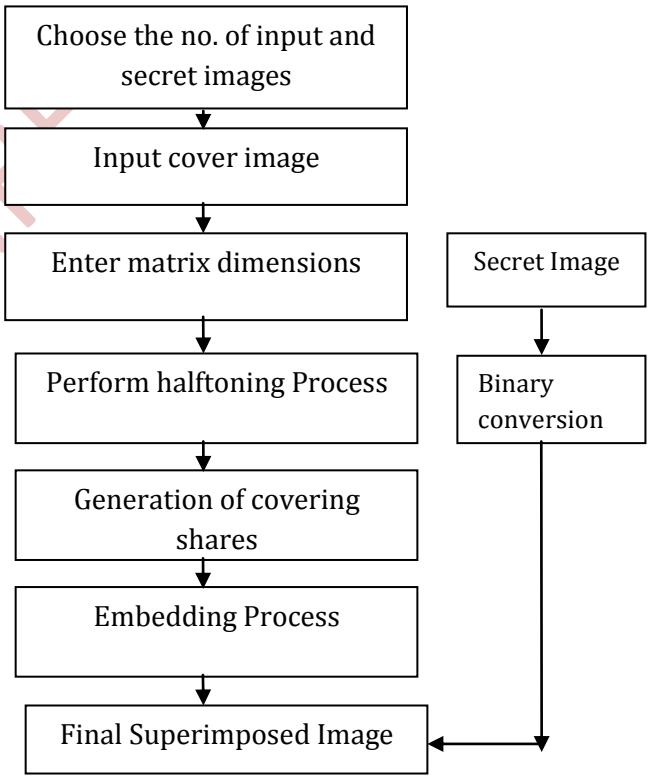
1. INTRODUCTION

In today's world the transmission of data via computer is an important issue. Because even the data which is transmitted secretly over an open channel can be easily attacked, interfered or forged by third party intruders. So for the security reasons the secret data is encrypted before transmission. So this paper describes the working of Embedded Extended Visual Cryptography Scheme by implementing more than one secret and input image and measuring the PSNR,MSE and MAXERROR value between each segment.

2. PREVIOUS WORK

The basic principle of visual cryptography Scheme was introduced by Noar and Shamir. The Embedded Extended Visual Cryptography Scheme (EEVCS) is a scheme that ensures that secret image can be visually observed by stacking the eligible subset of shares. The EEVCS consists of mainly two processes: Half toning process i.e. generation of covering shares and Embedding Process i.e embedding the corresponding Visual Cryptography Scheme into the covering shares.

3. PROPOSED WORK



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4.IMPLEMENTATION

Figure 1
To select the secret images and cover images

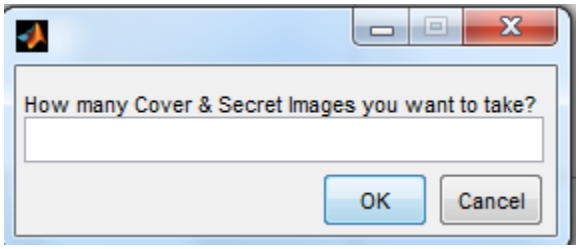


FIGURE 2
USER DEFINED MATRIX FOR CALCULATING HALFTONING

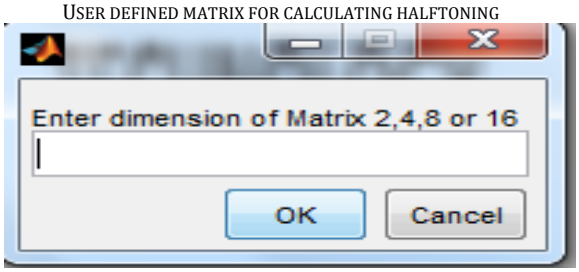


FIGURE 3
HALFTONING IMAGE

FIGURE 4
REVERSE HALFTONIONG IMAGE

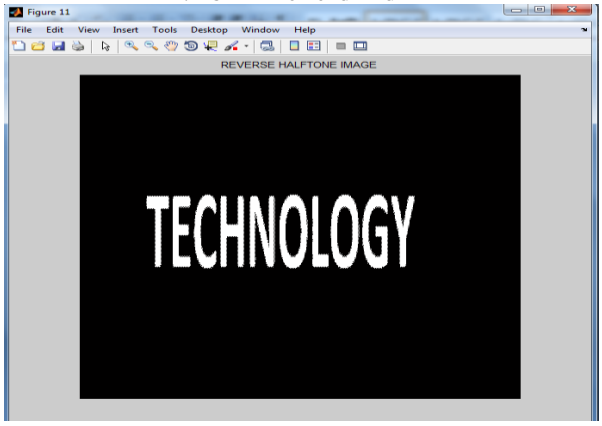


Figure 5

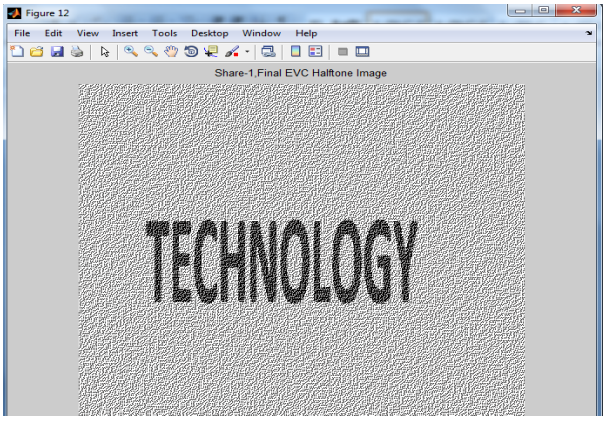


FIGURE 7
FINAL EVC SUPERIMPOSED IMAGE

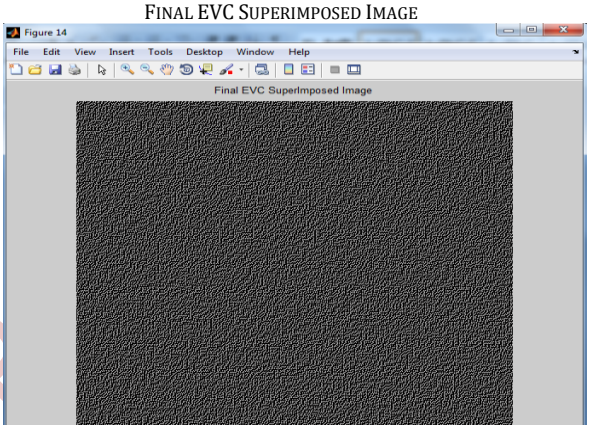


FIGURE 8
PSNR VALUES

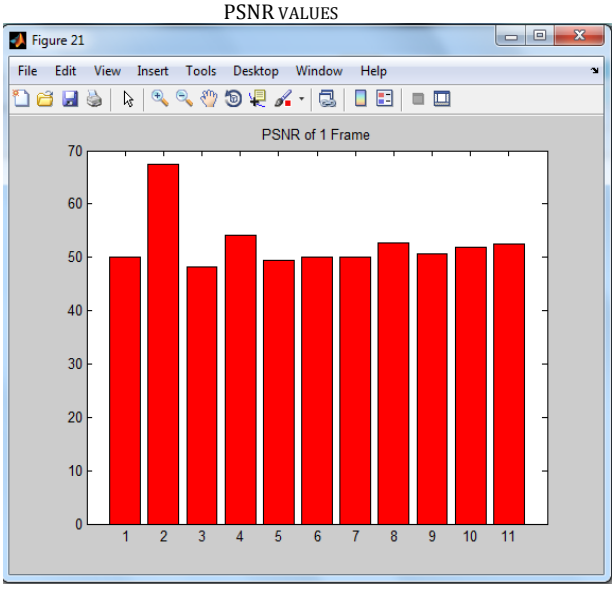


FIGURE 9
MEAN SQUARE ERROR VALUES

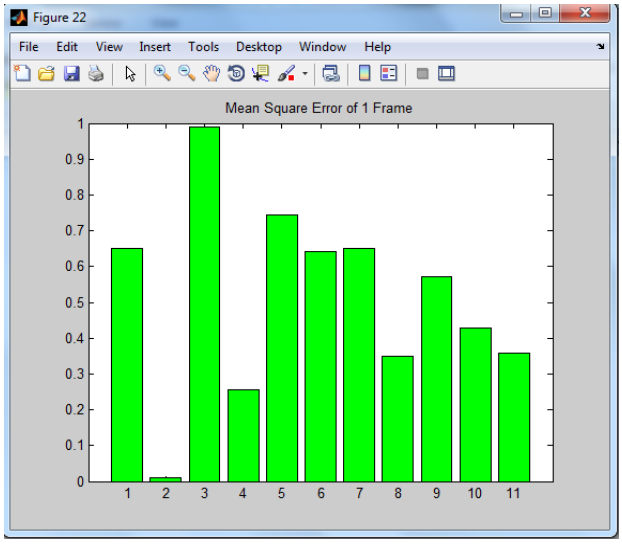
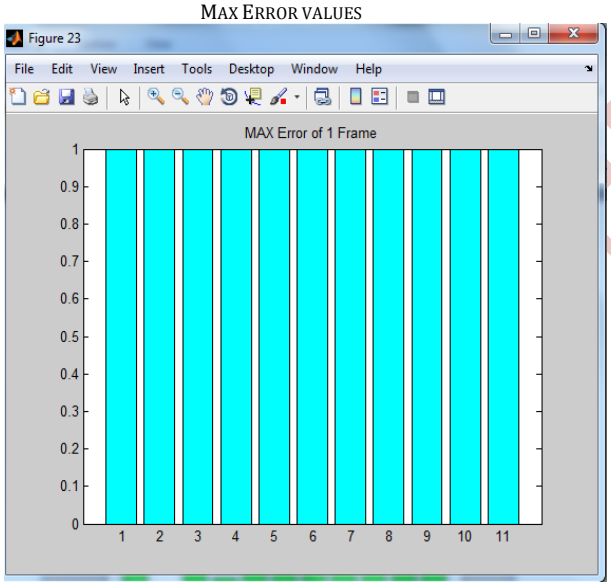


FIGURE 10
MAX ERROR VALUES



5.CONCLUSION

This paper defines and shows the different visual quality shares metrics and that are MAX ERROR VALUE,PSNR VALUE and MEAN SQURAE value by taking more than one secret and input image and these values are calculated between each segments.

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