Strong Histogram Form Support Scheme Designed for Expression Watermarking

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I.ABSTRACT:

In the recent years, the advance of restriction software and the popularity of the Internet, prohibited operations, such as repetition, alteration, fake and others in digital media, have become simple, quick and hard to prevent. Therefore, the protection of the intellectual goods rights of digital media has become an urgent matter. Digital watermarking has been demonstrated to be very useful in identifying the source, creator, owner, distributor, or authorized consumer of a document or an image. It can be used for tracking the images that were illegally distributed. Watermarking, when complemented with Embedding, can serve for many purposes, such as copyright protection, broadcast monitoring, and data authentication. Watermark detection is achieved through comparison with the original un-watermarked image. Propose a novel algorithm namely tree based parity check. A watermark-embedding scheme is proposed to insert watermarks into the chosen pixel groups. The usage of the histogram-shape-related index and safe band results in good robustness. The method is useful in images with backgrounds and foregrounds that are both bright or both dark. In particular, the method can lead to better views of bone structure in x-ray images, and to better detail in photographs that are over or under-exposed. A key advantage of the method is that it is a fairly straightforward technique and an invertibleoperator. Most existing data hiding algorithms try to minimize the visual artifacts introduced by the modifications. The proposed algorithm tries to reduce the probability of modifying the original host image. Theoretical analysis and experimental results are given in this paper. Both measures suggest that an improvement in visual quality is achieved in the watermarked image.Parity relationships between multiple pixels and/or regions of an image can be leveraged as described herein to reducethe amount of toggling required to embed a watermark in an image, thereby increasing watermark efficiency and reducing visual artifacts introduced in a watermarked image.

II.INTRODUCTION:

This chapter deals with the watermark with visual cryptography, its working, problem definition, system architecture and also its methodology. In problem definition, the limitations of watermarking and visual cryptography used earlier are explained. System architecture gives the diagrammatic representation of the complete system. The methodology gives the detailed view about each modules of the system. A Digital watermark is a digital signal or pattern inserted into a digital image. Since this signal or pattern is present in each unaltered copy of the original image, the digital watermark may also serve as digital signature for the copies. Digital watermarking is also to be contrasted with public key encryption, which also transforms original files into another form. Unlike encryption, digital watermarking leaves the original digital data basically intact and recognizable. Digital watermarks are designed to be persistence in viewing, printing or subsequent retransmission or discrimination. Thus, watermarking does not prevent copying but it deters illegal copying by providing a means for establishing the original ownership of a redistributed copy.Watermarking data for copyright protection is an accepted technique adopted for digital information. This subject has been quite exhaustively researched and several techniques have been established for protecting copyright for still images, audio and video files. The main aim of this project is to propose a possible new technique for watermarking on images.Digital Watermarking is a robust and efficient digital image water marking algorithm using the Fast Hadamard Transform is proposed for the copyright protection of digital images. This algorithm can embed or hide an entire image or pattern as a watermark such as a company's

logo or trademark into the original image. The performance of the proposed algorithm is evaluated using the stirmark, which consists of 90 different types of image attacks. Results show that the proposed algorithm is very robust and can survive most of the stirmark attacks.

III.LITERATURE SURVEY:

Yong Xiang, Iynkaran Natgunanat han, Dezhong peng, Member, IEEE, Wanlei Zhou,SeniorMember,IEEE,andShuiYu,[April2012]Member, IEEE[1],This work proposes a novel dual-channel time-spread echo method for audio watermarking, aiming to improve robustness and perceptual quality. At the embedding stage, the host audio signal is divided into two sub signals, which are considered to be signals obtained from two virtual audio channels. The watermarks are implanted into the two sub signals simultaneously. Then the sub signals embedded with watermarks are combined to form the watermarked signal. At the decoding stage, the watermarked signal is split up into two watermarked subsignals. The similarity of the costar corresponding to the watermarked subsignals is exploited to extract the embedded watermarks. Moreover, if a properly designed colored pseudonoise sequence is used, the large peaks of its auto-correlation function can be utilized to further enhance the performance of watermark extraction. Compared with the existing time-spread echo-based schemes, the proposed method is more robust to attacks and has higher imperceptibility. The effectiveness of our method is demonstrated by simulation results.

Min-jeong lee,Kyung-su kim,and heung-kyu lee[Nov 2010][2] Many illegal copies of digital video productions for cinema release can be found on the Internet before their official release. During the illegal copying of cinema footage, composite geometric distortions commonly occur due to the angle of the camcorder relative to the screen. We propose a novel video watermarking based on spread spectrum way that satisfies the requirements for protecting digital cinema. It enables the detector to not only extract the embedded message but also estimate the position where the camcorder recording is made. It is sure that the proposed position estimating model (PEM) can judge the seat in a theater with a mean absolute error (MAE) of (33.84, 9.53, 50.38) cm. Experimental results using various types of films show that the presented method provides the mathematical model for detecting and investigating the position of the pirate

Young Xing ,Dezhong peng, Iynkaran Natagunanathan and Wanlei Znou[Feb 2011][3]This paper proposes an effective pseudonoise (PN) sequence and the corresponding decoding function for time-spread echo-based audio watermarking. Different from the traditional PN sequence used in time-spread echo hiding, the reposed PN sequence has two features. Firstly, the echo kernel resulting from the new PN sequence has frequency characteristics with smaller magnitudes in perceptually significant region. This leads to higher perceptual quality. Secondly, the correlation function of the new PN sequence has three times more large peaks than that of the existing PN sequence. Based on this feature, we propose a new decoding function to improve the robustness of time-spread echobased audio watermarking. The effectiveness of the proposed PN sequence and decoding function is illustrated by theoretical analysis, simulation examples, and listening test.

Neil. Johnson,Zoran Duric and Sushil Jajodia[4]Many techniques for watermarking of digital images have appeared in numerous publications. Most of these techniques are sensitive to cropping and/or affine distortions (e.g., rotation and scaling). In this paper we describe a method for the recovery of original size and appearance of images based on the concept of *identification marks* (“fingerprints”); the method does not require the use of the “original” image, but only a small number of *salient* image points. We show that, using our method, it is possible to recover original appearances of distorted images. The restored image can be used to recover embedded watermarks.

Dr.D.Y.Patil,PimPri[May 2014][5]Multi-pixel encoding is an emerging method in visual cryptography for that it can encode more than one pixel for each encoding run. Nevertheless, in fact its encoding efficiency is still low because of that the encoding length is invariable and very small for each

run. This paper presents a novel multi-pixel encoding called pixel-block aware encoding. It scans the secret image by zigzag and perceives a pixel block with as many pixels as possible to encode for each run. A pixel-block consists of consecutive pixels of same type during the scanning. The proposed scheme has advantage in encoding efficiency over single pixel encoding and other known multi-pixel encoding methods. Furthermore, this scheme can work well for both threshold access structure and general access structure and well for both gray-scale and chromatic images without pixel expansion. The experimental results also show that it can achieve good quality for overlapped images.

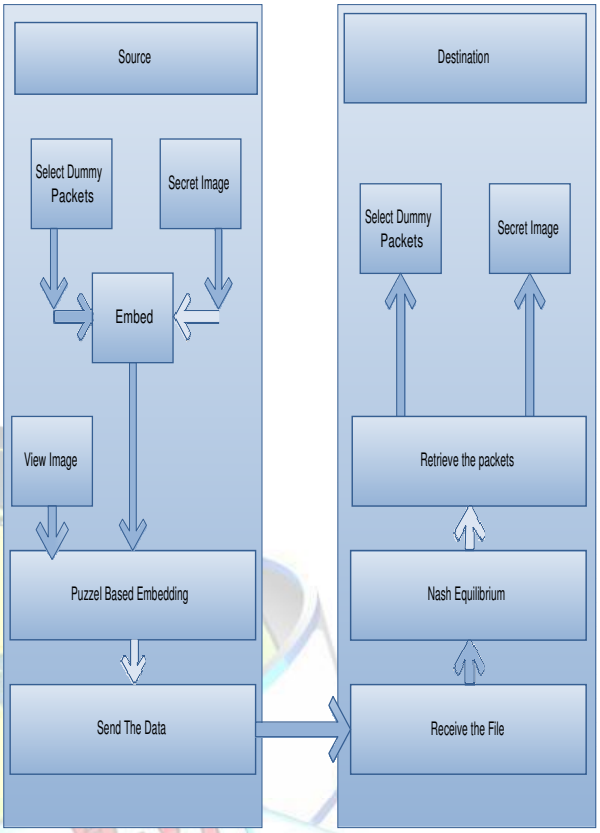
IV.EXISTING SYSTEM:-

Data security has been a challenging task in visual cryptography system.Most existing data hiding algorithms try to minimize the visual artifacts introduced by the modifications. The existing cryptography schemes that are used for data hiding have a security hole in the encrypted file.Existing watermarking process is not effective to secure the data.If the share File is hacked, the hacker can tamper the data that is hidden and hence can disturb the entire technique. Hackers can have possible to misuse our data. In the existing, there is no optimized secured way to access the secret hidden data and the data that are stored in databases.

V. PROPOSED SYSTEM:-

The proposed algorithm tries to reduce the probability of modifying the original host image.We doing the Invisible Digital Water Marking Technology.Propose a novel algorithm namely tree based parity check (TBPC). It's give more Secure to our secure dataproposed scheme is capable of withstanding variety of attacks.Proposed embedding and extraction algorithms are introduced.

VII.SYSTEM ARCHITECTURE



VI.MODULES:-

A. SENDER
B. LOAD SECURE DATA
C. TBPC BASED EMBEDDING
D. TRANSFER THE INVISIBLE WATERMARKED IMAGE
E. HALFTONE PROCESS

A. SENDER:

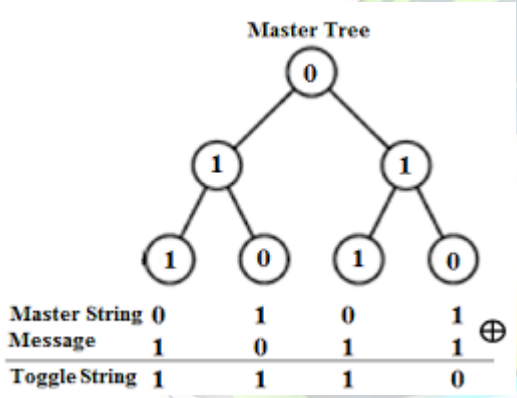
Sender can pass image from one person to another person, you apply transformations to images, using a service instead of performing image processing on the application. The sender is faced with involves the encoding process. In order to convey meaning, the sender must begin encoding, which means translating information into a message in the form of Image. Because of ownership problem, now we can identified our message content.

B.LOAD SECURE DATA:

All measures taken to prevent unauthorized use of electronic data unauthorized use includes disclosure, alteration, substitution, or destruction of the data concerned.You can load security information into user domains, application domains, and domain relationships from sequential file input.System must also be available must allow guaranteed, efficient and continuous use of information. It provides high level of security and flexibility.

C.TBPC BASED EMBEDDING:

We propose a novel algorithm namely tree based parity check (TBPC).



Tree Formation:

In TBPC, an N-ary complete tree namely Master Tree is filled up by the value of these embeddable locations.Every node of an N-ary complete tree except leaf nodes has N child nodes. In the proposed algorithm, one leaf node is needed to hold one information bit.To embed an L bits logo, L leaves are required in the Master Tree.

Parity Calculation:

To find out the information held by a leaf node, we travel from the leaf node to the root of the Master Tree.If the occurrence of '1' is an odd number, the information bit of the leaf node is said to be '1'.Otherwise, the information bit is said to be '0'.

D. TRANSFER THE INVISIBLE WATERMARKED IMAGE:

- Watermark should appear random, noise-like sequence
- Appear Undetectable
- Good Correlation Properties

High correlation with signals similar to watermark

Low correlation with other watermarks or random noise

- Common sequences

A) Normal distribution

B) m-sequences

Watermark Embedding:-

- Watermark placed into in sequence content of unique Image to create

Watermarked Image

- Image Content

Spatial Domain (Least Significant Bit)

FFT - Magnitude and Phase

Wavelet Transforms

DCT Coefficients

D. HALFTONE PROCESS:

A halftone is the reproduction of an image that is created by breaking up a continuous tone image into a pattern of dots varying in size, shape, and spacing. Lighter parts of the image are made up of larger dots that overlap each other. Printed with one color of ink, the dots merge together or space apart to give the illusion of continuous tone. Where continuous tone imagery contains an infinite range of colors or grays, the halftone process reduces visual reproductions to an image that is printed with only one color of ink, in dots of differing size (amplitude modulation) or spacing (frequency modulation).This reproduction relies on a basic optical illusion: the tiny halftone dots are blended into smooth tones by the human eye. At a microscopic level, developed black-

and-white photographic film also consists of only two colors, and not an infinite range of continuous

VI. METHODOLOGY

Fast Walsh–Hadamard Transform

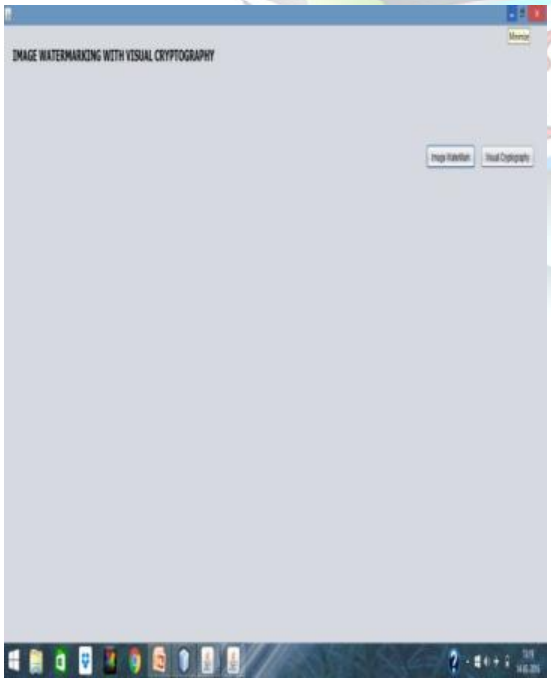
The Hadamard ordered fast Walsh–Hadamard transform is an efficient algorithm to compute theWalsh–Hadamard transform .Value provides complete information for one combination of input variables.Provides no information about other combinations.It provides some information about the behavior of the function at multiple points.Does not contain complete information about any single point. Some examples of the Hadamard Matrices follow.

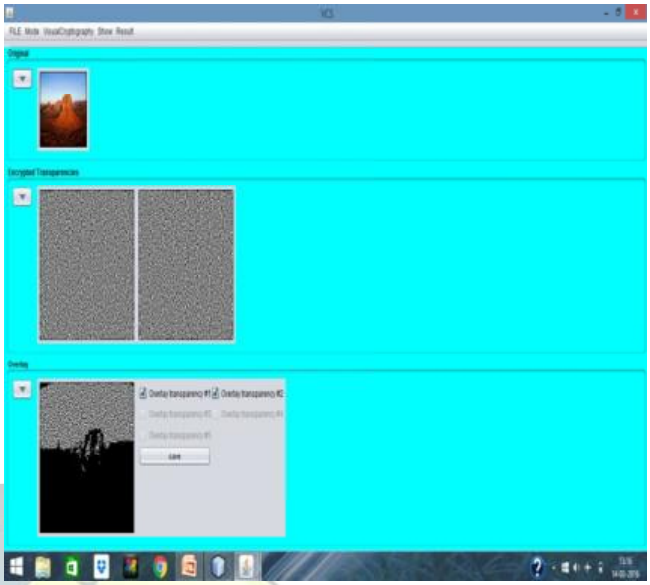
$$H_0 = +1$$

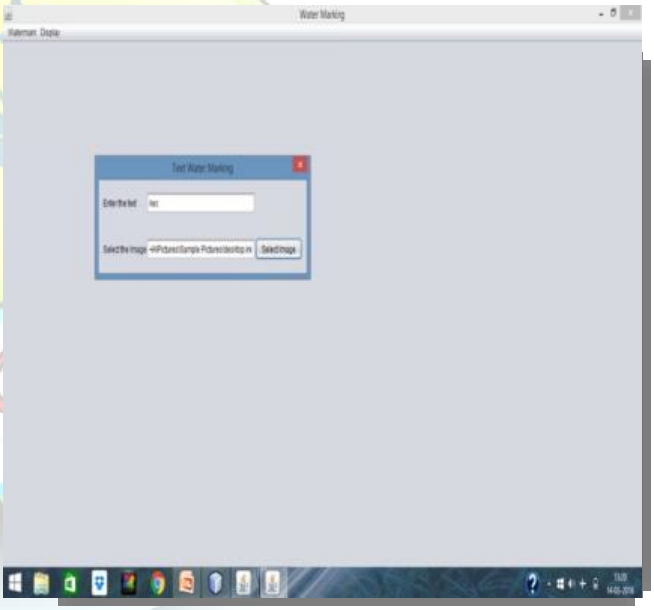
$$H_1 = \frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$$

This H_1 is precisely the size-2 DFT. It can also beregarded as the Hadamard transform on the two-element *additive* group of Z/(2).

IX:IMPLEMENTATION:-







X. CONCLUTION:-

In this Project, we propose a new image-watermarking method that is robust to common attacks. To deal with signal processing attacks, a Gaussian low-pass filter is employed to preprocess the host image such that watermarks will only be embedded into the low-frequency component of the host image. To tackle geometric attacks (including cropping attacks and RBAs), a histogram-shape-related index is utilized to form and select the most suitable pixel groups for watermark embedding. In

addition, a safe band is introduced between the selected pixel groups and the non selected pixel groups to improve robustness to geometric attacks. Furthermore, a novel HFCM scheme is proposed to compensate the side effect of Gaussian filtering, which further enhances robustness. Due to the usage of secret key, the proposed watermarking method is also secure. The superior performance of the proposed method is demonstrated by simulation results.

REFERENCE:

[1] A dual channel time-spread echo method for audio watermarking. Yong Xiang, Iynkaran Natgunanathan, DezhongPeng,Member,IEEE,WanleiZhou,SeniorMember,IEEE, and Shui Yu, Member, IEEE

[2]Digital cinema watermarking for estimating the position of pirate. Min-Jeong Lee, Kyung-Su Kim, andHeung-KyuLee

[3]Effective pseudo noise sequence and decoding function for imperceptibility and robustness enhancement.Yong Xiang, Dezhong Peng, *Member, IEEE*, Iynkaran Natgunanathan, and Wanlei Zhou, *Senior Member, IEEE*.

[4]Visual secret sharing scheme for multiple secrets without pixel expansion. *Ms. Smita Patil 1, Prof. Ms. JyotiRao* Dr. D.Y.Patil Institute of Engineering and Technology,Pimpri,Pune-181.

[5]Recovery of watermark from distorted images.