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Secure Distribution of Restricted Documents outside the Organization

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***Abstract*—In Generally any service that time we required strong security to that service. Which is use full to service provider as well as client? This literature is states that to provide copyright security to the document on the web. In Information Technology the security having main and important role because the daily information as well as technology in this field. Any type of information in the form of picture, Documentation it can easy to copied and displayed to overcome this type of problem copyright protection is needed. In this paper we mainly focus on digital watermark, when any type of content (audio, video, images or text) extracted finally with digital watermark. such watermark contain the digital message a as per the author. Watermarking to be an efficient technique to protect the documentations and intellectual property rights (IPR).This technology embeds into the data an unperceived digital code, namely the watermark, This information about the copyright status of the work to be protected from the external attacks .In this paper we propose a digital watermarking for secure documentation on web applications.**

Keywords*—*Security, watermarking, Alpha com-posit function, HIP (Human intellectual property).

I. INTRODUCTION

In day to day life the documentation is very important. Some documents are much sensitive so it requires securing them from the outside organization. So the documents are protected from some ways, so the security also one of the challenge for us. In day to day life the documentation is very important. Some documents are much sensitive so it requires securing them from the outside organization.

In this project we have to use digital watermarking to secure the restricted documents like photo/images form out- side the organization. And also to protect human intellectual property. Hence it required alpha composite function for human visibility.

The documents are protected by using digital watermark with text, so the security also one of the challenge for us.

A. What is Watermarking?

A watermark is a recognizable image or pattern in paper that appears as various shades of lightness/darkness when viewed by transmitted light (or when viewed by reflected light, atop a dark background), caused by thickness or density variations in the paper (Wikipedia).

II. LITERATURE SURVEY

Ramandeepkaur (2014) et al present that this paper proposed a novel technique for digital image watermarking to protect data. In this paper DIW method is proposed to apply function of a median filter based on the DWT and SVD. Original image is passed by function of median filter to create image smooth, and then transform of first level wavelets is using. Embedding is complete with a high frequency band through altering watermark singular value and original image. Various methods are proposed to secure information, but present method present robustness against numerous attacks [1].

In DWT contain some drawback like Oscillations, Shift variance, Aliasing and Lack of directionality and in a serious limitation of the SVD-based watermark insertion algorithm due to the embedding watermark insertion method.

III. GAP ANALYSIS IN EXISTING SYSTEM

A. *Existing System*

Watermark is a message which is embedded into digital content (audio, video, images or text) that can be detected or extracted later. Such messages mostly carry copyright information of the content. Watermarking has been revealed to be an efficient technique to cope with the problem of intellectual property rights (IPR) protection of multimedia data. This technology embeds into the data an unperceivable digital code, namely the watermark, carrying information about the copyright status of the work to be protected.

To our best Knowledge, up to now there is no research that addresses the issue of web application water marking in this paper we propose a new watermarking scheme for web applications.

B. *Proposed System*

We mainly concentrate on transmission of images safely through watermarking. Where the authorized user only can obtain the images without distortion. On the request of user we take the image and watermark image. We send it to the user where watermark can be checked and image can be viewed.

IV. STEPS FOR DIGITAL TEXT WATERMARK

The following steps to convert the primary image to the watermarked image.

1. Read the source image file into a BufferedImage object using the ImageIO.read() method.
2. Obtain graphics context of the BufferedImage object.
3. Use the Graphics2D object to paint the watermark which can be a String, an image or whatever can be drawn with the Graphics2Ds API. But basically, the watermark is usually translucent so an alpha channel is needed.
4. The output image using the ImageIO.write() method.

V. THE ALPHA COMPOSITE CLASS IMPLEMENTATION

The Alpha Composite class implements basic alpha compositing rules for combining source and destination gray colors to achieve blending and transparency effects this class extends the standard equations defined by Porter and Duff to include one additional factor. An instance of the AlphaCom- posite class can contain an alpha value that is used to modify the opacity or coverage of every source pixel before it is used in the blending equations.

The following factors are used in the description of the blending equation in the Porter and Duff paper:

Factor	Definition
As	the alpha component of the source pixel Cs a gray color component of the source pixel in premultiplied form
Ad	the alpha component of the destination pixel
Cd	a gray color component of the destination pixel in premultiplied form
Fs	the fraction of the source pixel that contributes to the output
Fd	the fraction of the destination pixel that contributes to the output
Ar	the alpha component of the result
Cr	a gray color component of the result in premultiplied form

Using these factors, Porter and Duff define 12 ways of choosing the blending factors Fs and Fd to produce each of 12 desirable visual effects.

The equations for determining Fs and Fd are given in the descriptions of the 12 static fields that specify visual effects.

Once a set of equations for determining the blending factors is known they can then be applied to each pixel to produce a result using the following set of equations:

Fs = f(Ad)

Fd = f(As) Ar = As*Fs + Ad*Fd Cr = Cs*Fs + Cd*Fd

The following factors will be used to discuss our extensions to the blending equation in the Porter and Duff paper:

Factor	Definition
Csr	one of the raw gray color components of the source pixel
Cdr	one of the raw gray color components of the destination pixel
Aac	the ”extra” alpha component from the AlphaComposite instance
Asr	the raw alpha component of the source pixel
Adr	the raw alpha component of the destination pixel
Adf	the final alpha component stored in the destination
Cdf	the final raw gray color component stored in the destination

Preparing Inputs ,The AlphaComposite class defines an additional al- pha value that is applied to the source alpha. This value is applied as if an implicit rule were first applied to the source pixel against a pixel with the indicated alpha by multiplying both the raw source alpha and the raw source colors by the alpha in the AlphaComposite. This leads to the following equation for producing the alpha used in the Porter and Duff blending equation:

As = Asr * Aac

All of the raw source gray color components need to be multiplied by the alpha in the AlphaComposite instance. Additionally, if the source was not in premultiplied form then the gray color components also need to be multiplied by the source alpha. Thus, the equation for producing the source gray color components for the Porter and Duff equation depends on whether the source pixels are premultiplied or not:

Cs = Csr * Asr * Aac (if source is not premultiplied)

Cs = Csr * Aac (if source is premultiplied)

No adjustment needs to be made to the destination alpha: Ad = Adr

The destination gray color components need to be adjusted only if they are not in premultiplied form:

Cd = Cdr * Ad (if destination is not premultiplied)

Cd = Cdr (if destination is premultiplied)

Applying the Blending Equation

The adjusted As, Ad, Cs, and Cd are used in the standard Porter and Duff equations to calculate the blending factors Fs and Fd and then the resulting pre$_m$*ultipliedcomponentsArandCr*.

Preparing Results

The results only need to be adjusted if they are to be stored back into a destination buffer that holds data that is not premultiplied, using the following equations:

Adf = Ar

Cdf = Cr (if dest is premultiplied)

Cdf = Cr / Ar (if dest is not premultiplied)

Note that since the division is undefined if the resulting alpha is zero, the division in that case is omitted to avoid the"divide by zero" and the gray color components are left as all zeros.

VI. ALGORITHM :(DIGITAL WATERMARK ALGORITHM)

Based on the human perception, watermark algorithms are divided into two categories.

A. VISIBLE WATERMARKING (ALPHA> 0.1):

Visible watermarking is easily percept by the human eye, means the visible watermark can be seen without the extraction process. For example, it can be a name or a logo of the company.

B. INVISIBLE WATERMARKING (ALPHA< 0.1)

In this watermarking, the mark cannot be seen by human eye. It is embedded in the data without affecting the content and can only be extracted by the owner.

VII. EXP REQUIREMENT

A. Data flow of System

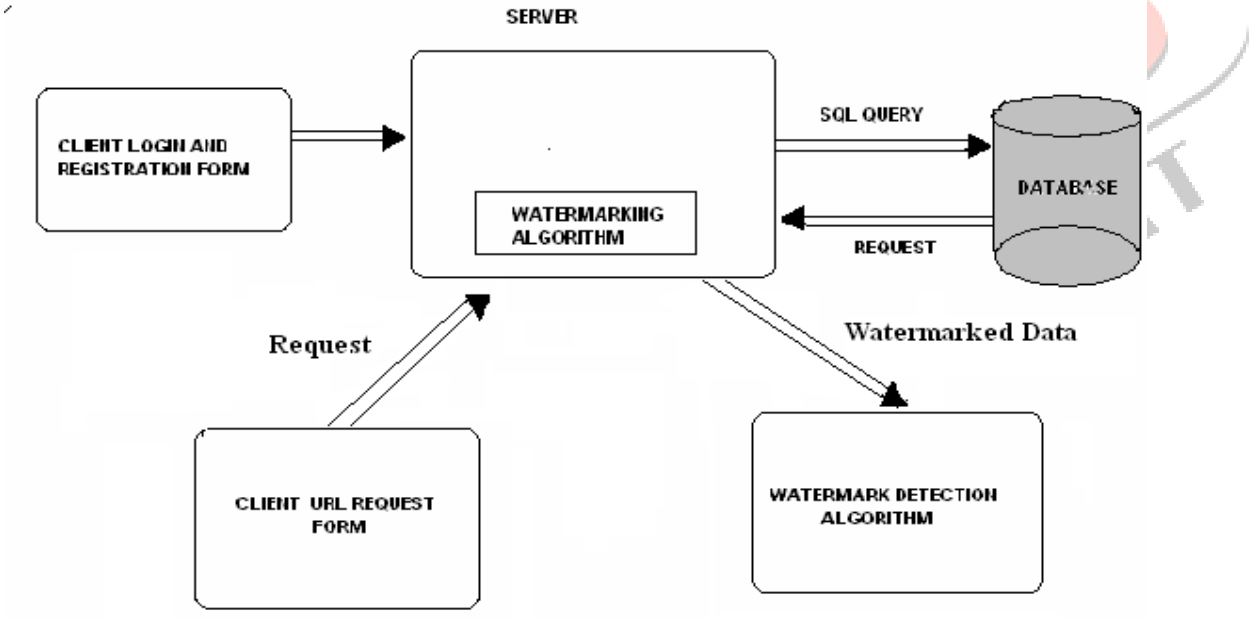
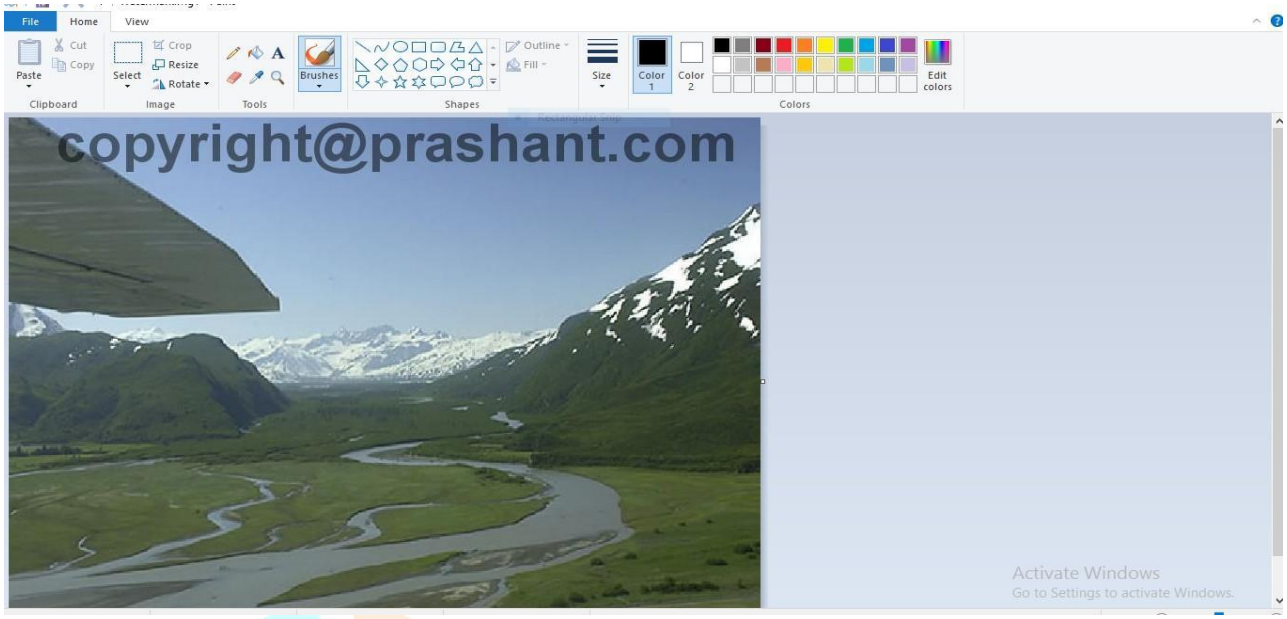


Fig. 1. Data flow of System

VIII. RESULTS



IX. FUTURE'S SCOPE

In this project we have to just protect the multimedia data like images, pdf, and text documents from outside the organization using digital watermarking using text watermarking.

In Future planning we try to improve the security by using color text watermarking also the image watermarking. So it will improve the quality of watermark by using RGB composition.

X. CONCLUSION

In this project we provide the security of restricted document from outside the organization using digital watermarking. Also to secure the intellectual property of 'Human being'.

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