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Survey on Image Mosaic Scheme

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ABSTRACT: To provide security to the transmission of image a new secure image transmission technique is proposed which transforms a given large-volume secret image automatically into a secret-fragment-visible mosaic image of the exact same size. Mosaic images are images made by cementing together small tiles in image processing. The tiles "tessellate" a image which is taken as sourceimage i.e target image with the purpose of reproducing the original visual information rendered into a new mosaic-like style. A general framework for retinal and document images is stated in this paper. This survey paper also discusses a review on different application of image mosaicing mainly in the area of retinal image mosaicing and document image mosaicing.The mosaic image which looks similar to a based on random choice selected target image and may be use as a camouflage of the secret image, is gained by dividing the secret image into into small parts broken and transforming their color charactracterstics to be those of the corresponding blocks of the target image.

KEYWORDS: Secret image; Target image; image mosaicing; Retinal; secure image transmission,fundus

I. INTRODUCTION

Mosaic is created with the help of very small pieces of any materials such as stone,glass,tiles.In networking to provide security while the transmission of the data is very essential so various security services and techniques are designed for data and telecommunications. Now-a-days all the transformation of important information are taking place through internet.Internet is very vulnerable to interruption by unauthorized person over the world. Today images contain private & confidential data as well as information which have to be protected from intruders during transmission. There are various methods for secret data transmission such as encryption of image or hiding the image behind another image. Data hiding is alternative for image encryption that hide secret image into cover image. So that no one can realize the existence of secret data. Mosaic image are made up of small pieces of images by combining together by comparing same tol or different parameters. By combining small images we get a huge image which is also called as mosaic image. We can see small pieces when mosaic images are viewed in short distance, we can see one large image form made by the pieces when they are view in long distance.

II. RELATED WORK

Hae–yeoun Lee This paper presents an automatic algorithm that makes the photo-mosaic image using images.. The algorithm is composed of 4 steps: partition and feature extraction, matching of block, redundancy removal and adjustment color. The input image is partitioned in the small block to extract feature . Each block is matched to search gor same photos in database by comparing similarity with Euclidean difference between blocks. The resolution of the block is adjusted to improve the similarity of image by replacing the value of light and darkness with that of relevant block. Further, the intensity of image is improve by minimizing the duplication of tiles in the adjacent blocks. Experimental results support that the proposed algorithm is excellent in quantitative analysis and qualitative analysis.

Ms. Priyanka Nehete1, Prof. Pankaj Salunkhe, Prof. Nilesh Pawar have stated by color transforming scheme with the characteristics similar to the target image mosaic images can be hide behind the secret images by. For various purposes images are transmitted over internet such as confidential enterprise archives, document storage systems, medical imaging systems, and military applications. These images may contain data which is secret or confidential information since it should be protected from hackers during transmissions to maintain confidentiality. An approach for secure image transmission is needed, which is to transform a secret image into a meaningful Secret Fragment Mosaic Image with size almost same and looking similar to the preselected target image. The mosaic image is the outcome of arranging of the block into small parts broken of a secret image in a way so as to disguise the other image called the target image. The mosaic image looks similar to a randomly selected target image. It is used for hiding of the secret

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image by color transforming their characteristics similar to the blocks of the target image. The appropriate information is embedded into the mosaicimage for the recovery of the transmitted secret image.

Jyoti R H, Prof Jyoti Neginal In this paper a new secure image transmission technique is proposed, which changes naturally a given huge volume secret image into a secret-fragment-visible image called mosaic image of the same size . The mosaic image, which appears to be like an discretionarily chose target image and may be utilized as a disguise of the secret image, is yielded by separating the secret image into sections and changing their shading attributes to be those of the comparing pieces of the target image. Skillful techniques are intended to lead the shading change process so that secret image may be recuperated almost losslessly. A scheme of handling overflows/underflows in the changed over pixels shading values by recording the shading contrast in the untransformed shading space is additionally proposed. The data needed for recuperating the secret image is embedded into the created mosaic image by a lossless information concealing plan using a key.

Senthilarut selvi balu, Mr.Shai Sanmuga Raja This paper introduces a new kind of mosaic image called secretfragment-visible mosaic image, which is automatically create a target image in a mosaic form by composing small into small parts broken of a given image. Secret image is embedded with the target image secretly in the resulting mosaic image. This information hiding is useful for secure communication. To create a mosaic image we transform a 3-D color secret image into 1-D color space, which is useful for finding similarity target image for secret image. A fast greedy search algorithm is used to find a similar tile image in the hidden image to fit into each block in the target image. Lossless least significant bit replacement scheme is used to create a secret key. Without secret key w are unable to recover the secret image. The proposed method designed for dealing a color image is extended to create grayscale mosaic image, which is useful for hiding text type document image**.**

Jaya.S, Varaola Tchoumy. M, Meghali. C, Jitendra. K, Nagesh. H, In this paper a new secure image transmission technique is proposed, which transforms automatically a given large-volume secret image into a so-called secret-fragment-visible mosaic image of the same size. The mosaic image, which looks similar to an based on random choice selected target image and may be used as a camouflage of the secret image, is yielded by dividing the secret image into into small parts broken and transforming their color characteristics to be those of the corresponding blocks of the target image. Skillful techniques are designed to conduct the color transformation process so that the secret image may be recovered completely A scheme of handling the overflows or underflows in the converted pixels color values by recording the color differences in the untransformed color space is also proposed. The information required for recovering the secret image is embedded into the created mosaic image by a lossless data hiding scheme using a key. The efficiency of the image recovered after transmission is also calculated in order to check the performance of the proposed technique. The proposed method is applied to database as well as real time image. A concept of tethering is used in order to extend the limitations of the proposed method. .

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Method	Description	Advantages	Limitation
Robust Hierarchical Algorithm	A fully-automatic registration of a pair of images of the curved human retina photographed by a fundus microscope describe in robust hierarchical algorithm. The estimation is taken in model by matching vascular landmarks extracted by an algorithm that recursively traces the blood vessel structure. The parameter estimation technique, which could be generalized to other applications, is a hierarchy of models and methods:	This hierarchy makes the algorithm robust to unmatchable image features and mismatches between features caused by large interframe motions.	Accurate registration is essential for mosaic synthesis, change detection, and design of computer-aided instrumentation.
Non-iterative method	This method for jointly estimating the transformations of all images onto the mosaic. This employs constraints derived from pairwise matching between the non-mosaic image frames. It allows the transformations to be estimated for images that do not overlap the mosaic anchor frame, and results in mutually consistent transformations for all images.	This means the mosaics can cover a much broader area of the retinal surface, even though the transformation model is not closed under composition.	This capability is particularly valuable for mosaicing the retinal periphery in the context of diseases such as AIDS/CMV
A novel block based scheme	This method is employed ensure that corners can be reliably detected over a wide range of images.A 2-pass feature matching is establish point correspondence from which the homography releating the input images can be computed .	2D discrete cosine transform is computed for image blocks defined around the detected corners and a mall subset of the coefficients is used as a feature vector.	It is not possible to capture a large document at a reasonable resolution in a single exposure so multiple.overlapping images of the document are stitched together seamlesssy to form a high resolution composite.
Pixels of window in the split images.	A new and simple approach to mosaic the two split images of a large document based on matching sum of values of pixels of window in the split images. The scheme is totally have referres to the concept of sliding window which gives high level features instead pixel level features. The method compares the sum of values of pixels of window in split images to identify Overlapping Region (OLR in the split images	The OVERLAPPING REGION, a region in common, helps in mosaicing of two split images of large document. However, a small OVERLAPPING REGION is assumed to be available at the end of split images of a large document.	The overlapping region in the split images depends on the size of the window.

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III. CONCLUSION AND FUTURE WORK

In this paper we have discussed various mosaic image processing techniques. We also have discussed why it is important and we have observed that image mosaicing is used in various field in almost every field it used for hiding images behind the one huge cover image provides security and also solves many problems.

IV. ACKNOLEDMENT

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BIOGRAPHY

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