A Digital Locker for Scanned Documents by using Steganography and Visual Cryptography.

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***Abstract*— The primary objective is to cut back dependency on physical documents as most of our necessary documents area unit prevailing in physical kind leading to huge administrative overhead. to beat this challenge of submitting multiple physical copies of the documents Digital Locker system is projected by ,in which all documents of a personal are going to be keep in electronic format. Digital Locker is one in all the key initiatives beneath the Digital India Program. Digital Locker is geared toward eliminating the utilization of physical documents and permits sharing of verified electronic documents across government agencies. During this projected work we have a tendency to describe Digital Locker to a scanned pictures of a persons' documents by employing a methodology of desegregation along visual cryptography and steganography through image process. specially, we have a given the methodology to perform steganography and Visual Cryptography at identical time exploitation pictures as cowl objects for steganography and as keys for cryptography.**

***Keywords*—About Client Portal, Digital Locker, Visual Cryptography, Steganography.**

I. INTRODUCTION

MOST of our vital documents square measure rife in physical type, resulting in vast body overhead. Cryptography and steganography square measure wide used techniques that manipulate info so as to cipher or hide their existence. These techniques have several applications in applied science and alternative connected fields. they're accustomed shield e-mail messages, mastercard info, company information, etc. Steganography is that the art and science of human activity during a means that hides the existence of the communication [1] [2]. Challenge to North American country in submitting multiple physical copies of the documents. Challenge to the institutions/govt/agencies to verify the believability of the documents.

For this Digital Locker is {one of|one among|one during all|one amongst|one in every of} the key initiatives underneath the Digital Bharat Program Pine Tree State - External web site that opens in a new window. A beta version of a similar has been already free by the Department of natural philosophy and knowledge Technology (DeitY), Govt. of India. Digital Locker is geared toward minimizing the usage of physical documents and modify sharing of e-documents across agencies.

With the assistance of the Digital Locker Portal, the sharing of the e-documents are done through registered repositories thereby making certain the believability of the documents on-line. Residents may also transfer their own electronic documents and digitally sign them victimization the e-sign facility. These digitally signed documents are often shared with Government organizations or alternative entities.

Sharing documents with numerous government and personal agencies for various functions could be a tedious task. From revenue enhancement Returns to school Degrees to PAN Cards, numerous agencies want these documents for process loans, providing services etc. the govt plans to try and do away with physical sharing of documents with these agencies and thus has launched the Digital Locker, geared toward making a repository of digital documents for every resident of the country.

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The main key conception behind steganography is that message to be transmitted isn't detectable to casual eye. during a Digital Locker, the scanned image of a document square measure Steganographed. These techniques square measure accustomed secure information throughout the communication and storage. As a result, the ultimate

information are keep in encrypted format [4], [5].
The planned work creates a Document Locker that is understood as a Digital Locker, can be done by victimization combination of 2 applications: Steganography and Visual Cryptography for safe on-line looking and shopper satisfaction.

II. Existing System

In today's advanced world everybody has access to state of the art security systems. one in all the newest trends in security systems is Digital safes locker. This digital safe lockers are Electronic safe protection systems that operates as per the signals received through the input key boards tamper proof and supply several security choices for the user. Digital Electronic computer keyboard entry lock offers many blessings additionally because it isn't solely additional reliable and powerful however additionally simple to use. It works on computer keyboard variety entry and is predicated on the mix of locks. The Digital lockers mechanically go in protection mode if left idle for quite a pre-programmed fundamental quantity. The Digital Locker facility has already been up running since past few weeks with quite five large integer users already registered and therefore the prime three states ar Maharashtra, Uttar Pradesh and state. However, this facility remains within the beta mode and is wanting forward to receive feedback from its users.

While the Digital Locker makes facility to safeguard the necessary documents, several beta users of the power have given feedback because the website ought to have a minimum of 128 bit secret writing and additionally the login ought to have a 2 means authentication method to create positive the proper person has been logged in to the account[5].

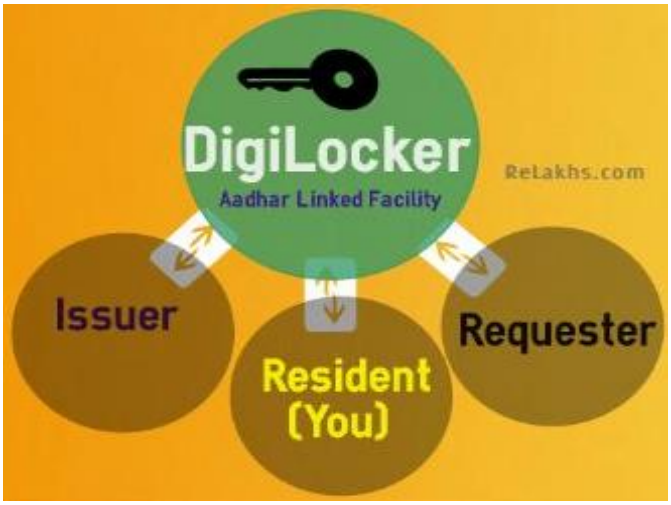

Fig. 1. Digital Locker Portal.

However, the power users the Aadhaar variety ANd an OTP being sent to the mobile variety registered with Aadhaar variety throughout the registration method. once with success registering, the Digital Locker permits you to transfer numerous documents as well as your SSC Certificate, PAN Card, elector ID Card, etc. but these e-documents hold on within the Digital Lockers ar required to be e-signed so as to be valid and issued to the requestor. So, with Digital Locker, you'll really share the documents with numerous government and personal agencies for various functions that different wise would be a tedious task.

Market:
With the rise of crimes within the society, Safety and security became a primary concern for all. it's judicious to possess the money, ornaments and different valuables underneath safe custody as a result of burglars of late ar terribly technical school savvy and that they have plenty of contemporary equipments with them. Burglars ar currently equipped with instruments and that they will destroy most of the traditional safety locker systems. the improved safety features of the digital safe lockers have created it terribly troublesome for the thieves to control a digital safe locker. the necessity for safe locker systems in homes, Offices, outlets business institutions, banks, monetary establishments, gasoline stations, Brokers, Hotels and Hospitals is more and more felt in of late owing to the rise within the security issues.
There are only a few micro/small enterprises engaged in producing Digital safe lockers within the country. there's enough scope for putting in place many additional units to manufacture Digital Safe Lockers. If the entrepreneurs will manufacture this product with all the advanced safety features and may offer wonderful once sales services, there's enough scope for this product not solely within the domestic market however additionally on the export front also[6]

III. Proposed Work

A. *Digital Locker*

Digital Locker, conjointly known as as DigiLocker may be a dedicated personal space for storing connected to every resident's Aadhaar range meant to be accustomed store e-documents. Going in-depth in to the current, DigiLocker facility can assist you to digitally store all the vital documents like PAN card, passport, mark sheets and degree certificates. it's conjointly being claimed by the govt that it uses legitimacy services provided by Aadhaar and is aimed toward eliminating the utilization of physical documents and allows sharing of verified electronic documents across government agencies[4]. each user is alleged to be provided a frenzied personal space for storing of ten MB (too less to store all the documents though) within the cloud that is connected to the citizen's Aadhaar range.

Fig. 2. Digital Locker Solution

B. *Steganography and Visual Cryptography*

The word steganography springs from Greek words „stegnos" that means „covered" and „grapy" that means „writing", shaping it as „covered writing". it's the art and science of writing hidden messages in order that nobody except the meant recipient is aware of the existence of the message. it's achieved by concealing the existence of data inside cowl. the quilt or carrier is also text, image, video, audio, etc.

Cryptography is science of exploitation arithmetic to encode and decode sensitive data in order that it cannot browse by anyone aside from meant recipient. It keeps non-public data shielded from unauthorized access. it's method of changing plain text into cipher text exploitation special keys at sending finish and changing back cipher text to plain text at receiving finish . Cryptography is predicated on mathematical algorithms which require previous information of pure mathematics, pure mathematics pure mathematics, range theory, applied math and applied math illation. science is that the science of analyzing and breaking cryptological secured communication by exploitation combination of analytical reasoning, mathematical tools pattern findings etc.

C. *Proposed Digital Locker Architecture by using Steganography and Visual Cryptography*

Designing Steps:

1) *Steps 1: Design and develop a scanning document* system to produce scanned documents in pdf, jpg, jpeg, png, bmp and gif file type.

2) *Step 2:* Create a storage structure to hold this documents.

3) *Step 3:* Encrypt the document & store it into a database as specified into Step 2. Structure.

4) *Step 4:* Register new user for locker services.

5) *Step5:* Access to the locker services using locker interface.

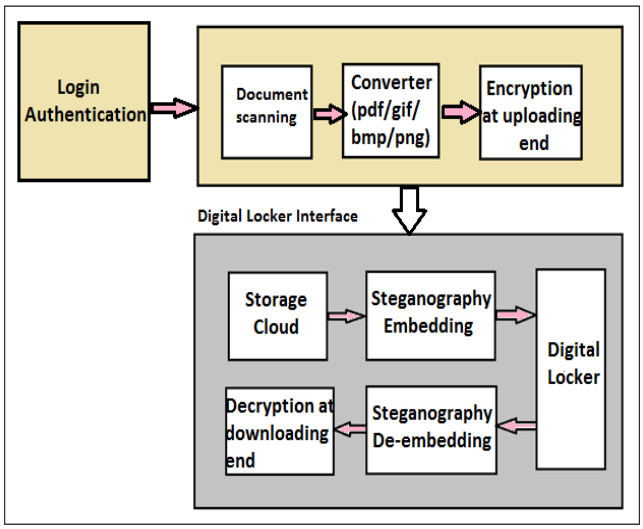

Fig. 3. Block Digram of Proposed Digital Locker by Using Steganography and Visual Crptography

D. *Proposed method for Image Based Steganographic and Visual Cryptographic System.*

The majority of today"s steganographic systems uses pictures as cowl media as a result of individuals typically transmit digital footage over email and different web communication (e.g., eBay). during this article, we are going to concentrate solely on pictures as carrier media. This section describes a brand new planned technique for image format secret writing for strong concealing. during this technique, the key key can use for encrypting the input secret image file. an equivalent secret message will be write in code with totally different secret key having an equivalent cowl file. when a brand new secret key's generated for an equivalent secret message. this system will do multiple times secret message encrypting procedure [7].

The planned technique uses a typical key between transmitter and receiver that is named as secret key. The secret writing diagram shown in Fig. 4(a).

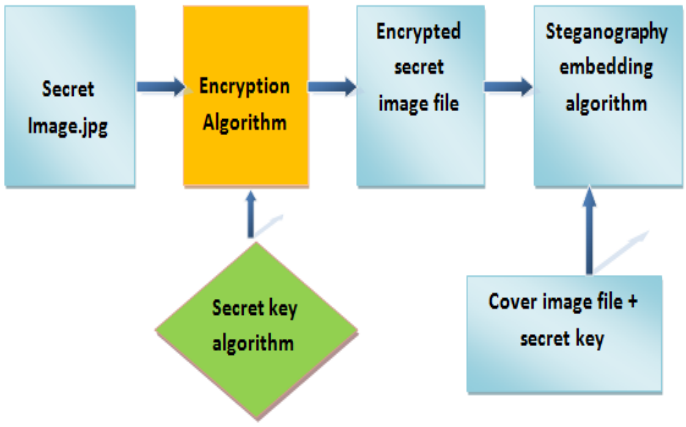

Fig 4 (a): Encryption at Uploading End.

The decryption of secret speech is shown in block diagram Fig. 4(b). The reverse encryption algorithm is applied to retrieve the secret image.

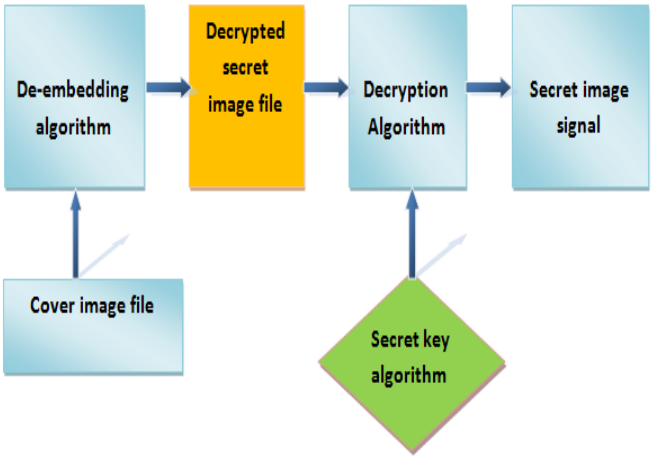

Fig 4 (a): Decryption at Downloading End.

IV. Conclusion

In the proposed technique Digital Locker to the document sharing and submitted by the customer to the online storage by providing least information that will only verify the documents uploaded by the said user from its client portal account. This is achieved by the introduction of a Digital Locker for scanned documents and by combining Steganography and 2-out-2 visual cryptography that provides customer documents privacy and prevents misuse of the documents at server side. The Steganography is really effective against eavesdropping and has a high information hiding capacity as compared to traditional Steganography approach. The document received by the cloud portal can be in the form of image format related to the documents used for various purposes. This proposed work is concerned only with prevention of identity theft and customer‟s document security. The main aim is consumer satisfaction and security to the document transaction. In comparison to other the proposed Digital Locker portal application [8], the proposed method by using Steganography and Visual Cryptography provides efficiency , security and can be applied for E-Commerce Document portal with focus area on online digital document sharing during online shopping as well as physical banking .

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