

# Hiding information in edges of image by using encryption and decryption techniques

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## ABSTRACT

With the development of means of communication, computer science and information exchange via electronic information networks an urgent need emerged to find ways to save exchanged information Encryption had a prominent role in this area However, with the development of intrusion hackers become able to access to information and change it This showed the need to adopt more sophisticated technology and more confidentiality in order to preserve the information So, it become famous to use the system of coverage in which the sent the information being invisible to anyone, through hiding it inside the sent media, such as audio, image, text, and video This paper aims to apply the idea to hide image message, using the least significant bi algorithm inside an image and encrypt it in a new way for encryption .For the purpose of increasing security of the access of the letter it is being encrypted to hide the message before using the Encryption for the highest text This in turn increases the strength of encryption.

**Keywords:** image, Encrypt image, decrypt image.

## I. INTRODUCTION

Become aware of information security place of great interest by researchers those interested in those who are trying to get the solutions and techniques of new and updated to ensure the protection of the information send and receive across the worldwide Web of information (Internet) without the occurrence of any breach or revealed by actors. . [1]. [2] It was to be keep up with the development of security information and create techniques and sophisticated hence the afternoon of knowledge hide information and development of the adoption of technology concealment. [3]. [4] The technique concealment of the methods of protection that make me sending

and receiving invisible, in order to hide messages certain inside cover specific. . [7]. [8] Aim achieved the process of concealment is not to exciting any point doubt the existence of data hidden, while the goal analyst concealment is a doubt in all messages posted, and checked to make sure that the presence of data hidden where. Called a process that is where an attempt to a party detect the presence of the information hidden or read or change or delete the process of decoder concealment. [9]. [10] So I figured I needed to find a means of a multi-purpose of receipt of information and data properly and protected from informed of the third-party is authorized to access to this information appeared aware of encryption is science, which means methods which processed concerned the protection of store information and transfer in the field of a wide, and these methods depend on the secret key is used to encrypt the data. Although encryption is a good way to protect information, it is easy to detect and can be manipulated by any intruder. The need for more sophisticated, more confidential and data-intensive technology. [11]. [12] , especially with the emergence and evolution of the Internet, Seeing data as encrypted is enough to push a hacker or attacker to believe that important or sensitive data exists in random or encrypted text. It starts by using anti-encryption techniques to try to obtain its content. Even if it fails to do so, it may tamper with or distort it or use some means Available To prevent their access to their goal . The major and major challenge faced by the information security field is the emergence of computer networks and means of communication in order to store, enter and provide information internally within organizations and externally from and to remote host systems. A new term has been added to the Information Security Glossary, . [9]. [10] Network

Security, which is defined as the correct protection of all components associated with the computer network, including data, communication tools and infrastructure.. [11]. [13]

## II. PROPOSE SYSTEM:

1\_ input block data (128 bit size)

The block is divided into four parts A, B, C, D each part is 23 bits

2\_ Enter the encryption key and its size is also 128 bits, and starts its  $S [0, \dots, 2r + 3]$ .  $2\_1\_$  take the first part B and do the first steps of encryption, where we take part B and we merge the segment with the key  $S [0]$  and the following equation:  $2\_2\_ B = B + S [0]$  The result obtained from step (1\_2) Function f, and this function performs complex operations on that result where you add a specific statement to the key or cluster or both to increase the intensity of the complexity can be explained by the following equations:  $Key = hash (password + salt)$  For 1 to 65000 do

3\_2\_ We take the result from step (2\_2) and then perform the displacement of three orders according to the following equation:  $t = (B(2B+1)) \lll 1gw$

Note: We convert the result from step (3\_2) to section C

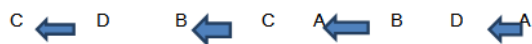
3\_ We do the same before but this time between the two parts c, d where we take d and combine it with the key  $s [1]$  The same processes are performed in terms of scaling and function f but with different equations As we observe in the following equations:

$$u = ((D(2D+1)) \lll 1gw)$$

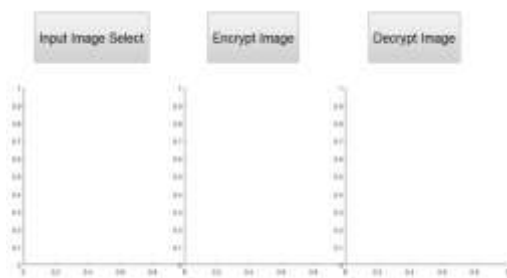
$$C = ((C \wedge u) \lll t) + S[2i+1]$$

Note: These steps are repeated at each session until the number of courses passed by the algorithm is 10. Courses

4\_ The final results obtained from this algorithm are as follows



Note: In order to decrypt, we follow the same steps in the opposite way (ie, reverse encryption).



Choose image



Input image



Encrypt image



Decryption image



### III. CONCLUSIONS:

- 1- using encryption to prevent unaided to the cover of the image in addition to the process of encryption to make the image more secure.
- 3-In light of the results of this study can be inferred Encryption has an important role in maintaining data security from hackers Keep confidential data private.
- thorized access to data and personal images
- 2- For the development of the project can be adedd

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