

SRS DOCUMENT

ENCRYPTO-STEGENOGRAPHER

INTRODUCTION:

This document is to provide the software requirement specification of a encryption and dtegenography software which will encrypt data and will hide it in a image file.

PURPOSE:

The application Encrypto-Steganography has been developed to hide text messages (after encryption) into a image file using a key(which would be just another string of characters).

SCOPE:

This software has great implemntation in various fields ranging from local communication to high security data transfer.

OVERVIEW:

This application software is a Steganography application which includes encryption of the messages to be hidden as well. This application will be designed to hide a text message effectively in a image file using the steganography techniques. The application will also implement encryption of the text message to be hidden before it's passed into the image thus increasing the security of the hidden message many folds. This application is basically designed to allow the user to hide secret messages into a image file after it is encrypted using a key as wished by a user. The aim of the application is to make the "post-processed" image file (after the message has been inserted, also called stego-image) look more and more identical to the original image so that it arouses least suspicion (that some hidden message is there in the image). Steganography has been used since ancient times and now-a-days large corporations use the modern digital steganography to hide information that they send from say one industry to another. Thus steganography including encryption is immensely popular in today's world for hiding secure information.

BENIFITS:

1. Safe transfer of data.
2. Easy encryption and decryption using a symmetric key.
3. User friendly interface.

BASIC REQUIREMENTS:

4. A user friendly environment for easy accessibility of the application.
5. Eryption of data to make it secure.
6. Hiding the data in a image to increasec the level of security.
7. Use of a key (alphabet and numbers possible) as a passcode
8. Easy decryption of data if the key is known.

OVERALL DESCRIPTION:

1)USER INTERFACE:

The application must have a user friendly graphic interface comprising of dialogue boxes and linkboxes. The user should find it easy to operate.

2)APPLICATION FUNCTIONS:

- To encrypt data (text file).
- To hide the file in a image.
- To decrypt a encoded file after obtaining it from image..

3)THE KEY:

The application must be based on a symmetric key i.e. the person who is decrypting the file must use the same key as the one who encoded it to get the correct text file back.

3)APPLICATION FEATURES:

A)ENCRYPTION:

- The application needs to encrypt data using a four step full proof method which is nearly unbreakable. Moreover once encrypted the ciphered text would be again hidden in a image file by changing some of the pixels of the image (This process is known as STEGENOGRAPHY).
- For encryption the application should require the full name of the image file (along with extension), the text message that is to be hidden and the key (basically another sequence of characters, can be a word or numbers etc.) based on which the text message will be encrypted.
- As the output we will get the final image file with all the text hidden in it which can be decrypted to retrieve the encrypted data.

B)DECRYPTION:

- For Decryption the application will again require an image file to decrypt and the key (must be same as that used in encryption to get the correct text back).
- The steps followed for decryption would be just the reverse of those followed for encryption. After decryption the program should return us a text file with the decrypted data

C)STEGENOGRAPHY:

- Steganography is the art and science of writing hidden messages in such a way that no one, apart from the sender and intended recipient, suspects the existence of the message, a form of security through obscurity.
- Image stegenography is a very common method of stegenography by which a text data is hidden in an image file by appropriately modifying

some of the pixels of the image file.

- Stegenography is a very ancient way to hide important data and is still in practice worldwide. High level digital image processing is used nowadays by big firms to hide their secure data in images for safe communication.
- For this application we will be using image stegenography only.

D)GRAPHIC USER INTERFACE:

- The application must have a user friendly environment.
- The interface must consist of dialogue and link boxes.
- No preknowledge would be required to use the application other than the key.

INPUT AND OUTPUT FORMAT:

9. FOR ENCRYPTION:

10.the application will need a text file, a image file and a key as input

11.As output it will give the stego-image with the data hidden in it.

2. FOR DECRYPTION:

12.the application will require an image file (to be decrypted) and the key.

13.As output it will give the decrypted text back.