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iSteg

Steganography encryption for Mac OS X

User manual

Steganography

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**. The word *steganography* is of Greek origin and means "concealed writing". Generally, messages will appear to be something else: images, articles, shopping lists, or some other *covertext* and, classically, the hidden message may be in invisible ink between the visible lines of a private letter.

The advantage of steganography, over cryptography alone, is that messages do not attract attention to themselves. Plainly visible encrypted messages—no matter how unbreakable—will arouse suspicion, and may in themselves be incriminating in countries where encryption is illegal. Therefore, whereas cryptography protects the contents of a message, steganography can be said to protect both messages and communicating parties.

Steganography includes the concealment of information within computer files. In digital steganography, electronic communications may include steganographic coding inside of a transport layer, such as a document file, image file, program or protocol. Media files are ideal for steganographic transmission because of their large size. As a simple example, a sender might start with an innocuous image file and adjust the color of every 100th pixel to correspond to a letter in the alphabet, a change so subtle that someone not specifically looking for it is unlikely to notice it. (from Wikipedia)



iSteg

iSteg is an encryption tool for Mac OS X.

The two main tasks off iSteg are **encoding** and **decoding**.

Encoding

Encoding means to **hide a file into another file**. For example you can hide a text message into a jpeg picture. In order to encode you need at least:

- a source file, the one you want to hide (text file or ZIP file)
- a source jpeg picture file
- encryption password (you have to choose it)
- a destination jpeg picture file

Decoding

Decoding means to **extract a hidden file from a source file**. For example you can extract a hidden text message from a jpeg picture. In order to decode you need at least:

- a source jpeg picture file
- encryption password (you must know it)
- a destination file

Encoding

Encoding means to hide a file into a picture.

The picture should be a jpeg file. Size matters because you can't hide a big text file into a small jpeg picture. The hidden file must be smaller than the jpeg picture file. For better results the jpeg picture file should be 20 times bigger than the file you want to hide.

To encode a file into a picture follow this steps:


- open iSteg
- check the **"Encode"** checkbox
- select the **Source Picture File** clicking the "+" button
- choose a **password** or click "+" button to generate a random password
- select the **Source Text File** clicking the "+" button. This file must be a .txt file or a ZIP file. You can put every file you want into the ZIP archive, not only text files.
- click **"Process"**
- choose **file name** for the destination jpeg file and click **"Save"**
- wait for iSteg to finish. A small report window shows you the technical information about encryption and errors if any.
- the destination jpeg file can be opened in picture viewers and it should look exactly the same as the original picture. This file contains the hidden file.

Decoding

Decoding means to extract a hidden file from a jpeg picture.

To decode a file from a picture follow this steps:

- open iSteg
- uncheck the “**Encode**” checkbox
- select the **Source Picture File** clicking the “+” button. This file is the jpeg picture that should contain a hidden txt/zip file
- insert **password**
- click “**Process**”
- choose **file name** for the file you are extracting and click “**Save**”
- wait for iSteg to finish. A small report window shows you the technical information about encryption and errors if any.
- the destination file is the hidden file.



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