Шифр Сурок

**Шифр Сурок (Cipher Marmot)** is a Steganography tool developed by Alek.

It leverages a feature in the PDF standard to embed encrypted binary data; bypassing the need to encode the cipher text, allowing the PDF file to remain compact while handling large files.

Despite not being open source, it's a simple task to figure out its logic.


Considerations

- The embedded cipher is invisible to virtually, every PDF engine.
- When you choose a password, a cryptographically secure key will be derived. However, it's strongly advised to use a password that is difficult to guess.
- Most PDF files are compatible with **Шифр Сурок (Cipher Marmot)**, but it is advised to test the integrity of the PDF file after embedding the data.
- It's been succesfully tested with files up to 700mb. The whole midsommar movie was encrypted, embedded, and extracted in less than a minute, using a consumer-grade laptop. ~~(This speed was reached only after compiling using the -O3 flag)~~

### Encrypting and Embedding a file within a PDF
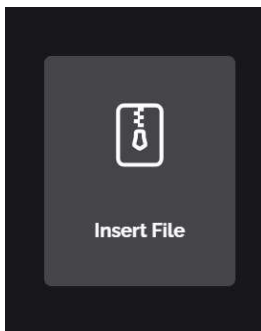
1. Select the file to encrypt and embed.

2. Select the PDF file to use. Choose you own file or select a template.

3. Choose a password

4. Select the location to save the resulting PDF.

Creating a new document, and embedding it
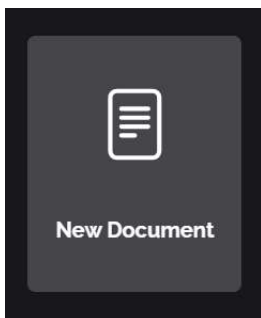
1. Fill in the document title, and add your own content
2. Select "Encrypt & Embed"
3. Select the PDF file to use. Choose you own file or select a template.
4. Choose a password
5. Select the location to save the resulting PDF.

Extracting a file/document
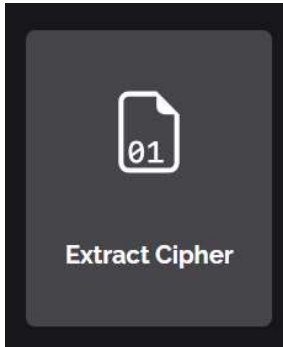
1. Select whether you want to extract a file or a document.
2. Enter the password
3. "f you're extracting a document, it will be displayed automatically. If you're extracting a file, you'll be prompted to select a save location, and for security reasons, the recipient needs to add the file extension.

This file itself, contains an encrypted PNG file.

You can test it by using the password 1234