Design Diagrams

Steno Input Formats

BMP
PNG
JPG
GIF

Steno Output Formats

PNG

Unsteno Input Formats

PNG

Data Formatting

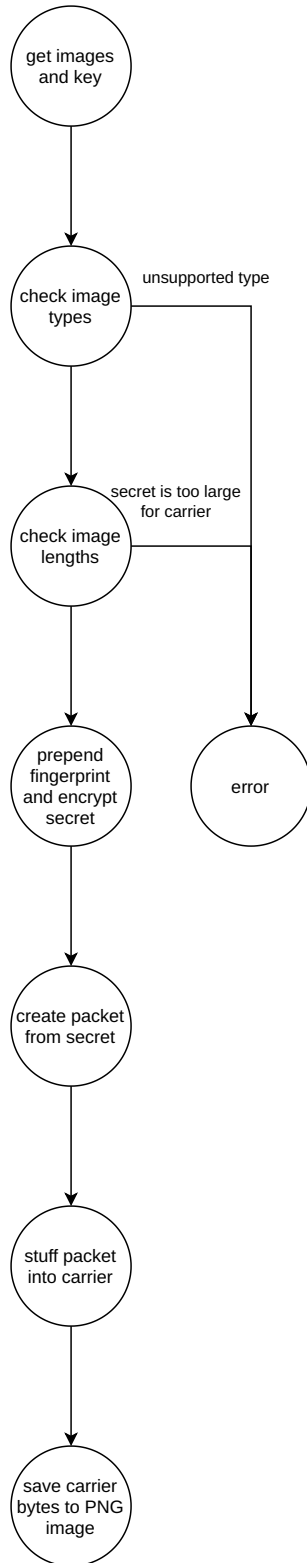Packet that is stuffed into carrier image

length as int (4B)	encrypted secret (length equal to length in header)

Data that is encrypted using AES

0xDEADBEEF	plaintext

0xDEADBEEF is a fingerprint
that we check for to ensure
that the image was created by
out application

Steno Image

get images and key

↓

check image types — unsupported type →

↓

check image lengths — secret is too large for carrier →

↓

prepend fingerprint and encrypt secret

↓

create packet from secret

↓

stuff packet into carrier

↓

save carrier bytes to PNG image

error

Unsteno Image

get imate and key

↓

ensure image is PNG — not PNG →

↓

unstuff the secret from the carrier

↓

extract legnth to find data segment

↓

decrypt data segment

↓

check for fingerprint — Fingerprint not found →

↓

write plaintext to file

error