

steganoMessage

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## Chapter 1

# steganoMessage

Tool to encrypt and decrypt a message withing a random graphic file (for now bitmap, propably will support jpeg and png as well)

Mainly as experiment to learn about steganography. Compiles on linux with: `g++ -o steganoMessage ./src/main.cpp [... all the other files located in ./src and ./header]`

for GDB debugging do : `g++ -o steganoMessage ./src/main.cpp [... all the other files located in ./src and ./header]-export-dynamic -g`

Should compile with little to no changes on MAC as well for now. Should work under cygwin or mingw in windows as well if needed tools are installed. No promises though.



## Chapter 2

# Class Index

### 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">BitmapArray</a>		
<a href="#">BitmapArray</a>	Class is supposed to contain image data of the bitmap file . . . . .	7
<a href="#">BitmapHeader</a>		
<a href="#">BitmapHeader</a>	Class contains header information extracted from bitmap file . . . . .	??
<a href="#">ErrorHandler</a>		
<a href="#">ErrorHandler</a>	Class is implemented to store a list of standard errors and offer a interface between standard errors and stderr . . . . .	??
<a href="#">Image</a>		
<a href="#">Image</a>	Class is implemented to store the bitstream of the image file as well as the filepath and to offer easy to use methods to extract information from the image file . . . . .	??
<a href="#">Message</a>		
<a href="#">Message</a>	class is supposed to contain the message that the user enters via terminal and wants to hide in the image file . . . . .	??
<a href="#">SteganoMessage</a>		
<a href="#">SteganoMessage</a>	class ist implemented to store values that are needed to be shared between all classes (for example errorHandler). It shall be constructed in the beginning and terminated in the very end of the runtime . . . . .	??



## Chapter 3

# File Index

### 3.1 File List

Here is a list of all files with brief descriptions:

<a href="#">.dep.inc</a>	??
build/Debug/GNU-Linux/src/ <a href="#">BitmapArray.o.d</a>	??
build/Debug/GNU-Linux/src/ <a href="#">BitmapHeader.o.d</a>	??
build/Debug/GNU-Linux/src/ <a href="#">ErrorHandler.o.d</a>	??
build/Debug/GNU-Linux/src/ <a href="#">Image.o.d</a>	??
build/Debug/GNU-Linux/src/ <a href="#">main.o.d</a>	??
build/Debug/GNU-Linux/src/ <a href="#">Message.o.d</a>	??
build/Debug/GNU-Linux/src/ <a href="#">SteganoMessage.o.d</a>	??
header/ <a href="#">BitmapArray.h</a>	??
header/ <a href="#">BitmapHeader.h</a>	??
header/ <a href="#">constants.h</a>	??
header/ <a href="#">ErrorHandler.h</a>	??
header/ <a href="#">Image.h</a>	??
header/ <a href="#">Message.h</a>	??
header/ <a href="#">SteganoMessage.h</a>	??
nbproject/private/ <a href="#">c_standard_headers_indexer.c</a>	??
nbproject/private/ <a href="#">cpp_standard_headers_indexer.cpp</a>	??
src/ <a href="#">BitmapArray.cpp</a>	??
src/ <a href="#">BitmapHeader.cpp</a>	??
src/ <a href="#">ErrorHandler.cpp</a>	??
src/ <a href="#">Image.cpp</a>	??
src/ <a href="#">main.cpp</a>	
Main Function of steganoMessage. Mainly orchestrates the init and gui creation	??
src/ <a href="#">Message.cpp</a>	??
src/ <a href="#">SteganoMessage.cpp</a>	??





## Chapter 4

# Class Documentation

### 4.1 BitmapArray Class Reference

[BitmapArray](#) Class is supposed to contain image data of the bitmap file.

```
#include <BitmapArray.h>
```

Collaboration diagram for [BitmapArray](#):

#### Public Member Functions

- [BitmapArray](#) ()  
*Standard constructor.*
- [BitmapArray](#) (std::string p, uint32\_t b, uint32\_t w, uint32\_t h, uint32\_t bit)  
*Non-Standard constructor.*
- [BitmapArray](#) (const [BitmapArray](#) &orig)  
*Copy Constructor.*
- virtual [~BitmapArray](#) ()
- int [readArray](#) ()  
*Opens original bitmap file and calls private read function.*
- void [printArray](#) ()  
*Prints all image data.*
- std::vector< std::vector< uint32\_t > > [getBData](#) ()  
*Returns the 2D std::vector containing image information.*
- std::string [infuse](#) (std::string message)  
  
\*\*\*

#### Private Member Functions

- int [read](#) (std::ifstream &f)  
*Loads and decrypts the image data to the 2D std::vector member.*
- uint32\_t [genInt](#) (char \*c, size\_t s)  
*Generates an uint32\_t value from up to 4 Bytes.*
- void [printArray](#) (char \*c, size\_t s)  
*Loads and decrypts the image data to the 2D std::vector member.*