

CryptoMessenger_GUI User Tutorial



FOR RELEASED VERSION V0.0.1.1 BUILT ON 231022 ON GITHUB

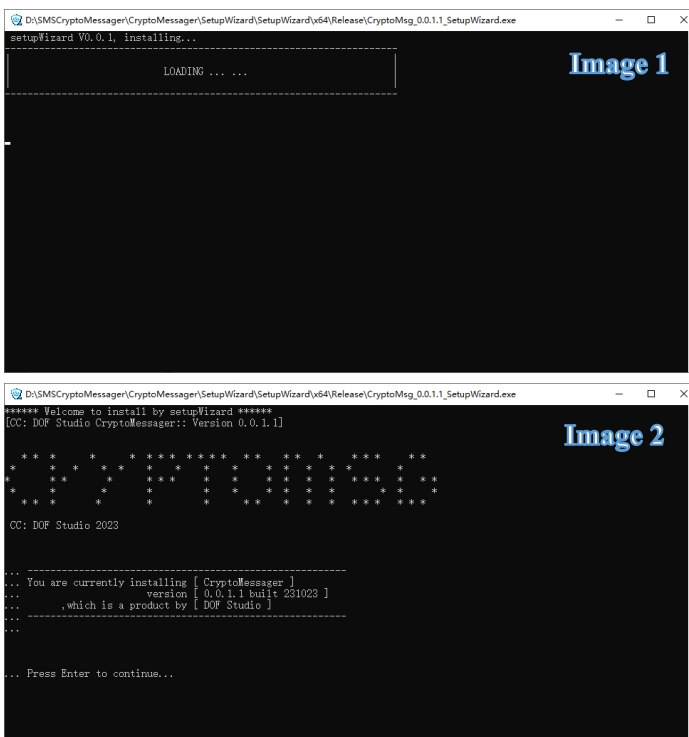
ONLY OUR OFFICIAL WEBSITE CAN BE REGARDED AS THE TRUSTED SOURCE OF THIS SOFTWARE.

github.com/dof-studio/CryptoMessenger

THIS ESTEEMED PRODUCT IS DEVELOPED BY DOF STUDIO (2023).

1. INSTALLATION-----

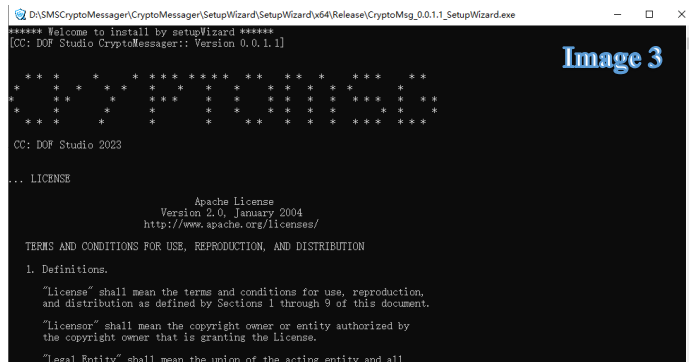
All of our officially released versions can **Only** be legally found on the homepage of this product, which is github.com/dof-studio/CryptoMessenger. To get a binary released version, you can click the **Releases** button shown on the right side of the homepage, or enter the **BIN** directory of the **main** branch to see all binary archives available, for example, the **CryptoMsg_0.0.1.1_SetupWizard.exe**, representing our initially released version. To proceed to the next step, you have to go through our **README.md** and **LICENSE** files to fully understand our licenses and terms of this software, and once you have fully agreed with all terms listed on the website, you can then click and download a copy of this product to explore further uses.



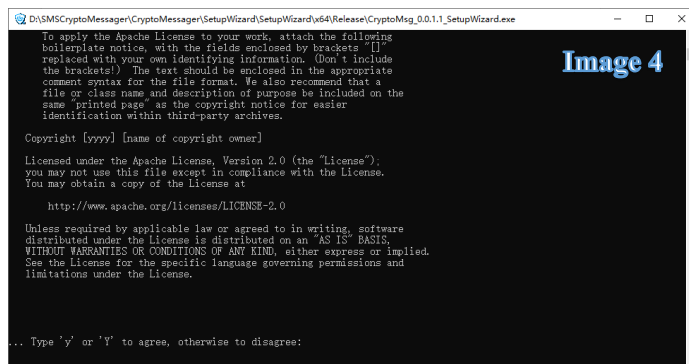
If your download is completely successful, you will then see a **CMD** console shown on your screen once starting the setup wizard on your disk, typically, with a console window that is similar to the **Image 1** demonstrated on the left side. Please note that sometimes, particularly when you start the setup wizard without specifically running as **Administrator**, you are supposed to select a **YES** option to run in administrator mode in the pop-up window instead of selecting a **NO**, since sometimes we need to add some environmental variables when installing the product.

Please then wait a while for the setup wizard to automatically complete the initialization process until a **Welcome** page is displayed on your screen, along with our dot-

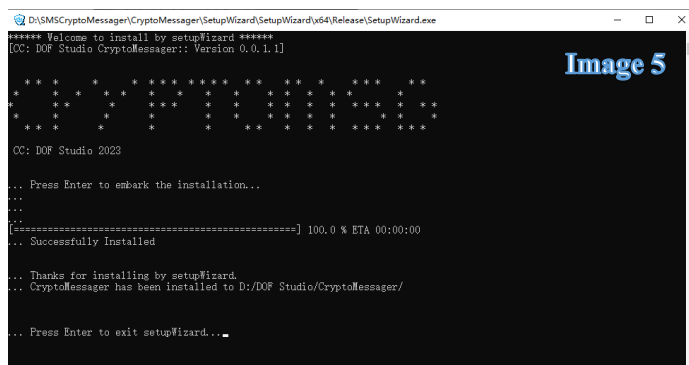
matrix logo, product information, and other directions, as illustrated in **Image 2** on the left. You can then press the **Enter** key to proceed to the next phase of installation.



You can easily pull the slider on the right side of the console window to read the entire license displayed on your screen, and for further information about exceptions and limitations, they can be accessed on our homepage website github.com/dof-studio/CryptoMessenger.



confirmation if your input was not a valid input like **y** or **Y**, hence, if you are intending to exit, please input something other than the accepted signature **y** or **Y** for **TWICE**. Once you have confirmed your agreement with the license and terms, you will have to press the final **Enter** key to officially embark the installation, and ultimately, to have files and settings actually modified on your device.



procedure. Typically, the setup procedure is done correctly and automatically, with a **Thanks** displayed at the end of the step, as shown in the **Image 5**. If you have encountered some unexpected installation issues that you cannot solve on your own, you are welcome to leave some feedback in the **Discussions** zone of our GitHub homepage, and hopefully, we will seek our effort (but do not guarantee, since this software was licensed without warranty) to solve them.

Congratulations! Till now, you have completed all of the procedures to install this software with a user-friendly GUI. All basic components have been installed to **D:/DOF Studio/CryptoMessenger/**.

Following the instructions, after typing the **Enter** key several times, you will then see a full version of our **Base License** – Apache License Version 2.0 displayed on your screen, as shown in the **Image 3**. It should be reiterated that in order to be legally entitled to use this free software, you must fully understand and agree to the license and the terms within the **License Exception** section on the homepage.







After you have completed the reading of the terms and confirmation of the license and other terms, as illustrated in the **Image 4**, by following the instruction on the console, you can proceed to the installation step by simply typing a **y** or **Y** and then press the **Enter** key to reassure your confirmation has been recorded. Please note that you will be given at most **TWO** times of chances to reassure your

Once the installation is officially started, the installation wizard will automatically install the CryptoMessenger backend program, its accompanying Graphic User Interface (GUI), and other necessary files on your computer. You can directly observe the installation process by checking the **Process Bar**, and an **ETA** time that will be automatically updated by following the

2. USE IT BY THE GRAPHIC USER INTERFACE (GUI)-----

Before starting your journey of experiencing encrypted communications with *CryptoMessenger*, some facts of our software structure should be emphasized earlier. First, please spend a few minutes to do some research of the directory *D:/DOF Studio/CryptoMessenger/*, where this product was installed to. You will then see two similar files with an *exe* suffix, namely *CryptoMessenger_cs.exe* and *CryptoMessenger_GUI.exe*, as shown in the *Image 6*.

Image 6

	Crypto.dll	2023/10/25 20:29	应用程序扩展	3,276 KB
	CryptoMessenger_cs.exe	2023/10/25 20:29	应用程序	10,096 KB
	CryptoMessenger_GUI.exe	2023/10/25 20:29	应用程序	393 KB
	DOF Studio	2023/10/25 20:29	文件	1 KB
	LICENSE	2023/10/25 20:29	文件	12 KB
	logo_qs.ico	2023/10/25 20:29	ICO 文件	51 KB

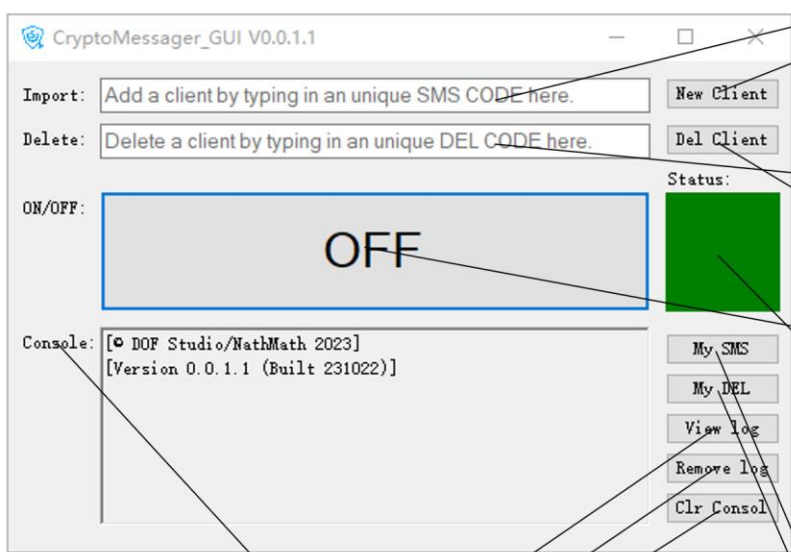
While they are all, indeed, important components of the core system of this product, the former one ending with *_cs.exe* normally works as a backend program invoked by the later one that ends with *_GUI.exe*, and what we will typically use, is the second one – the Graphic User Interface. In summary, please make sure to keep the file structure (and possibly the installed directory, to avoid a great deal of unexpected problems) unchanged (which means do not modify any of those extant files, and other generated files in a later phase), use the one that ends with *_GUI.exe*, the smaller executable file, and feel free to manually create *Shortcut Links* of the *_GUI.exe* to make it more accessible.

Okay, let's start our journey now!

Once starting the GUI program, a tiny user interface will be displayed on your screen, like the one shown in the *Image 7*, and it will briefly introduce some *Basic Usage* of the buttons, signals, input bars, and consoles in the GUI.

At the meantime, we will deeply discuss some typical usage by assuming some conditions and

Image 7



A input bar for entering a SMS Code
A button for register a SMS Code
 Before decrypting an encrypted message from another client, you have to register that client by asking for a **SMS Code** from her, entering it into the bar, and click the register button to officially make her as a trusted client.

A input bar for entering a DEL Code
A button for register a DEL Code
 If you do not intend to have any further communication with a registered client, by entering her **DEL Code**, and click the delete button, you will never be able to decrypt her encrypted messages.

The main button controlling ON/OFF
A state light indicating states of this system
 When the main button shows an OFF and the status light displays a **green** square, it means that the system for automatically encryption and decryption is turned off. When the main button shows an ON and the status light displays a **red** square, it means that the system for automatically encryption and decryption is turned on. When the main button shows an ON and the status light displays an **orange** square, it means that the system for automatically encryption and decryption is now busy, and cannot be shut off by clicking the main button.

A button for getting your encrypted logs
A button for clearing your encrypted logs
A button for clearing the console

The main console outputting information

Console: [DOF Studio/NathMath 2023]
 [Version 0.0.1.1 (Built 231022)]

Buttons: My SMS, My DEL, View log, Remove log, Clr Console

giving procedures for using this software to meet your requirements.

Condition I

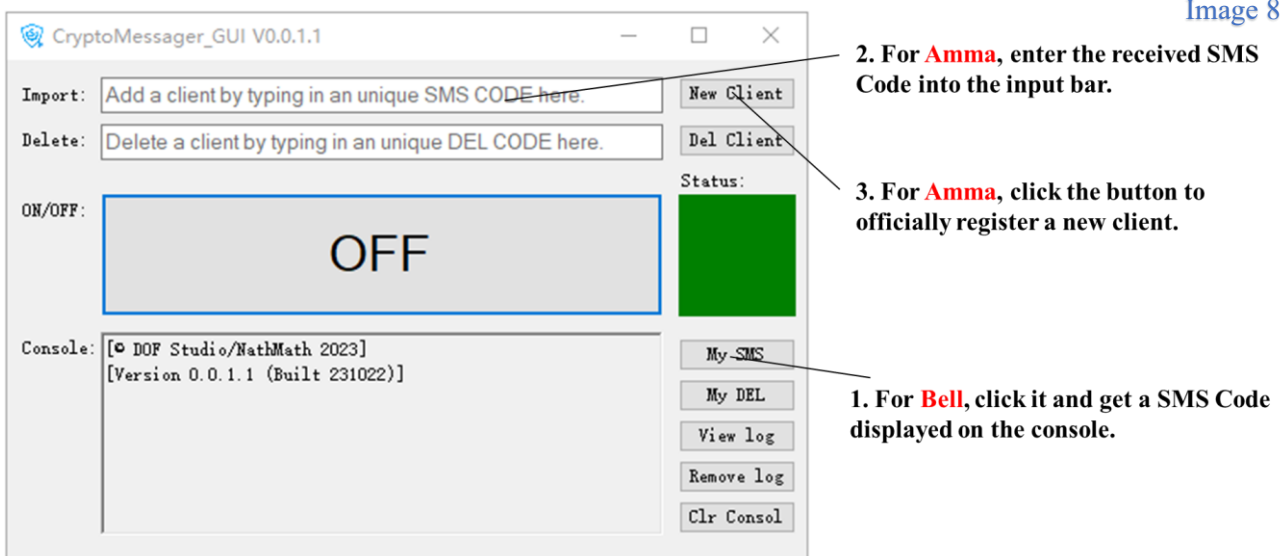
Suppose that you are *Amma*, and *Bell* is your new school mate who wants to communicate with you via an insecure online chat platform, but to protect your privacy with CryptoMessenger. How can you register *Bell* as a trusted client and starting encrypted communication?

-> **Step 1:** Let *Bell* export her own *SMS Code*, a set of visual strings, and give it to you *Offline* (for example, via a Bluetooth exchange, or by an USB storage). It is really important to exchange the *SMS Code* offline since (although your *SMS Code* might be different from time to time) anyone who correctly holds a copy of your *SMS Code* can effortlessly decrypt whatever you said. Therefore, sending it by an online platform is **Strongly Not Recommended**.

-> **Step 2:** Once received *Bell's SMS Code* offline, you are then expected to register her as a new trusted client by entering *Bell's SMS Code* in the **Import** input bar and click the **New Client** button to proceed the registration. If a *SMS Code* is registered for first time on your device, it will be rapidly accepted, registered, and saved by the backend program, with a successful notification displayed, but if a *SMS Code* is invalid or has been registered, it will display an error.

Image 8 is a diagram of the steps above.

Image 8



Those are the essential steps for registering a new client as a trusted client to start your encrypted communication. Please note that the *SMS Code* is partially based on your device information, including the hardware information and your username, so by changing your username can your *SMS Code* simultaneously altered to a novel one that might be invalid for others to decrypt your encrypted messages anymore.

Condition II

Suppose that you are *Amma*, and *Bell* is your new school mate who has just been registered as a trusted client in your CryptoMessenger system. You cannot wait for a chat by using CryptoMessenger as an encryption tool to protect your privacy while sharing some of your most private information with her (it should be noted that *Bell* has also completed the same procedure to make you registered as a trusted client). How to encrypt your message, and decrypt what you have received?

-> **Step 1:** Click the **Main Button** to turn the automatically encryption and decryption system **ON**,

and instantly you will see that the **Status Light** turning to a **red** square.

-> **Step 2:** You need to edit the message you want to send in advance, with a plaintext form, and temporarily store it in a chat box of the chatting platform, or simply edit it in a notepad program.

-> **Step 3:** Select all of the plaintext that you want to share in a ciphertext form, hold down **Ctrl + C** shortcut keys to copy it, and then, the backend program will automatically detect the change of the clipboard, identify your plaintext, and start the encryption at the meantime.

-> **Step 4:** Normally, if your plaintext is not dramatically long (for example, larger than 1 MB or so) the encryption process will be completed instantly, and at that time, be pasted into the clipboard. Please hold down **Ctrl + V** shortcut keys to directly paste the encrypted ciphertext to your chat box, and then feel free to send it.

-> **Step 5:** Decrypting Bell's encrypted message generally has a similar procedure – to select the ciphertext, hold down **Ctrl + C** shortcut keys to copy it, a possible waiting, and hold down **Ctrl + V** shortcut keys to directly paste the decrypted plaintext.

-> **Step 6:** When you do not need to encrypt by the encryption and decryption system anymore, please click the **Main Button** to turn it **OFF**, and instantly you will see that the **Status Light** turning back to a **green** square, since any behavior of copying and pasting will be continuously detected and possibly, be unexpectedly encrypted and decrypted.

Image 9 is a diagram of the steps above.

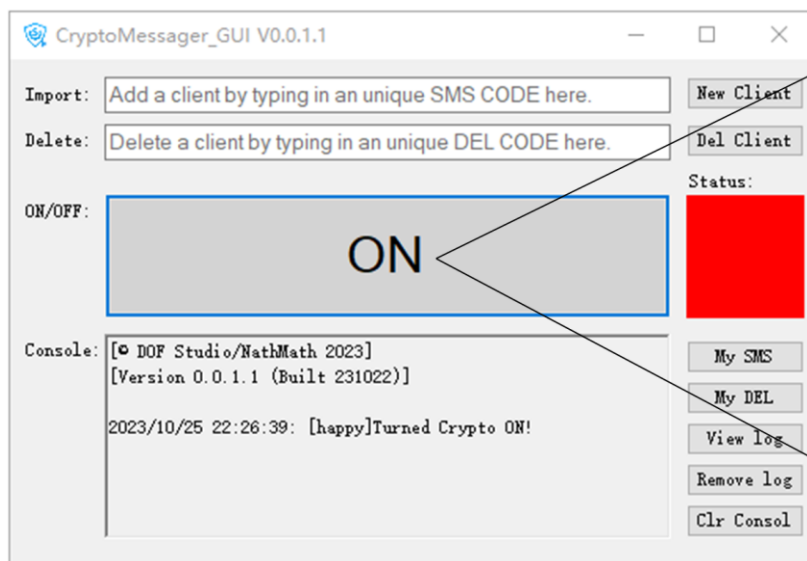


Image 9

1. For Amma, click the main button to turn the encrypting system on.

2. For Amma, edit some messages in a chat box or notepad.

For example: *I have fell in love with you for a long time.*

3-4, 5. For Amma, hold Ctrl + C and Ctrl + V to copy the plaintext and paste the generated ciphertext. Or vice versa.

For example:

DOFM=90e057=1rtmdUaW9@bghJEbmkkMt[S&Sue#cjKl4h
_5b5qXvoCN1e_lgu*5u6=0pQfsfLA#2P(hpWK9iZ)*mhl'
fKSGmv@T7*j93m5T1lFFvL~3G!UjWuH8]xQ1~#gkFj]0

6. For Amma, click the main button to turn the encrypting system off.

Note that when your copied message is large enough, it will take some time to get it properly encrypted, so there will be a waiting period and simultaneously, the **Status Light** will turn to an **orange** square meaning the encryption system is busy and turn back to **red** when it is finally completed. Furthermore, when the encryption system is busy (an orange square is shown), you cannot manually turn the system **OFF** by clicking the **Main Button**.

Condition III

Suppose that you are **Amma**, and **Bell** is your new school mate who accepted your confession, but after a big argument with you, she then firmly proposed to break up. For you, **Amma**, you see that you will never, ever chat with her anymore and have already decided to delete her online account, as well as to remove her from your trusted client in CryptoMessenger. How to delete a previously trusted client?

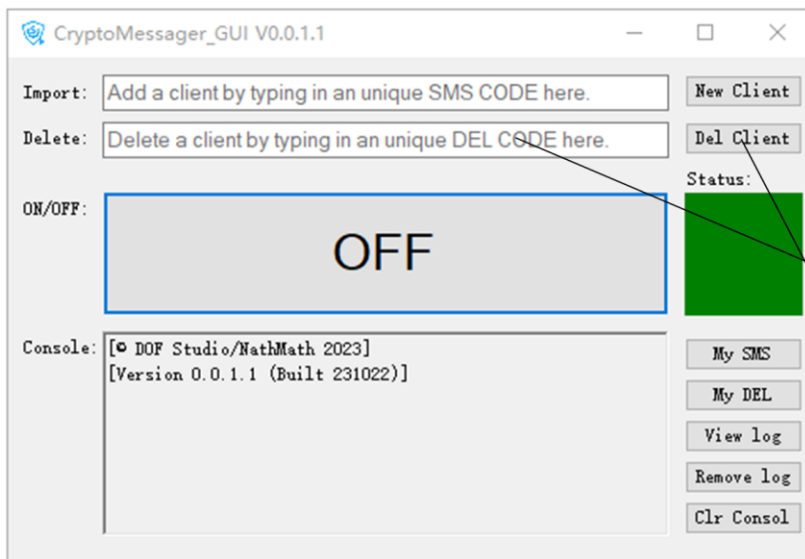
-> **Step 1:** Unfortunately, after registering her, you cannot unconditionally remove her from your trusted client list without the **DEL Code** of **Bell**. But fortunately, under the circumstance that you have

had a great deal of encrypted messages sending from her, you can easily get it from any encrypted message by selecting the **6-character** strings between the only two '=' in the whole ciphertext (for example, 90e057, which is a simulated **DEL Code** used in the previous example).

-> **Step 2:** Once you have got **Bell's DEL Code**, you can then hurry up to remove her from your trusted client list by entering **Bell's DEL Code** in the **Delete** input bar and click the **Del Client** button to proceed the de-registration. If a **Del Code** is referring to a registered client, it will be rapidly accepted, processed, and deleted along with all registration related information about **Bell** by the backend program, with a successful notification displayed, but if a **Del Code** is invalid or referring to a client that has not yet been registered, it will display an error.

Image 10 is a diagram of the steps above.

Image 10



1. For Amma, get Bell's DEL Code by directly asking her, or split the 6-character DEL Code in a decrypted message.

For example:
DOFM=90e057=1rtmdUaW9@bghJEbmkkMt[S&8ue#cjK14h
_5b5qXvoCN1e_lgu*5u6z0pQfsfLA#2P(hnpWK9iZ)*mhl'
fKSGmv@T7*j93m5T1IFFvL--5G!UjWuH8]xQ1-#gkFj]0

2. For Amma, enter the DEL Code into the input bar.

3. For Amma, click the button to officially removed a trusted client.

Please note that the history of encryption and decryption (log) will not be automatically deleted when removing a certain trusted client. Therefore, if you want to completely delete all history records, please click the **Remove log** button.

3. FURTHER NOTIFICATIONS-----

Please note that according to the license integrated, this software is a free software under not warranty, which means nobody has a legal obligation to solve the problems that individual users encounter during use.

However, DOF Studio have kindly provided some friendly bug feedback and problem consultation channels for all users using this CryptoMessenger, including **GitHub's Discussions Zone** and our official **Customer Feedback Email** dof.statisticality@gmail.com (which is the same with the email of our open-source standard library Statisticality).

- ` To report bugs and problems on GitHub, please enter: github.com/dof-studio/CryptoMessenger
- ` To send a consultative email, please send to: dof.statisticality@gmail.com

Yours,
DOF Studio 2023.
October 25, 2023.