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STM32 Quest : 2024 University Developer Contest (GFX & Wireless)

Mission 1 : Graphics basics with TouchGFX

STMicroelectronics

Mission overview

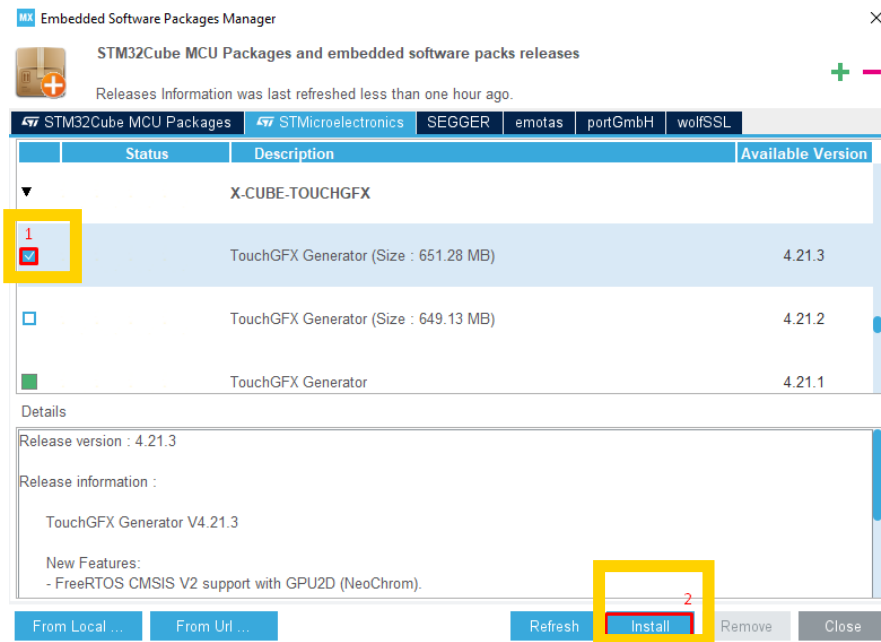
- The goal of the first mission is to become familiar with how to use TouchGFX Designer. You need to install the latest version of STM32CubeMX and the latest version of X-Cube-TouchGFX. After the installation process is complete, you will create a GUI based on TouchGFX Stock.
- Completion Conditions
 - After the UI is completed, compress the build/bin folder into a zip file for submission.
- Note :
 - Screenshots might show a different version of TouchGFX but don't worry and simply use the latest version. The steps to follow are the same in any case so you can proceed without any issue.

Download the necessary software

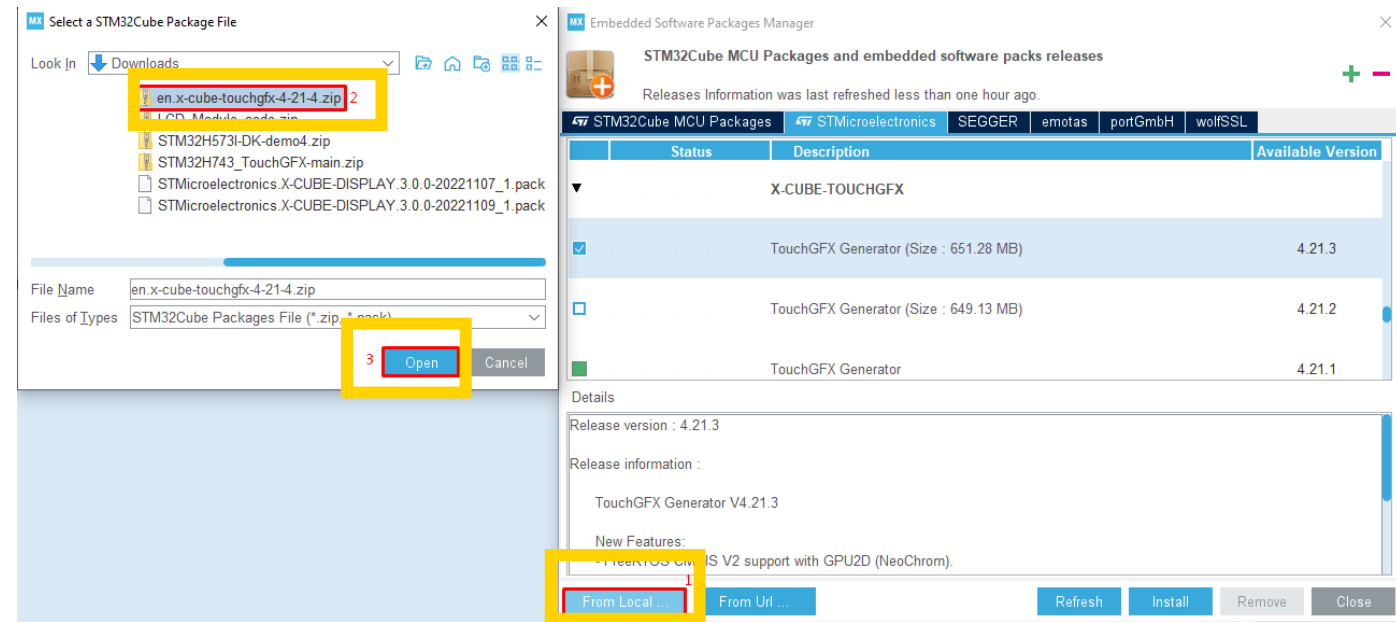
- Download and install the latest version of STM32CubeMX.
 - <https://www.st.com/en/development-tools/stm32cubemx.html>
- Download X-CUBE-TOUCHGFX.
 - <https://www.st.com/en/embedded-software/x-cube-touchgfx.html>
- You can refer to the following YouTube tutorial on how to install ST software to use TouchGFX (Korean subtitles available)
 - <https://youtu.be/OMeiG9jS-yk?si=Hv7Zhb0uByzvsU5o>
 - If you follow the video tutorial, you can skip the installation instruction slides and directly go [here](#).

Download the necessary software

- In STM32CubeMX, to download the X-CUBE-TouchGFX software pack there are 2 methods :



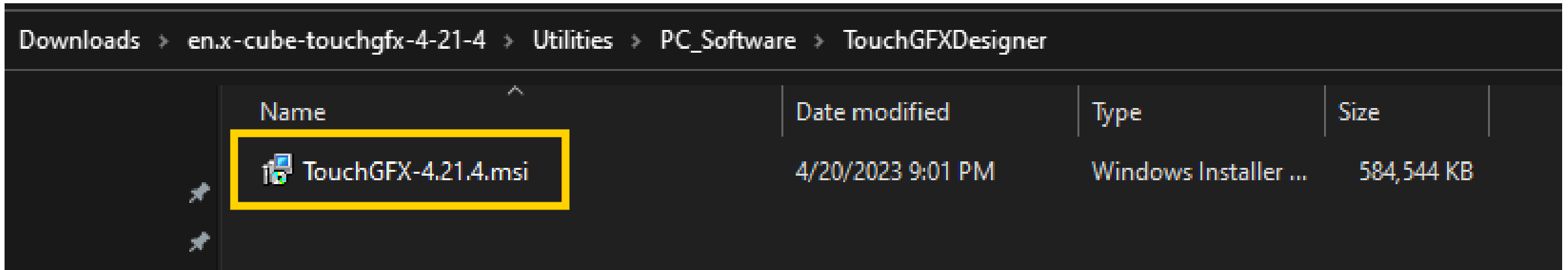
Option 1



Option 2 (recommended)

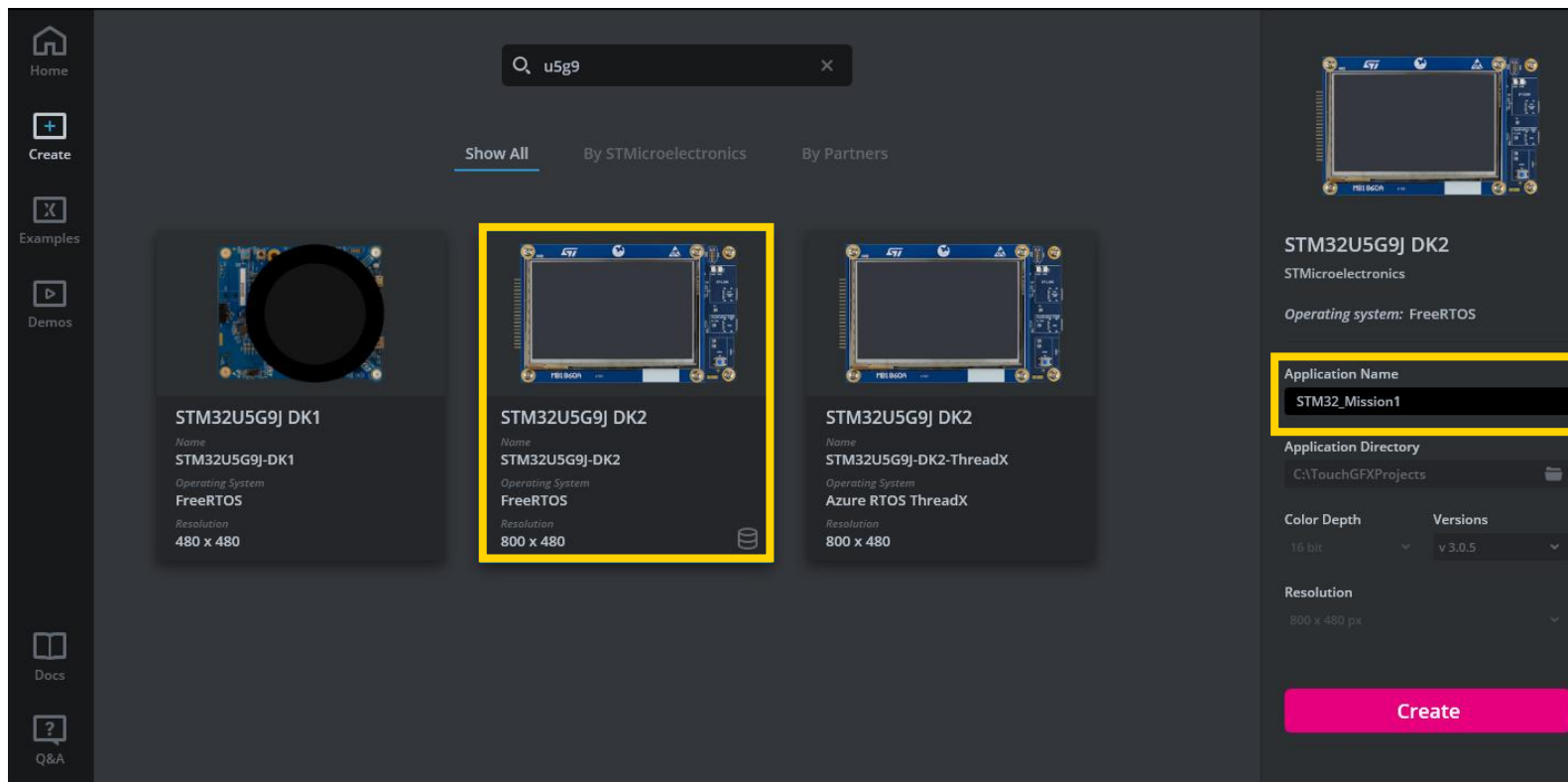
TouchGFX Designer installation

- Install TouchGFX Designer located in the X-CUBE-TouchGFX folder.



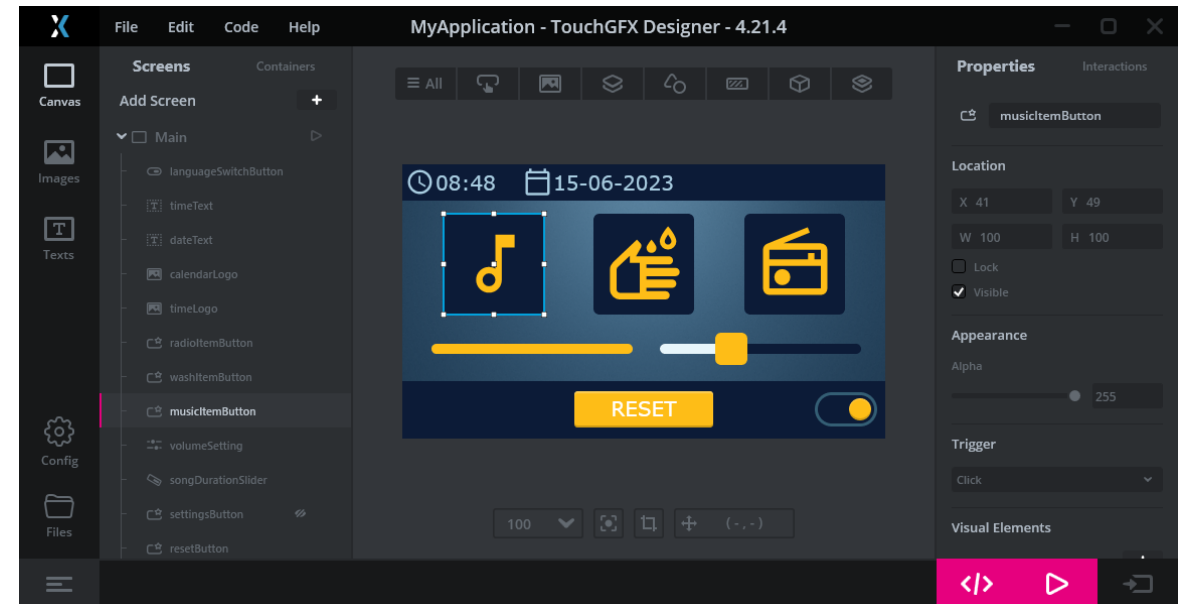
Create project

- Once everything is correctly installed, open TouchGFX Designer and create a STM32U5G9J-DK2 project named “STM32_Mission1”.
 - Color depth: 16-bit, Resolution : 800x480



GUI reproduction

- Refer to the attached simulator EXE file to create the same UI based on TouchGFX Stock.
- Please use the provided images to make your GUI creation faster.
- Tips :
 - To create the language switch, please refer to the below web pages.
 - <https://support.touchgfx.com/docs/tutorials/tutorial-06/tutorial-06-part-1>
 - <https://support.touchgfx.com/ko/docs/development/ui-development/designer-user-guide/texts-view>
 - <https://support.touchgfx.com/ko/docs/development/ui-development/touchgfx-engine-features/texts-and-fonts>
 - <https://support.touchgfx.com/ko/docs/development/ui-development/touchgfx-engine-features/languages-and-characters>
 - To create an interaction, you can refer to the below link.
 - <https://support.touchgfx.com/ko/docs/tutorials/tutorial-02>
 - You can refer to the following pages to learn how to save various settings values and keep these values as they are even when changing screens.
 - <https://support.touchgfx.com/ko/docs/tutorials/tutorial-03>
 - <https://support.touchgfx.com/ko/docs/development/ui-development/software-architecture/model-view-presenter-design-pattern>



Things to know:

- We recommend using the latest 4.24 version of TouchGFX for this Quest.
- Font : In case of English use Verdana, for Korean use Malgun Gothic bold
- Font sizes: Small 14px, Medium 17px, Big 20px, Percentage value should be 40px

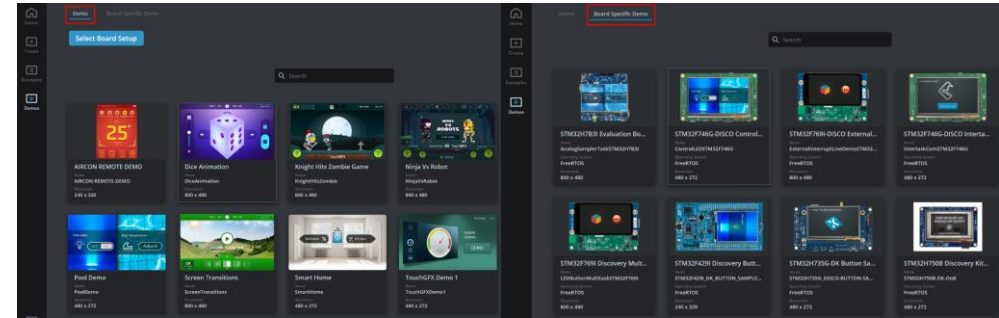
Signing one's simulation

- After completing the GUI, add your username in the GUI using a single Text Area and run the Simulator (example shown below). Finally, compress the Build/bin folder into a zip file and submit it.

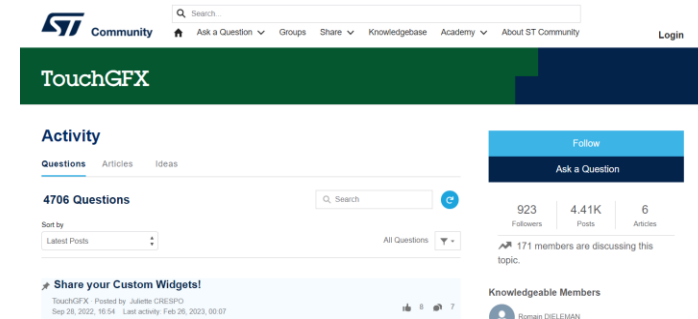


Useful resources

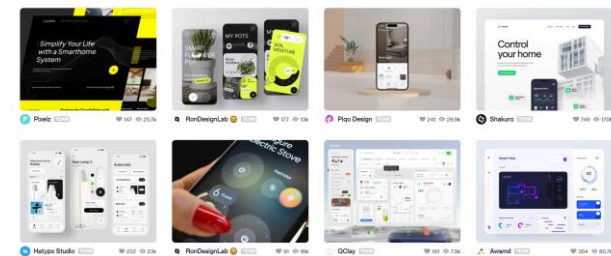
- Demos in TouchGFX Designer
- [TouchGFX Technical videos YouTube playlist](#)
- [Videos in Korean YouTube playlist](#)
- [ST Community](#)
- [TouchGFX documentation](#)
- [Dribbble](#) for UI inspiration
- [st.com](#) for information on ST products
- Free image creation tool : [Paint.NET](#)



Demos in TouchGFX Designer



TouchGFX – ST Community



Dribbble website

Our technology starts with You



Find out more at www.st.com

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