Here are the instructions to rebuild the firmware. These are rough instructions and I will try to improve and update them as I get time. Forgive me if it’s rough and not as clear as it could be.

**Additional Resources / Downloads**

* DGUS App <https://www.dwin-global.com/tool-page/> (DGUS\_V7x).

**Web.ShadowUI**

This project builds/displays each of the screens with supported languages.

1. The top menu has a link for each language/culture supported (Cultures.cs). For each culture there is a corresponding resource file with the translated text needed for that language.
2. The translate link is for translating new text via Google translate. Changing the language dropdown updates the text needed for the resource file. This would be copied and pasted in the data section of the resource file with a text editor like notepad.
3. Once you are happy with the screens and selected a language you need to get a full screenshot of the page. For best and quickest results, this can be done from Chrome. If you’re viewing the page in Chrome, hit Ctrl+Shift+I for the Developer Tools, hit Ctrl+Shift+P for the run command, type “screenshot”, click “Capture full size screenshot”. Wait a moment and the image will be generated and saved. That image will be used for the “ICL Files” process.

**ICL Files**

This directory is used to split full screenshots into individual screen images. Each of the language has its own directory for these files and is used to generate the ICL file with that language.

1. To split the full screen image into their screen images, you will use “\_SplitImages.exe” and the definition file “\_TaskDefinition.xml”. Assuming nothing was changed as far as positioning the “\_TaskDefinition.xml” has all the correct coordinates to slice the file in the correct locations. You would need to drag and drop both “\_TaskDefinition.xml” and the selected screenshot image onto the “\_SplitImages.exe” file. This will slice the image based on the details defined in the definition file. When it’s completed a message box will pop up and tell you x files exported, then those x files will be placed in the current directory.
2. Once you have files generated for the specific language, you will need to copy/move those files to 2 possible locations. If this is English or the language you want to reference in DWIN, you will need to copy the numbered images to the “\Source\ DGUS\DWIN\_SET\” directory. Those are only used for reference and not specific to the generated firmware. After that move the numbered files to the directory for the language they contain.
3. To create the new ICL file needed for the new firmware, this will be done using an internal tool inside the DGUS app. From the welcome tab click on the “DWIN ICL Generator” link.
   1. This step is pretty straight forward with only two steps. First, click “Select Directory“ and choose you language image directory (\Source\ICL Files\English). Second, click “Generate ICL” and save the file in the correct language build directory (\Builds\English v1.x\DWIN\_SET\16\_68%.icl).

**DWIN DGUS**

This directory is the project files needed to rebuild the bin files. There are two things that will need to be performed, rebuild the ICL file and generate the bin files.

1. To create the new ICL file needed go to the “welcome” tab click on the “DWIN ICL Generator” link. A second application will open up.
   1. This step is pretty straight forward with only two steps. First, click “Select Directory“ and choose you language image directory (\Source\ICL Files\English). Second, click “Generate ICL” and save the file in the correct language build directory (\Builds\English v1.x\DWIN\_SET\16\_68%.icl).
2. The other task that can be done is open the project and you can make changes to the individual screens. There are a lot of options and things to tweak, so be careful and backup often. Once you have made your changes, under the file menu save the project and then click generate.
   1. The generated files (13TouchFile.bin, 14ShowFile.bin, 22\_Config.bin) are saved in the “\Source\DGUS\DWIN\_SET” directory. These three files can be moved into the correct language build directory (\Builds\English v1.x\DWIN\_SET\).

Note: If you are making layout changes and are supporting multiple languages, the bin files are the same for all firmware directories with the icl files/languages that have changed.

Bins = layout and functionality changes.

ICL file = Background image / language.

\*\* The bin files layout need to match the background button and textbox placements.