**Custom Platform Files**

Welcome back to Cypress Academy, WICED WiFi 101. In the last video, I talked about the platform files that are included in WICED studio. But, what I forgot to show you was what to do when you have your own custom hardware or when you want to use the shield board that I will use in some of the later videos. So, here is a bonus video that shows you how to deal with those situations.

I have a shield board that I created to go along with this class that adds some features that are not available on the base board. The shield has PSoC 4 that acts as an analog coprocessor – it reads various analog sensors (thermistor, ambient light, humidity, and potentiometer) and then provides the results to the base board using I2C. The PSoC also provides a CapSense button user interface.

This shield board has two mechanical buttons and two LEDs just like the baseboard. When the shield is plugged in, we want to use the buttons and LEDs on the shield instead of the ones on the baseboard, but they’re not on the same WICED chip pins. Not to worry – we can just copy and modify the platform files from the baseboard so that the same project will work in either case with just a change to the way we build the project.

The platform files with the changes already made can be found in the class material. The name of the platform folder is WW101\_2\_CYW943907AEVAL1F. It represents the shield and the WICED kit together as a system. To install this for use in WICED Studio, you just need to copy it into the platforms folder.

Inside the WW101\_2\_CYW943907AEVAL1F folder you will see the same files as in the starting platform with a few of the names changed. All we had to do for this platform was change the mapping for the buttons and LEDs in platform.h. We also changed the comments at the top to be consistent and changed the function to set the LED states in platform.c since they are active high on the shield instead of active low like they are on the baseboard.

One final change needs to be made so that this new platform can be used. In the file apps/waf/tiny\_bootloader/tiny\_bootloader.mk, we need to make sure our new platform is listed as a valid platform. In this case, we can just add a \* at the beginning of CYW943907\* so that it will match our new platform name.

Now that we have the new platform files, the same projects can work seamlessly with either the kit by itself or with the shield and kit combination. I will use the baseboard by itself in most of the exercises but if you have the shield you can easily modify the platform name in the make target to use the exact same code for either setup. We will talk about make targets in detail in one of the upcoming videos.

You can post your comments and questions in our Wifi developer community or as always you are welcome to email me at alan\_hawse@cypress.com or tweet me at @askioexpert with your comments, suggestions, criticisms and questions.