Lesson 1-2 Running Snips

Welcome back to Cypress Academy, WICED WiFi 101. In this video I will show you how to build and run two simple applications. We call them “snips” because they are just slices off of a real application…. just enough to be a working example that can demonstrate a specific feature. We also call them snips because they reside in the snip folder of the “apps” folder. Remember I told you, all of your firmware will reside in the apps folder.

I am going to program two snips. The first snip is called “snip.gpio” which just blinks the onboard LEDS, the second is called “snip.scan” which will scan for all of the WiFi access points that are around you, and then it will display information about them.

In order to build one of the snips you need two things:

1. Knowledge of which “platform” (meaning which development kit) the snip will run on. The second thing is
2. A make target

The answer to the first question is pretty easy. I am going to run both of these projects on the CYW943907AEVAL1F. If I look in the platforms directory, I can see that there is a folder called “CYW943907AEVAL1F” ok… that’s my platform … that’s good.

The second thing that I need is a “make target” In the WICED SDK, all of the projects are built and programmed using make. Moreover, they are built and programmed with the same basic make files. When you run Make, you need to tell it which application you want to build, and what you want to do with it. This is done via the make target.

If you click on the little arrow to expand the make targets, you can see that we give you a bunch of examples with the SDK…

A make target is just a string of characters which tells the make system which project to build. They are all of the form of

directory.projectname dash platform name space download space run

For instance, to run the GPIO snip I will need to create a make target like this

Snip.gpio-CYW943907AEVAL1F download run

There are several ways to create a new make target. The easiest path is to copy an existing target by typing ctrl-c. Then paste it with control-v. When you do that, you will get a window that says “copy of snip.scan”… and you can edit it to suit your own needs. You can also “right click new” which will bring up a blank box where can type the complete make target.

Once you have a make target you can double click to run it.

When I double click the “snip.gpio” make target, it builds and programs my board… and lookey-here … the blinking LED. That’s great.

Now let’s build something a little bit more interesting… the snip.scan. This snip will scan all of the WIFI access points that it can “hear”, and then it will printout information about what it hears, for instance, the SSID name, RSSI, the Channels etc. You program this snip exactly the same way as the blinking LED example. Create a make target of “snip.scan-CYW943904AEVAL1F download run” … then you double click it.

In order to see the output of the snip, I will attach a terminal window to the serial port. It will printout all of the APs that it can see… wait for about 500ms … then go back around and do it again. Right where I am sitting right now, I can see a bunch of different WiFi access points.

In the next video, I will take you through the platform directory, and show the important files and what they do.

You can post your comments and question in our WIFI developer community on cypress.com, or, as always, you are welcome to email me at alan_hawse@cypress.com or tweet me at @askiotexpert. Thank you.