**Chapter 3-5 RTOS Timer**

Welcome back to WICED WiFi 101. The last RTOS primitive that I am going to talk about is the timer. The timer does exactly what you would think that it does. Specifically it runs your specific function at a regular interval that you can set.

All of the timer functions can be found in the API guide under components->rtos->rtos timers.

To create a timer you call wiced\_rtos\_timer\_init with the timer handle, the time between calls, the function you want called and the argument that you want to call that function with.

For instance, exercise 5, I will redo the blinking LED program to be run by a timer. In the application start I:

* Initialize the timer using wiced\_rtos\_init\_timer
* Then I start the timer using wiced\_rtos\_start\_timer

The timer will then periodically call the function ledToggle which will just toggle the led.

You can use a timer for many periodic functions in your system, for instance reading, an I2C accelerometer at a specific interval, or sending data to the cloud on some regular basis.

This could be implemented with a thread and a wiced\_rtos\_delay, but with this scheme I can easily turn it on & off with wiced\_rtos\_start\_timer and wiced\_rtos\_stop\_timer

You should be aware that this is an RTOS and there are other things probably going on in the system so these timers are CLOSE to correct but are not perfectly correct because they won’t run until it is their turn.

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

The next chapter is focused on using the C-libraries that we provide for you to improve your development cycle time.