**Chapter 3 RTOS Introduction**

Welcome to Chapter 3 of Cypress Academy, WICED WiFi 101. There is a lot of stuff going on inside of a network connected device. To be a good citizen on the network you are responsible for responding to many different requests. In addition, there are lots of events that are happening very asynchronously. In order to manage all of this complexity we have built WICED on top of a Real Time Operating system or RTOS.

We provide built in “threads” that will take care of all of the networking functionality and will hide you from the complexity of being attached to the network… obviously you will be able to configure that functionality… but you won’t need to worry about it.

In the WICED SDK we support multiple RTOSs including both ThreadX – which is actually built into the ROMs of our devices – as well as FreeRTOS. So you can choose either. I will say that you get a no cost license for ThreadX as part of the deal, so it is probably more efficient for you to use it. However, both will work.

Everyone has their own opinion about what is the best RTOS. In order to enable everyone to use the RTOS of their choice, we created the WICED RTOS abstraction layer. When you build your application firmware if you use the WICED\_RTOS functions it will abstract you from the actual RTOS and will enable porting between different RTOSes.

Our abstraction layer gives you all of the normal RTOS features including Threads, Semaphores, Mutexes, Queus and Timers. In the rest of the videos for this chapter I will show you how to use each one of these primitives.

Don’t forget that you can read about all of this in my textbook.

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.

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