Technical Article

Unit Testing Ultra-low-power MSP430™ MCUs in a Desktop Environment

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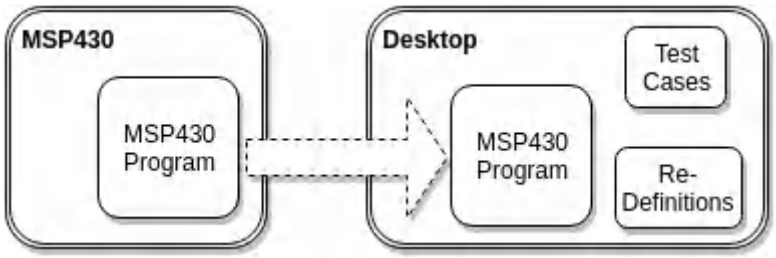
I've written a short white paper that outlines some methodologies that can be used for unit testing code written for any ultra-low-power MSP430™ microcontrollers (MCU). Through my many years of experience of writing software for desktop, embedded and web applications, it's only in the last few years that I've really transitioned into test-driven development, and on the whole, it can be one of the ways to dramatically improve code readability and structure, as well as reduce the potential for the introduction of bugs during design and refactoring stages.

Writing software for an MSP430 MCU should be no different, as one can apply similar design methodologies to embedded development. There are a few small tricks that need to be performed in order to properly setup an MSP430 MCU test suite, but they are relatively simple and make use of modern C++ constructs which fit nicely to mimic register updates and interrupts.



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