Product News

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IAR Systems adds major functionality to leading tools for Texas Instruments' MSP430 microcontrollers

Version 6.30 introduces stack usage analysis and parallel build as well as integrated static code analysis

Uppsala, Sweden—March 9, 2015—IAR Systems® has launched a new version of its leading development toolchain IAR Embedded Workbench® for Texas Instruments' ultra-low-power MSP430™ microcontrollers. In addition to the add-on product C-STAT® for integrated static code analysis, version 6.30 introduces stack usage analysis and faster build times through parallel build.

Stack usage analysis provides details on the maximum stack depth in an application. Calculating the stack space is notoriously hard for all but the smallest embedded systems. This fact makes worst case maximum stack depth very useful information in most embedded projects. Using the stack information now available greatly simplifies estimations of how much stack an application will need. Enabling stack usage analysis in IAR Embedded Workbench for MSP430 MCUs adds a stack usage section to the linker map file with listings of the maximum stack depth for each call graph root. The analysis process can be customized to take into account such constructs as calls via function pointers and recursion. The output can optionally be generated in XML format for post-processing activities.

Static code analysis performs source code level checks that can help developers detect potential code errors in complex applications and ensure compliance with coding standards for embedded applications in various segments. C-STAT is a powerful static analysis tool that executes fast and provides analysis results directly in the IAR Embedded Workbench IDE. It checks compliance with rules as defined by the coding standards MISRA C:2004, MISRA C++:2008 and MISRA C:2012, as well as hundreds of rules based on for example CWE (the Common Weakness Enumeration) and CERT C/C++. C-STAT is available as an add-on product.

To speed up build times, the user can now set the compiler to run in several parallel processes and make better use of the available processor cores in the PC. This feature can have a major impact on reducing the build times of the compiler.

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In the debugger, the new version adds advanced mode in the Advanced Cycle Counter. More information about the complete C/C++ compiler and debugger toolchain IAR Embedded Workbench for MSP430 MCUs is available at www.iar.com/ew430.

About MISRA C

MISRA, The Motor Industry Software Reliability Association, is a collaboration between vehicle manufacturers, component suppliers and engineering consultancies which seeks to promote best practice in developing safety-related electronic systems in road vehicles and other embedded systems. MISRA C is a software development standard for the C programming language developed by MISRA. More information is available at www.misra.org.uk

About CERT C/C++

The CERT C/C++ Secure Coding Standards are standards published by the Computer Emergency Response Team (CERT) providing rules and recommendations for secure coding in the C/C++ programming languages. More information is available at www.cert.org

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About IAR Systems

IAR Systems provides developers of embedded systems with world-leading software tools for developing competitive products based on 8-, 16-, and 32-bit processors. Established in Sweden in 1983, the company has over 46,000 customers globally, mainly in the areas of industrial automation, medical devices, consumer electronics, telecommunication, and automotive products. IAR Systems has an extensive network of partners and cooperates with the world's leading semiconductor vendors. IAR Systems Group AB is listed on NASDAQ OMX Stockholm. For more information, please visit www.iar.com.