IAR Systems adds powerful code analysis possibilities for Atmel 8-bit AVR developers

New version of IAR Embedded Workbench for AVR introduces static code analysis and stack usage analysis

Uppsala, Sweden—June 2, 2015—IAR Systems® presents version 6.60 of its development tools IAR Embedded Workbench® for AVR. The update extends code analysis possibilities with the integration of static code analysis tools as well as stack usage analysis.

Version 6.60 of IAR Embedded Workbench for AVR adds support for IAR Systems' static analysis add-on product C-STAT®. Completely integrated in the IAR Embedded Workbench IDE, C-STAT can perform numerous checks for compliance with rules as defined by the coding standards MISRA C:2004, MISRA C++:2008 and MISRA C:2012, as well as rules based on for example CWE (the Common Weakness Enumeration) and CERT C/C++. By using static analysis, developers can identify errors such as memory leaks, access violations, arithmetic errors, and array and string overruns at an early stage to ensure code quality and minimize the impact of errors on the finished product and on the project timeline.

In addition, stack usage analysis is introduced. As the stack is a fundamental property of an embedded application, setting it up properly is essential for ensuring the application's stability and reliability. However, calculating the stack space is notoriously hard for all but the smallest of systems. This challenging task can be greatly simplified by having access to information about the worst case maximum stack depth of the application. Enabling stack usage analysis in IAR Embedded Workbench provides just that, adding listings of the maximum stack depth for each call graph root to the linker map file. The analysis process can be customized to take into account such constructs as calls via function pointers and recursion.

"The new functionality in IAR Embedded Workbench provides great advantages for our customers," says Steve Pancoast, VP SW Development, Tools & Applications, Atmel Corporation. "Developers can leverage the new analysis possibilities to improve the quality of their code, as well as streamline their development process. Atmel's strong partnership with IAR Systems gives our customers access to world-leading tools across our entire range of AVR and Atmel | SMART ARM-based microcontrollers and microprocessors."

– more –

IAR Embedded Workbench for AVR is a complete set of high-performance C/C++ development tools featuring world-leading code optimizations creating compact, fast performing code. Version 6.60 introduces parallel build, which can have a major impact on speeding up build times. The user can optionally set the compiler to run in several parallel processes, which can significantly reduce the build times of the compiler.

To read more about IAR Embedded Workbench for AVR, visit www.iar.com/iar-embedded-workbench/atmel/avr/.

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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Editor's Note: IAR Systems, IAR Embedded Workbench, C-SPY, C-RUN, C-STAT, visualSTATE, Focus on Your Code, IAR KickStart Kit, IAR Experiment!, I-jet, I-jet Trace, I-scope, IAR Academy, IAR, and the logotype of IAR Systems are trademarks or registered trademarks owned by IAR Systems AB. All other products names are trademarks of their respective owners.

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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.