Tool Suite Extends Certification Support for x86 Assembly Code

LDRA has developed a variant of the LDRA tool suite that supports x86 assembler syntax. Catering to a broad range of x86 assembler platforms, including ASM486/386/286/186, Pharlap, MASM and Borland Assembler, the LDRA implementation provides scalable support for any x86 assembler variant. This integration enables certification for legacy applications that would not otherwise be certifiable.

By applying the LDRA language-independent representation model to assembly code, LDRA has fine-tuned the capabilities of the LDRA tool suite to include x86 assembler. The integration provides x86 assembler-based applications gain assembly static analysis, assembly coverage (including bitmap coverage on real-time targets), and creation of artefacts and reports consistent with other LDRA tools. Customers can now collect and process execution data on x86 processors in a variety of challenging scenarios such as:

• Hand-coded assembly programs including board support packages and BIOS
• Compiled programs, which can be disassembled and instrumented for coverage
• Legacy x86-based operating systems written in assembly
• Legacy code where full high-level source code is not available
• Coverage of complex MC/DC scenarios which are difficult to analyze via high-level language coverage

“Many industries—whether avionics, industrial control or medical—are facing new certification standards to which their legacy applications must comply,” noted Ian Hennell, LDRA Operations Director. “Legacy applications frequently lack the full high-level code, involve hand-coded assembly, or contain board specific BIOS code that previously could not be certified. With this integration, the LDRA tool suite delivers the necessary artefacts for these legacy applications to meet new certification standards or environments, saving companies the tremendous development and cost overheads of writing, testing and verifying new code.”

The LDRA tool suite is the only solution able to qualify assembler code for certification. In addition, tool qualification packages are available to support the use of these coverage artefacts. This breadth of coverage, coupled with LDRA’s DO-178B Tool Qualification Support Pack for C/C++, Ada83/95 and Assembly languages, increases process manageability and speeds certification.

Source URL (retrieved on *09/21/2014 - 1:13pm*):
http://www.ecnmag.com/product-releases/2010/12/tool-suite-extends-certification-support-x86-assembly-code