

LDRA streamlines regulatory burden with support for QNX Momentics

Wirral, UK, November 30, 2011. LDRA has announced today that its LDRA tool suite now supports QNX Software System Limited's QNX Momentics Tool Suite and QNX Neutrino Realtime Operating System (RTOS). This offers a best-in-class approach fine-tuned for development needs and compliance to industry standards. Increased government scrutiny and new standards have created a compliance burden that challenges time-to-market goals and threatens to explode software development costs. By providing compatibility with QNX technology, LDRA confronts the burden of regulatory compliance and unrealistic schedules, which in turn supports companies' efforts to build reliable, safety-critical systems without sacrificing development speed or cost.

The LDRA support for the QNX Momentics Tool Suite and QNX Neutrino RTOS brings a boost in quality and performance that can accelerate time to market. The QNX Momentics Tool Suite features application profiler and system profiler tools, which enable developers to visualize performance and operations at the system level across multiple cores, chips, or boards. Using these tools, developers can quickly identify and correct bottlenecks and deadlocks, and better manage resource utilization.

LDRA's static and dynamic analysis capabilities include specific implementations for regulatory standards. Developers gain application feedback tailored to the specific safety-critical industry standards they must meet. LDRA tool suite users may quickly and efficiently achieve the highest possible certification standards due to this tuned and optimized monitoring of code coverage, identification of untested code, and auto generation of test harnesses.

Following the avionics standard of DO-178B, many industry standards—IEC 62304 for medical, IEC 61508 for industrial safety, and the newly ratified ISO 26262 for automotive—demand focus on requirements traceability as well. LDRA's superior MC/DC code coverage is ideal for ISO 26262, which requires more strenuous code coverage requirements. As well, the LDRA tool suite traces all application requirements and offers bidirectional graphical insight into the relationships between the requirements, code, and tests, exposing process-level problems that are difficult to find. The improved compatibility enables greater insight and compliance with the targeted industry standard.

The LDRA solution serves as a frontline of defense for medical, industrial safety and automotive markets where industry standards are taking on an increasingly significant role as system complexity increases. In combining the strengths of system-level performance monitoring and requirement traceability within a standard-specific framework and compliance check, the regulatory process is streamlined. With better management of the development process, developers can

concentrate on innovation, knowing that the tools support and enforce the software quality fundamental to certification of the product.

“Key trends driving today’s eHealth market—aging populations, rising health care costs and demand for remote access to medical diagnosis and treatment—have caused medical-device manufacturers to create telehealth and telemedical devices,” noted Kroy Zeviar, Business Alliance Manager, QNX Software Systems. “Issues such as portability, wireless connectivity, compelling user experiences, safety, data security, quality, and reliability have become paramount. By working with leading experts such as LDRA to provide compatible technologies, we can help customers deliver solutions that manage system complexity and software compliance.”

“Similar shifts are evident in other industry sectors as well,” confirmed Ian Hennell, LDRA’s Operations Director. “Entrenched hardware assets are being replaced with software solutions in industrial automation, automotive and medical, and the need for an end-to-end software environment that traces all system requirements to prove proper design, code and test through development to certification has been painfully obvious. For many of these companies, the need to comply with industry standards is new. Our goal in ensuring that our tools work in conjunction with leading software providers such as QNX Software Systems is to enable such companies to streamline their processes in their efforts to deliver reliable, safe and secure embedded systems.”

The LDRA tool suite can verify applications created with the QNX Momentics Tool Suite, not only in the desktop simulated environments, but also on the target device. Using network communication to download the executable to the target, LDRA monitors and analyzes the execution history and unit test data. Comprehensive static and dynamic analysis can be run on the target system with the benefit of full report management from a common platform. Thanks to LDRA Eclipse plug-ins, developers can choose to use either the LDRA GUI interfaces or those of QNX Momentics Tool Suite.

The QNX Momentics Tool Suite is a comprehensive, Eclipse-based integrated development environment with innovative profiling tools for maximum insight into system behavior. Developers gain at-a-glance views of real-time interactions, memory profiles, and shorten their debug times—all factors that can lead to faster time to market. Using this suite, developers can target the QNX Neutrino RTOS, a full-featured, robust OS optimized to meet the constrained requirements of real-time embedded systems.

The LDRA tool suite offers complete lifecycle software testing covering all phases of development from requirements traceability, modelling, coding, analysis and test. Extensive compliance checking for both programming and industry standards, as well as requirements traceability establishes the LDRA tool suite as the most comprehensive, best-in-class software testing environment for mission- and safety-critical software.

LDRA and QNX Software Systems are hosting an online seminar entitled,

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“Optimizing the Development of Certified Medical Devices” on December 7, 2011. After a brief overview of IEC 62304 and its impact on medical design and development, guidelines that encourage clean, modular and architecturally enforced process are complemented with details on how to trace your requirements through design, code analysis, testing, and verification. To attend the seminar, please link to http://seminar2.techonline.com/s/qnx_dec0711a.

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