



DESIGN West 2013: Booth #2138

Media contacts:

Janice Hughes, Hughes Communications, Inc., Media Relations
Tel : +1 (705) 549-8952, Mobile: +1 (705) 774-8686, Email: janice@hughescom.net

Mark James, LDRA, Marketing Manager
Tel: +44 (0)151 649 9300, Email: mark.james@ldra.com

This press release and associated images (in high-resolution compressed jpeg format) can be downloaded from www.hughescom.net.

Screenshot 1: LCMS checklists ensure DO-178C/DO-278A or DO-254 process compliance.

| Item Number | Doc Title | SCM | Check List | Pass | Comment | Open | Closed | Rel Date | Ref | EHS | Del |
|-------------|--|-----|------------|--------|---------|------|--------|------------|-----|-----|-----|
| 000-SYS-01 | System Requirements Document | CC1 | View | Modify | | 001 | 000 | 05/03/2013 | | | |
| 000-SMAC-01 | Plan for Software Aspects of Certification | CC1 | View | Modify | | 002 | 000 | 20/03/2013 | | | |
| 000-SDP-01 | Software Development Plan | CC1 | View | Modify | | 001 | 000 | 31/12/2009 | | | |
| 000-SVP-01 | Software Verification Plan | CC1 | View | Modify | | 000 | 000 | 31/03/2013 | | | |
| 000-SOMP-01 | Software Configuration Management Plan | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SQAP-01 | Software Quality Assurance Plan | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SRS-01 | Software Requirements Standards | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SDC-01 | Software Design Checklists | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SCS-01 | Software Code Standards | CC1 | View | Modify | | 000 | 000 | 02/02/2013 | | | |
| 000-SRD-01 | Software Requirements Document | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SDD-01 | Software Design Description | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SVP-01 | Software Verification Cases and Procedures | CC1 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SVR-01 | Software Verification Results | CC1 | View | Modify | | 000 | 000 | 06/02/2013 | | | |
| 000-SLCE-01 | Software Life Cycle Environment Configuration Data | CC2 | View | Modify | | 000 | 000 | 31/12/2009 | | | |
| 000-SCC-01 | Software Configuration Code | CC1 | View | Modify | | 000 | 000 | 06/02/2013 | | | |
| 000-SAS-01 | Software Accomplishment Summary | CC1 | View | Modify | | 001 | 000 | 31/12/2009 | | | |

Screenshot 2: LCMS FAA-approved templates save thousands of management and engineering hours.

LDRA Compliance Management System Details Steps to DO-178C, DO-278A and DO-254 Certification

Avionics compliance management tools found compliant by FAA, EASA, and Transport Canada for certification readiness in US, Europe, Canada, India, and China are now available in cloud or locally hosted versions

DESIGN West, San Jose, CA. 22 April 2013—LDRA, the leading provider of safety-critical software verification tools and software best practices, releases the LDRA Compliance Management System (LCMS) to help companies develop the infrastructure to become DO-178B/C, DO-278A, and DO-254 compliant. LDRA Certification Services (LCS) experts, fully accredited across all aviation disciplines, walk customers through the fully compliant plans, standards and other lifecycle documents, process checklists, and problem reports to help customers manage certification planning, development, verification, and regulatory activities. LCMS details a process that ensures certification readiness and dramatically reduces project costs while delivering total customer satisfaction.

LDRA Compliance Management System was developed over the past 15 years by Todd R. White, a Systems and Equipment FAA Designated Engineering Representative (DER) accredited in both the United States and Europe with Level A authority on all aircraft systems and equipment, including engines. White and his team of experts, now part of LCS, developed the detailed certification document templates. These templates are widely used along with LCS consulting and training services by avionics OEMs, avionics suppliers, military equipment suppliers, and the FAA. The FAA most recently hired LCS to bring their Wide Area Augmentation System (WAAS) that aids air navigation up to DO-178/DO-278 compliance.

“With more than 30 years experience in product development and verification, Todd White has provided oversight and guidance on a host of airborne and ground-based systems, including UAVs, air traffic control, flight engines, and military equipment for a number of suppliers in the United States, Europe, Canada, India, China, and most recently, Australia,” noted Ian Hennell, LDRA Operations Director. “LCMS has provided the foundation for these certification efforts over the last 15 years, streamlining the processes and ensuring that companies who follow the LCS model are certified in less time for less cost.”

LCMS is a proven, end-to-end certification solution to help companies manage the costs and schedule of avionics certification projects that frequently extend over a number of years in development. With the formation of LCS, White and his team of world-class FAA DER consultants have developed a comprehensive certification management process that enables LCS customers to gain compliance to a wide-range of aviation standards:

- Aircraft & Systems Development (ARP-4754A)
- Safety Assessment (ARP-4761)
- Integrated Modular Avionics (DO-297)
- Flight Electronic Hardware (DO-254)
- Flight Software (DO-178B/C)
- Ground Systems (DO-278/A)

LCMS has become the process backbone underpinning the comprehensive support that oversees and guides applicants to certification compliance at a fixed cost. While the compliance tools can work with any third-party tools, customers who integrate LCMS with the LDRA tool suite are able to streamline their verification process to match the certification processes outlined by the FAA and EASA in addition to reducing thousands of hours of documentation effort and up to 50 percent of process costs.

To provide additional flexibility and security for customers, LDRA has adapted and licensed LCMS to work in cloud-based or locally hosted environments. LCMS Local is installed and secured behind an applicant's firewall, addressing the security-sensitive requirements of some military and avionics applications. LCMS Cloud delivers a more economical option for companies with greater flexibility. Both options include a two-day quick start training and LCS Level A DER ongoing support to ensure full compliance to the standards.

"Today's software systems, with all of their safety-critical electronics, represent a complex matrix of specifications, interrelationships, and proofs that the system fully functions as intended," said Todd R. White, FAA DER. "We developed the LDRA Compliance Management System to bring clients into compliance as easily and efficiently as possible. Our expertise and vast experience minimises the effort and risk of becoming certified."

LCS provides comprehensive support to avionics companies across the entire development, production, and maintenance lifecycle. The LCS team can advise on new code development processes, as well as provide the gap analysis required to establish a program for bringing millions of lines of legacy code into compliance. Training and continuous involvement through ongoing DER oversight along with LCS design and verification support ensures client success.

The full capabilities of the LDRA Compliance Management System will be demonstrated at DESIGN West in San Jose, April 23–25, 2013 in Booth 2138.

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About LDRA

For more than forty years, LDRA has developed and driven the market for software that automates code analysis and software testing for safety-, mission-, security- and business-critical markets. Working with clients to achieve early error identification and full compliance with industry standards, LDRA traces requirements through static and dynamic analysis to unit testing and verification for a wide variety of hardware and software platforms. Boasting a worldwide presence, LDRA is headquartered in the UK with subsidiaries in the United States, India and an extensive distributor network. For more information on the LDRA tool suite, please visit www.ldra.com.

Please send reader enquiries to:

Mark James
Email: mark.james@ldra.com

LDRA Compliance Management System (LCMS)

- Web-Hosted LCMS Server and TBmanager verification workflow engine
- Reviews and Analysis Management System
- Document Review Management System
- Problem Reporting Management System
- Risk Management System
- DO-178C, DO-278A and DO-254 Templates (See Appendix)
- Fully Supported by Level A FAA DER

LCMS Server Security

- 128 Bit SSL Encrypted
- Uses complex passwords
- Security is maintained by the host company, Verio.com, a subsidiary of NTAA America, and complies with SAS70 requirements.

LCMS Applications

- Web-based system
- Generates a unique record for each team member (Named User)
- Manages team member roles and permissions

DO-178C, DO-278A and DO-254 Templates

- Plan for Software Aspects of Certification (DO-178C, 11.1)
- Plan for Software Aspects of Approval (DO-278A, 5.1)
- Software Development Plan (DO-178C/278A, 11.2)
- Software Verification Plan (DO-178C/278A, 11.3)
- Software Configuration Management Plan (DO-178C/278A, 11.4)
- Software Quality Assurance Plan (DO-178C/278A,11.5)
- Software Requirements Standards (DO-178C/278A,11.6)
- Software Design Standards (DO-178C/278A, 11.7)
- Software Code Standards (DO-178C/278A, 11.8)
- Software Requirements Document (DO-178C/278A,11.9)
- Software Design Description (DO-178C/278A, 11.10)
- Build Procedure for Source Code (DO-178C/278A,11.11)
- Load Control for Executable Object Code (DO-178C/278A, 11.12)
- Software Verification Cases and Procedures (DO-178C/278A, 11.13)
- Software Verification Results (DO-178C/278A, 11.14)

- Software Environment Configuration Index (DO-178C/278A, 11.15)
- Software Configuration Index (DO-178C/278A, 11.16)
- Software Accomplishment Summary (DO-178C/278A, 11.20)
- Structural Coverage Analysis Results
- Tool Qualification Plan
- OOT / C++ Mitigation Guide
- Software Change Impact Analysis Template (FAA Order 8110.49)
- Software Conformity Plan (FAA Order 811.49)