



LDRA – The tool of choice



ENSCO Corporate H.Q.
Falls Church, VA

The Client

ENSCO's Innovative Systems Solutions (ISS) Division, is a leading provider of solutions for internet development, e-commerce, automated equipment and process controls and mission-critical software development and engineering.

The Projects

ENSCO have been asked by a number of leading aerospace companies to provide experienced software test teams to reduce development costs and improve the quality and performance of their customer's products. ENSCO have achieved these aims by utilising the *LDRA tool suite* on a number of projects. One such project has been unit testing the embedded systems software for actuation systems written in C for the Joint Strike Fighter.

Another example has seen the LDRA tool suite utilised for the complex task of unit testing safety critical C++ object-oriented real-time embedded applications for the engine control system of a next generation passenger aircraft.

The Requirements

ENSCO required a tool suite that would assist in automating their testing processes. Following a rigorous analysis and competitive tool review they selected the *LDRA tool suite* as their preferred and fully integrated static analysis, dynamic analysis and unit testing tool suite.

Frank Zurlo, ENSCO's ISS Deputy Division Manager commented, *"The LDRA tool suite was our preferred tool of choice due to the technical and commercial benefits we gain. Due to the ease of use of the tool we can have a tester up and running within 3 – 10 days.*

With such a small learning curve and easy configuration we can achieve maximum efficiency from the team and bring large savings in our testing process."

The Benefits

ENSCO had their work cut out for them on the engine control system project because the software testing and verification had to comply with Do-178B Level A requirements which include strict structural coverage guidelines, requiring 100% MC/DC. Frank said: *"The software was extremely **complex object oriented C++ code** and the LDRA tool suite has assisted greatly in testing and certifying the source code to DO-178B Level A."*

"In terms of process, the LDRA tools provide a facility to store tests and documentation in such a way that we can pass these to our customer and they are able to easily load this information into their copy of the tools and carry out their own verification process as part of acceptance."

ENSCO have been impressed with the resultant time and cost savings for their customers. Frank continued *"ENSCO has benefited from a 50% improvement in performance using the LDRA tool suite, as opposed to traditional methods.*

The automated process enables the testers to focus on unit testing as TBrun takes away the traditionally time consuming task of creating stubs and writing the harness code."



Frank Zurlo



The Future

There is a current trend toward outsourced software development and testing. With their experience and working closely with LDRA, ENSCO are well placed to leverage new business opportunities, services, configurations and support testing services using the *LDRA tool suite* in the future.

A fully trained team of unit test specialists are available to meet customer software testing needs.

"50% improvement in performance using the LDRA tool suite"

To find out more about saving money and improving quality of service contact LDRA

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