

Lockheed Martin Awards nCode Major Contract

Industry: Aerospace

In early 2006 Lockheed Martin awarded nCode, the leading provider of end-to-end systems for the monitoring, collection, analysis and management of durability data, a major contract for F-35 Joint Strike Fighter test data processing. nCode will supply its ICE-flow® Library and GlyphWorks® solutions to enable the effective management and processing of data for F-35 static and dynamic airframe test programs.

Designed to replace a multitude of fighters including the F-16 and Harrier, the F-35 will be a cornerstone of future defense capability for the US and its allies. Development of such a complex and versatile aircraft is a major program for Lockheed Martin and its partners. Static and durability testing for the two STOVL (Short Take Off/Vertical Landing) variant test structures will be done in the Lockheed Martin Engineering Structural Test Facility, Fort Worth, Texas. Similar testing of the two CTOL (Conventional Take Off and Landing) variant airframes and horizontal tail components for all three variants will be conducted in the BAE Systems Structural and Dynamic Test Facility, Brough, United Kingdom. The three carrier variant airframes will be tested in Grand Prairie, Texas by Vought Aircraft Co. At times, as many as five separate F-35 airframe tests will be underway simultaneously.

"The successful implementation of the complex test program is critical to the whole aircraft development," says Robert J. Burt, Director and Chief Structures Engineer for F-35 Structural Development & Integrity. "Lockheed Martin and its partners required a method for rapidly sharing and processing secure test data among two hundred structural analysts in nine integrated teams across the globe."

Developing a solution in-house was infeasible. Following exhaustive analysis, an established commercial product was deemed to be the most cost effective and efficient solution to meet these accelerated team-wide requirements.

Lockheed Martin selected nCode because it demonstrated a comprehensive test data management system together with web-enabled access and data processing. Another contributing factor to the selection of nCode was the system scalability needed to handle the massive volumes of test data that will be generated.

ICE-flow will enable the JSF Structural Development and Integrity Group, along with its engineering partners, to search for, access and examine key test data online. This system streamlines structural analysis by providing users the capability to rapidly identify and download custom sets of data by test condition and percent load at the desired strain gauge level. ICE-flow Library will be the single source for the



released structural data. The team's structural design and analysis engineers will download data sets on-demand for analysis from this single repository and provide preliminary reports back through the same web-enabled Library. GlyphWorks is designed for the processing of huge multi-channel, multi-test, multi-format datasets and will be used to perform a full range of automated time, frequency, statistical and fatigue analyses.

According to nCode Chairman Brian Dabell, "...tracing terabytes of data as they move between different departments and partner companies are just some of the factors driving laboratories in the aerospace industry to consider new approaches to structural test data processing and management. ICE-flow addresses these needs. nCode will help the JSF team meet its firm's commitments to timing, performance and budget constraints."

About nCode

nCode provides end to end systems for the collection, analysis and management of engineering data. Its technologies help customers understand product performance, accelerate product development and improve product design. The company's portfolio comprises tools that allow data acquisition in the harshest environments, analysis of the most complex engineering data sets and optimization of product durability. The power and ease of use of nCode technologies is a direct result of its world class materials expertise and in-depth experience of a broad range of industries.