

## AVIATION WEEK EXECUTIVE ROUNDTABLE

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National Defense Industry Association/  
Association for Enterprise Integration

# INTEROPERABILITY SUMMIT IN SUPPORT OF NETCENTRIC OPERATIONS

**Hosted By:**

Linton Wells II, Ph.D.

Assistant Secretary of Defense (Acting) for Networks and  
Information Integration and Defense Dept. Chief  
Information Officer

**Written By:**

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Aligning the enterprise of the Defense Dept. and industry suppliers was the focus of the fourth Aviation Week Executive Roundtable: Interoperability Summit, which was held May 9 in Washington, D.C. Sponsored by UGS, a leader in life-cycle management, and held in cooperation with the Association for Enterprise Integration (AFEI), the roundtable was hosted by Linton Wells II, Ph.D., assistant secretary of defense (acting) for networks and information integration and Defense Dept. chief information officer.

The invitation-only participants at the roundtable included representation from the three work groups: Netcentric Operations Industry Forum of AFEI, the Netcentric Operations Industry Consortium and the Worldwide Consortium of the Grid. Also attending were representatives of the military branches and industry leaders tasked with program and/or information technology responsibilities.

more available, reliable and cost-effective and can readily assimilate new technology and upgrades throughout the protracted A&D life cycle. Nichols added, “The ‘mission thread’ to which Wells refers is what will enable these platforms to optimize their performance in joint multi-service/multi-national operations while remaining aligned with future threat scenarios.”

The mission areas in this “enterprise approach” for the Defense Dept. and its community of suppliers must include four components, according to Wells.

1. Support the business of the Defense Dept.—war fighting, enterprise information integration and intelligence.
2. Provide security to the information within agencies.
3. Provide for exchange of information with coalition partners that change depending on mission/program/system.

**“We need to accelerate interoperability, not in future years, but in a matter of months.”**

**—Linton Wells II, assistant secretary of defense (acting) for networks and information integration and Defense Dept. chief information officer**

Wells issued a simple challenge to the group: identify actions for the near-term that will have an enabling influence for current efforts while also supporting long-term netcentric operations objectives.

For the purposes of the session, the focus was on enterprise capabilities. Wells said the requirement is for an “Internet-like” model that will form the enterprise foundation. The model would mediate among applications and enable messaging and collaboration, while providing information assurance that protects the credibility of data, identifies vulnerabilities and addresses risk.

“This can’t be about wider moats and angrier alligators [to protect information],” Wells said. “It’s about managing information that involves outsourced goods and services.”

Tim Nichols of UGS, the sponsor of the roundtable, said enterprise-wide interoperability to facilitate collaboration—among teams, allies, agencies and industry—is critical if the industry is to provide systems, platforms and weapons that are

4. Enable cooperative operations with non-traditional partners (non-governmental, international and commercial organizations).

As part of these components, Wells said there is a need for data to be tagged in ways that make it discoverable, accessible and understandable. He also noted that the information would be shared with standard partners (NATO, for instance), as well as with less traditional or currently unanticipated users. “We need to accelerate interoperability, not in future years, but in a matter of months,” he added.

With Wells’ challenge on the table, the roundtable participants then heard from a member of the Automotive Industry Consortium. Richard Riff, one of five Henry Ford fellows for Ford Motor Co., explained how auto makers arrived at a base-level open system that allows for the exchange of data among suppliers and manufacturers.

Riff said the auto consortium participants determined that by establishing the base open-system standards, “the

**“The automotive industry has saved hundreds of millions of dollars by adopting common standards for all value-chain members to collaborate, thereby reducing the use of proprietary software to less than 5% of the time.”**

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automotive industry has saved hundreds of millions of dollars by adopting common standards for all value-chain members to collaborate, thereby reducing the use of proprietary software to less than 5% of the time.” Riff said the savings could then support market-driven innovation and differentiation for the individual companies.

In the automotive industry model, individual companies work on system upgrade projects, sharing the findings with other consortium members that invest in the development. The financial services industry addresses upgrade of the open system in much the same way, sharing the cost and research effort among member companies equally.

In the aerospace and defense industry, the shift to a set of base-level boundaries and an open operating system based on XML would allow contract dollars to move up the value stream into new technologies and innovation that would stretch further in meeting the capability requirements outlined by Defense Dept. and military leaders. Security and information assurance would be linked to “communities of interest,” which could be perishable or permanent.

Participants in the roundtable then spent two hours identifying actions that would lead to change “in a matter of months,” as Wells had specified.

## PROPOSED ACTIONS

The actions outlined by the 36 participants were listed and prioritized. The four working groups identified the top priority as being the establishment of the social aspects of movement toward interoperability and collaboration.

**I. Governance**—Establish boundaries, processes and protocols for achieving a foundation of operation enabling collaboration and interoperability. Develop the protocols and processes.

*(Action Leaders: Bob Lentz, director of information assurance (C<sup>3</sup>I) in the Office of the Secretary of Defense, and Bob Stow, senior vice president of engineering, technology and program management at BAE Systems NA.)*

## II. Apply an interoperability model to address identity management/global distribution directory—

Include in this effort protocols for exchange/collaboration and contracting/acquisition. A pilot program should incorporate the governance boundaries, processes and protocols identified in the “Governance” action item. During the pilot/test program, identify the environment needed to demonstrate interoperability, in terms of key critical behaviors and boundaries. Also, identify tasks in terms of the “mission threads” of end users and develop a framework for integration and test of the system. Track rules that impede or create barriers to the effort so that they can be addressed through policy. Also, identify tasks in terms of the “mission threads” of end users.

Needs—Acquisition authority and responsibility to launch.

*Action Team—U.S. Navy Capt. Tom Djugolecki; U.S. Air Force Col. David Madden, commander of the Enterprise Integration Systems Group at Hanscom AFB; B.J. Mayhew, UGS; John Phillips, vice president of government solutions at Home Depot; Wendy Roberts, CEO of Future Skies Inc.; Will Ivancic of NASA’s Glenn Research Center; Chris Gunderson, executive director of the Worldwide Consortium of the Grid; and Dave McQueeney, chief technical officer of U.S. Federal for IBM Corp.*

**III. Use the NII data strategy for common lexicon and interoperability schema based on XML and “Internet-like” capabilities**—Participants noted that the lack of a common lexicon has been a barrier to developing

standards; this action item intends to remove this barrier.

**Needs**—Conduct a follow-on workshop June 27, hosted by the Space and Naval Warfare Systems Command, to achieve joint staff buy-in. Hold a follow-on Aviation Week Executive Roundtable with chief executive officers, chief technology officers and chief information officers to gain buy-in to an XML- and browser-based open system and an operational model for upgrades, insertions, varying levels of security and communication.

**Action Team**—U.S. Navy Capt. Tom Djugolecki; Tim Nichols, UGS; and Dave Chesebrough, president of AFEI.

**IV. Gain representation from the international industry community to assist and collaborate on this effort. ♦**

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## AVIATION WEEK EXECUTIVE ROUNDTABLES

The Aviation Week Executive Roundtables are an invitation-only forum in which hands-on program executives meet to address issues common to technology development and industry effectiveness as they apply to space exploration, defense, security and commercial air transport.

The roundtables are an outgrowth of the Aviation Week Advisory Panels. The executives on these panels initially called for action planning surrounding several critical issues:

- Industry interoperability.
- Technology transfer/sharing.
- System life-cycle management.
- Development of future program leaders.
- Redefining engineering performance to fit new engineering task models.

Aviation Week has held four Executive Roundtables. The first two—which were held in conjunction with the Aerospace & Defense Programs Conference and Toulouse World Aerospace Symposium—were designed to gain a shared understanding of issues and develop action plans to address them. The third roundtable focused on increasing fleet/weapon systems readiness while improving cost, cycle time and interoperability among users, as well as improving industry support. This fourth Aviation Week Executive Roundtable went to the next level: It established the systems and methodologies that enable interoperability and global collaboration. ♦