

# **TELCOM 2011: Telecommunications Seminar**

## **Examining The Trade-offs Between Net-Centricity and Information Assurance**

**Dr. Isaac R. Porche, III, Senior Analyst, RAND**

**Abstract:** The ideal venue for collaboration and information sharing is among personnel who share the same location, security-clearance level, language, vocabulary, experiential background, and information technology. However, the reality is that these conditions are rarely met. For example, Army must collaborate and share information remotely with non-Army organizations, including government agencies, service partners, foreign militaries, and nongovernmental organizations, each with a unique set of capabilities. Such diverse environments are becoming more common, especially in light of the formation of international coalitions and alliances of organizations serving as first responders in the aftermath of natural disasters (e.g., Hurricane Katrina). This talk examines the concept of "Net-centricity" that is supposed to enable such wide-collaboration. It discusses some of the challenges implied by such openness. Finally, the talk surveys some of the potential trade-offs between security and openness.

**Bio:** Dr. Isaac Porche is a senior analyst at RAND. He received a Ph.D. in electrical engineering from the University of Michigan in 1998 and an M.S. in electrical engineering from the University of California, Berkeley, in 1991. Areas of expertise include cyberspace operations and cyber security, network and communication technology, information assurance and computer network defense. He leads research projects for the U.S. Navy, U.S. Army, and the Office of the Secretary of Defense. For the Army, he is exploring the Army role in cyberspace. In addition, he has assessed collaboration and information-sharing issues, , and modeling and simulation of tactical network communication technologies. He currently leads a study for the Army on The Army Role in Cyberspace. For the Navy, he currently leads multiple efforts to study network technologies used onboard ships. In 2005, he co-led a Net-Centric Operating Environment (NCOE) Capability-Based Assessment effort for the Joint Staff (J6). He has studied the readiness of advanced batteries and fuel cells for automotive and auxiliary power needs. He remains active in the automotive field as a consultant for Automotive News. He has convened a number of workshops at RAND on topics including network science and cyber security. In 2004, he co-authored the monograph Future Army Bandwidth Needs and Capabilities. A more recent publication appears in the Fall 2007 issue of the Military Operations Journal, titled The Impact of Networking on Warfighter Effectiveness. Most recently, he was lead author of Extending the Army's Reach: Collaboration and Information Sharing in Diverse Environments, a monograph published by RAND in February 2008.