ABSTRACT

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*The Power of Information Age Concepts and Technologies*

Paper Title:

Developing and Populating the Global Information Grid for Joint and Coalition Operations: Challenges and Opportunities

Topical Area:

Network Centric Operations Transformation

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Developing and Populating the Global Information Grid for Joint and Coalition Operations: Challenges and Opportunities

In today's world, it is inconceivable that anything could be accomplished outside of coalition operations.

Dr. David Alberts
Director, Research and Strategic Planning
Office of the Assistant Secretary of Defense NII
Seventh ICCRTS – September 16, 2002

Is there a place for small navies in network-centric warfare? Will they be able to make any sort of contribution in multinational naval operations of the future? Or will they be relegated to the sidelines, undertaking the most menial of tasks, encouraged to stay out of the way - or stay at home?...The "need for speed" in network-centric operations places the whole notion of multinational operations at risk.

Professor Paul Mitchell
Director of Academics – Canadian Forces College
Naval War College Review – Spring 2003

Network Centric Operations are transforming the nature of warfare. While literally countless definitions have been offered to explain what Network Centric Operations and Network Centric Warfare, recent directives by the Assistant Secretary of Defense for Networks and Information Integration (ASD/NII) have served to bound the problem and define the elements of the Global Information Grid (GIG) – the foundation for Network Centric Warfare. ASD/NII’s three goals have been articulated at previous Command and Control Research and Technology Symposia – as well as in other venues; 1) make information available on a network that people depend on and trust, 2) populate the network with new, dynamic sources of information to defeat the enemy, and 3) deny the enemy comparable advantages and exploit weaknesses.

This paper addresses a critical element of this GIG construct – how will the GIG be populated and developed to ensure success in Joint and coalition operations. We assert that a GIG designed to be utilized by U.S. and coalition forces and a GIG populated by a wide array of U.S. and coalition sensors and other dynamic sources of information will be a much more powerful tool than a GIG that is designed, developed, resourced and used nearly exclusively by U.S. forces.
We base this assertion not on the need to conduct coalition operations for “political cover” – although this is an important consideration – but on the operational realities of warfighting and the lessons learned from Operational Enduring Freedom and Operation Iraqi Freedom. For example, in the naval context, in the spring of 2002, during Operation Enduring Freedom, 91 coalition ships were concentrated in the Central Command Area of Responsibility. While 31 of these ships were U.S. Navy ships, 60 of these ships belonged to U.S. coalition partners. Clearly, the success of this U.S.-led operation – as well as others – was tremendously enhanced by the warfighting capabilities provided by a robust array of coalition assets.

As the United States’ military builds and populates the Global Information Grid as the foundation for Network Centric Warfare the value-added of building the GIG in such a way that it both supports coalition partners and accommodates sensors and systems that these partners bring to the table is clear. A GIG populated exclusively by U.S. sensors and systems may, in fact, be unaffordable and ineffective. The importance of including U.S. coalition partners “in the net” was put most succinctly by the Director of the U.S. Department of Defense Office of Force Transformation, Vice Admiral Art Cebrowski, who opined; “The United States wants its partners to be as interoperable as possible. Not being interoperable means you are not on the net, so you are not in a position to derive power from the information age.” While the construct of the GIG as it is currently envisioned does not exclude coalition partners, this paper suggests that insufficient effort has yet been applied by each of the United States’ military services to constructing their portions of the GIG to easily and seamlessly accommodate coalition partners.

Our research suggests that the window of opportunity to thoughtfully steer the construct of the GIG in such a way to accommodate U.S. coalition partners may be narrow indeed. Coalition participants at previous International Command and Control Research and Technology Symposia has made presentations that have expressed frustration with the direction that the United States has taken with Network Centric Warfare. They have pointed out, correctly, that while coalition operations in the previous century has worked adequately based on voice transmissions and limited data exchanges, with the advent of Network Centric Warfare future coalition operations will only be effective if coalition partners have real-time access to the same information that U.S. forces have access to. This means that coalition partners must have seamless access to the GIG. Our research of other acquisition program indicates that designing coalition interoperability into the GIG at its early design stages is far more effective than attempting to modify the GIG to accommodate coalition sensors and systems after it is built.

Thus, our paper’s thesis boils down to this: While our coalition partners ask what the price of admission is to work with United States military forces, in a GIG-enabled environment we ask what the price of omission is if the United States fails to include these coalition platforms - as well as the sensor suites they bring to the fight – into our Global Information Grid and other warfighting networks. We assert that the price of omission is too high and robust efforts must be undertaken immediately to accommodate potential coalition partners into the GIG at the earliest stages of its development.

Our paper recommends that this issue be addressed with urgency by the United States Department of Defense as well as by the individual branches of the military services. We further recommend that detailed campaign analysis and modeling and simulation be conducted to assess the value-added of including coalition forces in a Global Information Grid-enabled warfighting environment and offer suggestions for how this might be accomplished using assets such as the Distributed Engineering Plant.