



CCRP Update  
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OASD (NII)

CCRTS  
2004



# CCRP Charter



- Develop an understanding of the national security implications of the Information Age
- Develop advanced concepts leveraging the capabilities afforded by emerging technologies and concepts
- Support Joint Vision 2010 & Joint Vision 2020 implementation
- Improve the state of the art and practice of C2
- Bridge the technical and operational communities
- Disseminate results and best practices
- Foster development of C4ISR research and analysis infrastructure
- Identify and articulate critical research areas



# FY04 Program (1)

- Metrics
  - Network Centric Warfare/Operations Framework (Net-Centricity)
  - Transformation Metrics
  - Info Age Metrics Working Group (J6, JFCOM, DISA, OPNAV N6, RAND, MITRE, IDA, BAH, SAIC, CNA, EBR, ThoughtLink, Boeing, Juan de Bloch Group, SYS, Services)
  - Sense and Respond Logistics
  - Advance Battlespace Awareness (ABA)
  - Trust, mistrust, and distrust



# FY04 Program (2)

- Center for Excellence in Experimentation
  - Code of Best Practice for Experimentation Short Course
  - Future Concepts and Experimental Plans (JFCOM, J9)
  - Sense and Respond Logistics Experimentation (OFT, USMC, CNA)
  - IS/NCW Seminar and Workshops Series (J6, JFCOM)
  - C2 Experimental Designs and Metrics (JFCOM, J9)
  - HLS C2 ACTD
- Improving the State of the Art and Practice
  - DoD Transformation (Office of Force Transformation, CJCS)
  - Distributed Team Decisionmaking: (ONR)
  - Modeling and Simulation of Synchronized Battlespace Actions (RAND)
  - Future Combat Systems (CECOM)
  - Tools for OOTW C2 (UK, NATO)
  - ABMs for NCW (MCCDC)



## FY04 Program (3)

- International and Coalition Initiatives
  - NATO SAS-050 Working Group
  - C2 Decision Modeling (UK)
  - 9th International CCRTS (Denmark)
  - Multi-National Interoperability Council (AU,CA,FR,GE,UK,US)
  - US/UK Bilateral Working Groups on C2 Issues and Transformation
  - Coalition Experimentation (JFCOM and Coalition Partners)
  - NATO Code of Best Practice for C2 Assessment Lecture Series (CA, UK, GE,...)
  - US/CA Bilateral Meetings on Command and Experimentation (US, CA)



# FY04 Program (4)



- Education and Awareness
  - NCW/NCO
  - DoD Transformation
  - Experimentation
- Community Leadership and Outreach
  - Leadership: Chair ISWG; NATO SAS-050
  - CCRP Web Site
  - Maintain Directory of more than 4170 C2 Researchers and Practitioners
  - Provide Forums for Information Exchange (Symposia & Workshops)
  - Support to ARDA and NIMD



# Publications in the Pipeline



## Information Age Transformation Series

- Campaigns of Experimentation: Pathways to Experimentation and Transformation
- Exploring the Edge: Leveraging Inherent Human Capability
- Journal of Defence Science: Network Enabled Capability
  - Available on the Web at [www.dodccrp.org](http://www.dodccrp.org), but will be published as a CCRP publication



# CCRP Impact



- Material from the CCRP publications are influencing key experimentation efforts at USJFCOM, NATO Allied Command Transformation, the Canadian Forces Experimentation Centre, UK Defence Science and Technology Laboratory (DSTL), and the Swedish Defence Research Agency.
- Active role in a current DoD initiative using the Network Centric Operations Conceptual Framework for C2 Assessment.
- Creating a baseline using real-world case studies to measure Network Centric Operations.
- Direct interaction with USJFCOM in planning campaigns for transformational experimentation.
- Collaboration with the USMC on Project Albert using agent-based simulation to explore new command and control doctrine and relationships.





# CCRP/NII Priorities

- Execute and Innovate
  - Focus on delivery of capabilities associated with key GIG-related communications and information programs
  - Meet all key cost, schedule, and technical objectives
- Synchronize and Integrate
  - Develop a family of systems integration plan
  - Establish an end-to-end test program
- Migrate
  - Develop transformational roadmaps
  - Specify programs to be eliminated, sustained, or integrated based on consistency with network-centric principles
- Implement
  - Develop Business Management Modernization Program
- Accelerate
  - Foster Information Age Transformation by identifying near-term opportunities

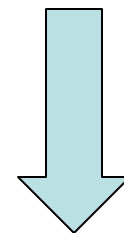


# Yesterday, Today, and Tomorrow

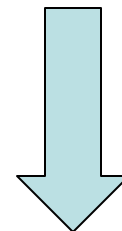


- Recent Past
  - *As-is* communication and information systems infrastructure
  - Program-centric oversight and acquisition
  - Interoperability is but one of several priorities
- Present
  - GIG Integrated Architecture firmly established
  - Key programs defined and initiated
  - Significant GIG-related FYDP funding
  - Applying net-centric criteria to new and legacy systems
  - Strategic partnerships established
- Future
  - Developing capability gaps based on OIF lessons learned
  - Building the *to-be* GIG
  - Systematically migrating from the *as-is* to the *to-be*
  - Filling the capability gaps by evolving a network-centric capability

Platform-Centric  
Operations



The Beginning of  
Network-Centric  
Operations



Network-Centric  
Operations



# CCRP/NII Strategic Partnerships



- NII is working closely with JFCOM, STRATCOM, the Joint Staff, and PA&E
  - Net-centric program reviews
  - Enhanced planning process
  - Net-Centric Functional Capabilities Board
- Other partners
  - SOCOM - Global War on Terrorism
  - Services - Incorporation of GIG architecture and network-centric principles
  - Allies and Coalition partners



# BAA in Support of OASD(NII) & CCRP



- Broad Agency Announcement for:
  - Research into edge or networked organizations
  - Development and testing of the C2 theory for these orgs
  - Analysis of the conditions for their success
- Initial concept papers should be 3-5 pages and include:
  - Nature of the C2-related problem being addressed; specific research objectives; technical approach and project plan; the deliverables; qualifications of the project team; examples of relevant performance and firm fixed price
- Where more information is required, a second 50-page technical paper may be requested and will be due prior to Dec. 31, 2004
- Read the BAA at [www.dodccrp.org](http://www.dodccrp.org)

*Concept Papers are due July 30, 2004*



# Recent CCRP Recognition



- Dr. David S. Alberts accepted the following awards on behalf of the CCRP during 2003-2004:
  - *Aviation Week and Space Technology's* Government/Military Laurel
  - The inaugural 2004 NCW Award for Best Contribution to the Theory of NCW presented by the Institute for Defense and Government Advancement
- *Power to the Edge*: finalist for the Royal United Services Institute (U.K.) Westminster Medal for Military Literature (2004)



# 2004 Events



- Ongoing Events
  - Information Age Metrics Working Group (formerly ISWG) (monthly)
  - NATO SAS-050 (quarterly)
  - Support for JFCOM experimentation (ongoing)
  - 2004 CCRTS
- Upcoming Events
  - 9<sup>th</sup> ICCRTS
  - 72nd MORS Symposium (June 18)
  - NATO SAS-050 (July)
  - Strong Angel II (July 17-24)
  - 10<sup>th</sup> ICCRTS will be held in June 2005 at the Ritz-Carlton, Tyson's Corner, VA (Washington, DC area)



# 2004 Completed Events



- MORS Workshop: Operations Analysis Support to Network Centric Operations (Jan. 27-29)
- NCO Conceptual Framework Workshop #3 (Feb. 3-5)
- Multinational Experiment 3 (Feb. 2-20)
- Highland's Group Mini-Forum (Mar. 29)
- NATO Allied Command Transformation Workshop (Apr. 5-7)
- Cornwallis IX, Austria (April)
- NATO SAS-050 (March-April)
- Project Alberts International Workshop 8, Singapore (April)
- Marine Corps Aviation C2 Workshop (May 11-12)
- Keynote Presentation at the "Science Supporting Innovation: Research and Development in Network Based Transformation," conference in Sweden (May)



# FY2005 Research Priorities



- Stability Operations
- Information Operations
- Speed of Decision and Speed of Action
- Transformation of the USMC's "Three Block War" concept into the "Four Block War"
- Integration of the Interagency into the military planning process
- Interagency Command and Control: Experiment, Train and Analyze
- Trust: Decisionmaking in the C2 domain
- Decisionmaking under uncertainty
- Coalition peace operations
- Leadership and Self-Synchronization





# The Way Ahead

- The Fundamentals are in place
  - The Vision is well articulated
  - DoD leadership is on board
  - GIG architecture and core programs are in place
- Much work has been done, but much more remains to be done
- It is all about being network-centric now!—and more so in the future
- The Way Ahead...*Experiment, Execute, Integrate, Migrate, Improve, Accelerate, and Innovate*