Network Centric Operations Industry Consortium Overview

Presentation Given To
Ground System Architectures Workshop
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www.ncoic.org

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Why the NCOIC?
Industry Leadership to Reduce NCO Time-To-Market

- A Forum for Subject Matter Experts to Collaborate on NCO Initiatives:
  - Better Understand Customer's NCO Vision, Goals, and Objectives
  - Exchange strategies and proven approaches to enhance system delivery

- An Organization Committed to Establishing Open, Interoperable Systems using Common Best Practices and Systems Engineering Techniques:
  - Facilitates Consistency Across Industry
  - Advocates for Open and Interoperable Systems Design

- Companies Committed to Meeting the Government More Than Half-Way:
  - Understanding Industry's Responsibilities and Acting
  - Addressing the Problem, Taking Initiative, Understanding the Requirement
  - Seeking close collaboration with Government and the rest of industry.

> This consortium exists to exchange ideas and produce process and technology deliverables that facilitate force transformation through NCO.

Consortium Vision and Mission
Responding to the Need

- Vision:

> *Industry working together with our customers to provide a network centric environment where all classes of information systems interoperate by integrating existing and emerging open standards into a common evolving global framework that employs a common set of principles and processes.*

- The Mission of the Consortium is to help accelerate the achievement of increased levels of interoperability within, and amongst, all levels of government of the United States and its allies involved in Joint, Interagency and Multinational (JIM) operations.

NCOIC Members – February 28, 2006

Total Members: 80   **Additional Pending Members: 0**

Newest Members are in Blue

Tier 1 Members (23)

- BAE Systems, Inc.
- Boeing
- Cisco Systems
- Deloitte & Touche
- EADS
- EFW
- EMC
- General Dynamics

- Harris Corporation
- Hewlett-Packard
- IBM
- Intel Corp.
- ITT Industries
- L-3 Communications
- Lockheed Martin

- Northrop Grumman
- Oracle
- Raytheon
- Rockwell Collins
- Saab
- SAIC
- Sun Microsystems
- Thales

Tier 2 Members (1)

- Alcatel Government Solutions

NCOIC Members – February 28, 2006
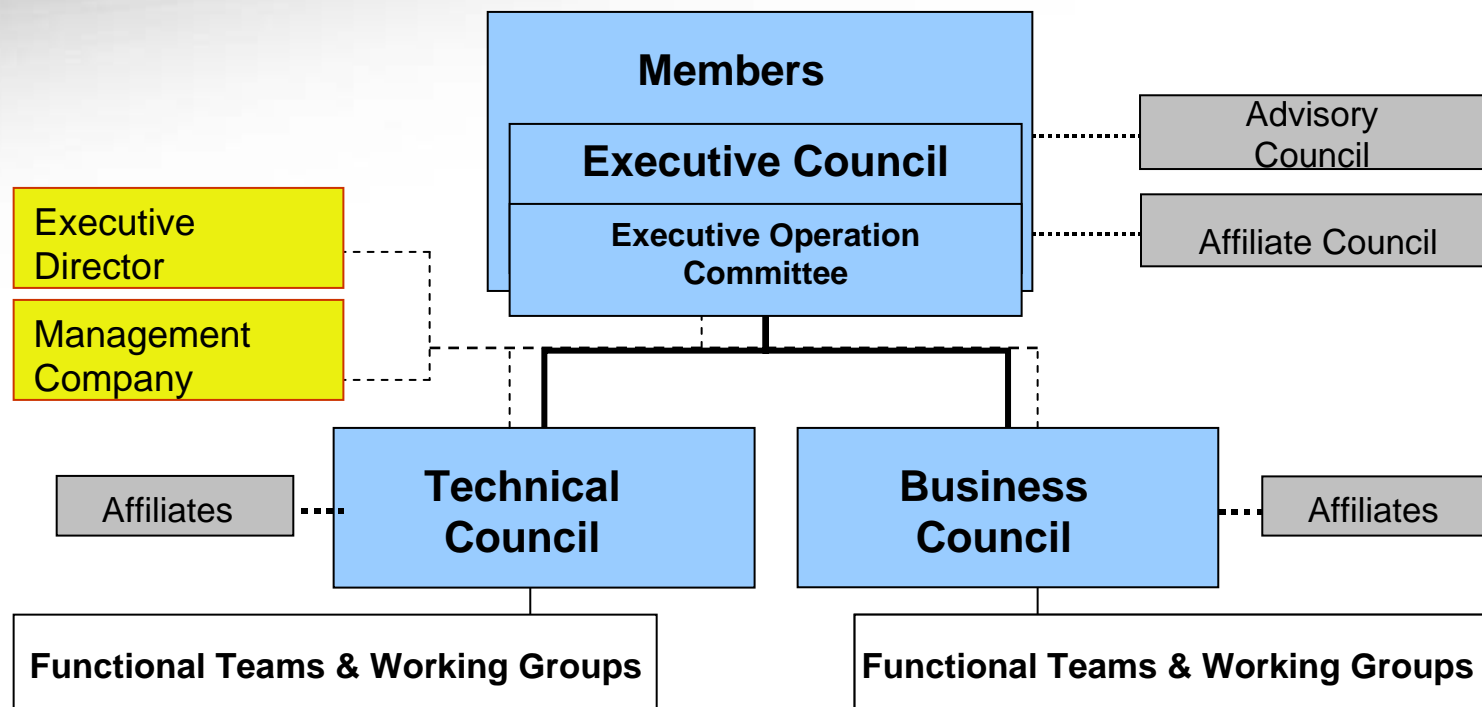
Total Members: 80

Additional Pending Members: 0

Newest Members are in Blue

Tier 3 Members (56)

- The Aerospace Corporation
- AFEI
- Anteon Corporation
- Argon ST
- Ball Solutions Group
- BearingPoint
- CACI
- Camber Corporation
- CB Technologies
- Ciena Government Solutions
- Cryptek, Inc
- Crystal Group
- Cubic Defense Applications
- DataPath, Inc.
- DCN
- EDISOFT S.A.
- Engenio Information Technologies
- Ericsson
- Finmeccanica
- Factiva
- Honeywell

- INDRA
- Innerwall
- Innovative Concepts, Inc
- Institute for Defense Analyses
- Instrumentointi Oy
- International Data Links Society
- Interoperability Clearinghouse
- Israel Aircraft Industries
- Johns Hopkins U. Applied Physics Lab
- LynuxWorks Inc.
- Marconi Communications Federal Inc
- Maritime Technology Centre R&D Institute
- MBL International, Ltd.
- Microsoft
- MITRE
- Military Communication Institute
- Motorola
- Objective Interface Systems, Inc.

- OrderOne Networks
- Real-Time Innovations, Inc
- Rheinmetall Defence Electronics
- RUAG Electronics
- SAP Labs, Inc.
- Sikorsky Aircraft
- Smiths Aerospace
- SPARTA, Inc.
- SRI International
- Systematic Software Engineering A/S
- Systems Integration and Development, Inc.
- Terma A/S
- Themis Computer
- University of Maryland, CSHCN
- Wakelight Technologies, Inc
- West Virginia High Tech. Consortium Foundation
- Wind River Systems

Consortium Operations

BUSINESS COUNCIL

Interim-Chair: K Mowrey, Boeing   **Vice Chair:** E Vogler, Sun

European Regional Coordinator: W Glagla, IBM

STANDING TEAMS

- Strategy & Planning
- Membership Outreach
- Export Compliance
- Information Technology Systems
- Events
- Legal
- Marcom
- Affiliates

Current Composition of Advisory Council

- **Dr. Paul G. Kaminski** — **AC Chairman**
- **LTG Steven W. Boutelle,** — **Army**
- **Lt Gen (USAF, Ret) James R. Clapper, Jr.** — **NGA**
- **Mr. Bill Dawson** — **Intelligence Community**
- **Georges D'Hollander** — **NATO HQC3S**
- **Dr. Vitalij Garber** — **OUSD (A, T, &L)**
- **Ms. Priscilla E. Guthrie** — **OASD (NII)**
- **Lt Gen William T. Hobbins** — **Air Force**
- **Mr. Lee Holcomb** — **DHS**
- **VADM James D. McArthur, Jr.,** — **Navy**
- **Gen (USAF, Ret) James P. McCarthy** — **USAFA**
- **Mr. Arthur L. Money** — **At large**
- **Maj Gen (ret) Staffan Näsström** — **Swedish DMA**
- **Lt Gen Charles E. Croom, Jr.,** — **DISA**
- **LtGen Robert M. Shea, USMC** — **JCS**
- **Maj Gen Ruud van Dam, AF Netherlands** — **NATO SACT**
- **LTG Robert W. Wagner, USA** — **JFCOM**
- **Dr. Dag Wilhelmsen** — **NATO C3A**

Technical Council Structure

TECHNICAL COUNCIL

Chair: Mike Curtis (IBM) **Vice Chair :** Sheryl Sizelove (Boeing) **Chair Emeritus:** Alan Murdoch (NGC)

Executive Sponsors: J Osterholz (BAE Systems), M Van Schaik (Thales)

European Region Coordinator: Jan Weiberg (Saab)

Customer Requirements

Chair: Steve Russell (L-3)

Vice: John Smith (HP)

Exec Sponsor: Claude Roche (EADS), TBD

Project Leaders:
- NCOW Reference Model (NCOW RM)
  - Abe Meilich (Lockheed Martin),Krishna Sankar (Cisco)
- GIG Architecture (incl. GIG IA and NCES)
  - Bob Babiskin (ICH),TBD
- Navy FORCEnet
  - Steve Ditlinger (Boeing), TBD
- DCGS Family of Systems
  - Steve Russell (through NCOIF ISR WG)

Building Blocks

Chair: James Burke (Lockheed Martin)

Vice: Harrison Miles (Intel)

Exec Sponsor: Rick Jones (Intel), TBD

- Application Enabling
  - Paul Delvey (Intel) / TBD (Motorola)

Architectures and Standards Analysis

Chair: Mark Bowler (Boeing)

Vice: Jacques Ariel Sirat (EADS)

Exec Sponsor: Mark Connelly (Sun), Nan Mattai (Rockwell Collins)

Working Groups:
- Open Standards / Patterns
  - Joe Schlesselman (RTI)
- NCOIC Interop Framework (NIF)
  - Frank Miller (Rockwell)
- NCO Analysis Tool (NCAT)
  - Fred Mervine (IBM), Vish Dixit (Boeing)
- Mobile Networks
  - Jim Bound (HP), Torsten Griem (Boeing), Paul Schweitzer (LM)
- Services Information Interoperability
  - John Yanosy (Rockwell), Hans Polzer LM)
- Information Assurance
  - Jim Ross (Boeing), TBD
- Ground Stations
  - Fred Mervine (IBM)

Education and Outreach

Chair: Al Nauda (Raytheon)

Vice: Stephen Bahr (IBM)

Exec Sponsor: Terry Morgan (Cisco)

Working Groups:
- OSD/OFT
  - Stephen Bahr (IBM), TBD
- W2COG – TBD
- Distance Learning
  - Ken Cureton (Boeing)
- Position Paper TF - TBD

Engineering Processes

Chair: Ken Cureton (Boeing)

Vice: Walter LeGrand (EADS)

Exec Sponsor: Val Gavito (L-3), Bob Collet (SAIC), Steve James (EMC)

Working Groups:
- System Engineering Processes
  - TBD
- Lexicon Custodian
  - Daniel Wengelin (SAAB)
- Modeling, Simulation, & Demos

Key Technical Deliverables (1 of 2)

- Analysis of government agency architectures, capability needs, and mandated open standards to identify commonalities, synergies, conflicts, gaps and potential areas for improvement.

- The NCOIC Lexicon which provides a common language for use within NCOIC documents.

- The NCOIC Interoperability Framework (NIF), which provides a Systems Engineering framework to organize and relate the applications, data, and communication elements used by suppliers and system integrators to build and deploy interoperable NCO systems

- Recommendations for Open Standards and their patterns of use (using the structure of the NIF), in specific areas such as Mobile Networks, Services and Information Interoperability, Information Assurance, etc.

Key Technical Deliverables

- The Network Centric Analysis Tool (NCAT), which delivers a metric based approach to evaluating a system's, subsystem's, or component's *"fitness"* for operating in a net centric environment.

- NCOIC endorsed Systems Engineering Best Practices and Processes, including Tools, Process and Maturity Models, Modeling techniques, and Collaborative Environments for NCOIC Integration.

- An online catalog of Off-The-Shelf, open standards based building blocks for interoperability solutions compliant with the NCOIC framework

- Training and educational materials to promote the awareness, adoption, and use of Network Centric infrastructures and methods.

- Collaborative relationships with other NCO orientated organizations for the joint promotion of Network Centric interoperability.

NCOIC Ground Station Working Group

Charter:

" The Ground Station working group will develop a platform independent Service Oriented Reference Architecture for future Ground Stations"

. . . resulting in Ground Stations that will be cost effective, modular and 'plug and play' and providing the capabilities fundamental to Net Centricity:

- **Open standards based**
- **Composeable**
- **Extensible**
- **Interoperable**
- **Scalable**

Summary

- The Consortium Is:
  - Focused: Our sole purpose is to partner with government to enable transformation through NCO.
  - Dedicated to outreach and education to make identified architectures, open standards, and best practices widely available to government & industry.
  - Open: Across Industry, Across Borders

- Comprised of Members of the Production Chain:
  - Ultimately responsible for creating the NCO Solutions,
  - Uniquely capable of affecting true change in the production chain.
  - Highly Inclusive – Industry, Academia, Government.

- The Consortium Is Not:
  - A Replacement of or Competition to Government Forums,
  - Closed to Non-Traditional Industry Partners.

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