NATO Research & Technology Organization

Studies, Analysis & Simulation Panel

Mr Allen Murashige
United States Representative
Overview

“NATO Code of Best Practice for C2 Assessment”
- Developed by NATO RTO SAS-026 Project Team

RTO: NATO’s Research & Technology Organization

SAS: RTO’s Studies, Analysis & Simulation Panel
- Principal US Representative is Mr Allen Murashige

SAS-026: Project under the SAS Panel
- US-led multinational study team
- Study Director: Dr Dave Alberts, OSD C3I Dir of Research & Strategic Planning
- Nations involved: US, UK, NL, CA, GE, FR, TU, NO, NC3A
NATO RTO History

Previous Structure for NATO Research & Technology

- AGARD -- Advisory Group for Aerospace R&D
  - Established 1952 by Dr Theodore von Karman (USAF Ch Scientist)
  - Advance the development & application of aerospace technology
  - USAF lead in US
  - Government, industry, academia
  - Under NATO Military Committee

- DRG -- Defense Research Group
  - North Atlantic Council created CNAD & DRG, 1966
    - DRG reported to CNAD
  - Defense research other than aerospace
  - Primarily government participation
  - Focus on cooperative projects

North Atlantic Council decision July 96 to merge AGARD & DRG
- Merger implemented 1997-98, creating NATO RTO
NATO RTO Mission

- Support military technology needs of the Alliance
- Provide single focus for NATO defense R&T activities
- Develop coordinated NATO defense R&T strategy
- Provide advice to NATO and national decision makers
- Conduct studies & analyses of priority NATO defense issues
- Sponsor joint studies
- Coordinate R&T programs & activities between nations
- Conduct & promote cooperative research
- Facilitate R&T information exchange
- Provide scientific & technological assistance to member nations
  - Emphasis on Greece, Turkey, Portugal, & new members
  - Partnership for Peace nations
NATO RTO Structure

- RTO reports to NATO Military Committee and NATO Conference of National Armaments Directors
- Research & Technology Board -- provides oversight
  - Dr Don Daniel, Chair (US, former Dep Asst SECAF (R&E))
  - US Reps: Dr John Hopps (DUSD AT&L (Labs & Basic Sciences)); Dr Mike Andrews (DepASA (Research & Technology)); Mr Fred Gregory (Dep Dir, NASA)
- Research & Technology Agency -- provides support
  - Headquarters in Paris, FR
  - Full time staff of approximately 50 persons
  - RTA Director: Prof Ucer, TU
- Panels – initiate and direct the technical work
  - Seven Panels: Studies, Analysis & Simulation; Human Factors & Medicine; Applied Vehicles Technology; Sensors & Electronics Technology; Systems Concepts & Integration; Information Systems Technology; Modeling & Simulation Group
- Task Groups – conduct the technical work
Studies, Analysis & Simulation Panel
Mission

- Conduct studies & analyses of operational, systems, and technology issues
  - Studies of military operational needs, current and future
  - Studies of promising technologies and systems which may advance military capabilities

- Exchange information & promote development of operational analysis methods and tools

- Provide a forum for NATO modeling & simulation issues
  - Identify opportunities to improve NATO command structures through application of simulation technologies
  - Identify opportunities for cooperative development of simulation
  - Coordinate the integration of simulation in NATO

- Customers: CNAD, MILCOM, SHAPE, SACLANT, NAFAG, NNAG, NAAG, NC3A, NIAG, National MODs, industry
Studies, Analysis & Simulation Panel

Members

- Chairman: Mr Viggo Lemche, DE
- NATO Organizations Represented: MILCOM, NATO Intl Staff, SHAPE, SACLANT, NC3A
- National Reps – up to 3 per Nation
- US Reps to Panel:
  - Mr Allen Murashige, HQ USAF/XIW (voting)
  - Mr Eric Coulter, PA&E
  - Mr Vern Bettencourt, HQ USA/G-3
  - Serve 3 year terms (can be renewed once)
- Technical Teams (numerous)
  - Participants nominated by Mr Murashige through US RTB Delegate (DUSD AT&L) to NATO RTO
Studies, Analysis & Simulation Panel
Activities

**SAS Panel** meets twice a year
- One meeting at NATO Hq, one hosted by member nation
- Reviews requests, selects topics, generates terms of reference
- Charters working groups
- Appoints national experts to working groups
- Reviews progress and final products of working groups

**Technical Teams** exist 1 to 3 years
- Part time, expert resources volunteered by nations
- Conduct studies and analyses
- Provide briefings and publish tech reports
- Organize cooperative programs, tests, etc
- Arrange workshops, conferences and symposia

**Products:** Briefings and Technical Reports
- Briefings to MILCOM, CNAD, SHAPE, SACLANT, MODs
- Technical reports distributed to NATO organizations & nations
Some Completed Studies

- Reconnaissance, Surveillance & Target Acquisition Requirements & Capabilities (NAGS)
- Alternatives to Anti-Personnel Landmines
- Future Military Operations in Urban Terrain
- Analysis of Small Scale Contingencies
- Land Operations 2020; Maritime Operations 2015
- Chemical & Biological Defense
- Future Applications of UAVs
- Defenses Against Cruise Missiles
- Evaluating the Contribution of C2 to Force Effectiveness
- Non-lethal Weapons Measures of Effectiveness
- Reducing Collateral Damage in Peace Support Operations
- IFOR Data Collection
- Operation ALLIED FORCE Synthesis of Lessons Learned
- Lessons Learned from Ground Operations in the Balkans
- Future NATO Electronic Warfare Requirements
Current Activities

- Concepts and Technologies for Countering Terrorism
- Multinational Logistics
- Decision Support for the JTF & Component Commanders
- Multi-National Force Structure Planning
- Information Operations
- NATO’s Dependence on Civil Information Infrastructure
- Joint Operations 2025
- Aircrew Mission Training via Distributed Simulation
- Indirect Firing Systems
- Virtual Laboratory for Human Behavior Representation in Military Simulation
- PfP Symposium: Operations Analysis Role in Defense Decision Making
- Exploring New C2 Concepts and Capabilities
Some Advantages of US Involvement

- Improve awareness of NATO & European issues and perspectives
- Improve dialogue & common understanding on key issues facing NATO
- Gain familiarity of NATO operational environment
- Influence NATO agenda, issues, investments
- Satisfy Alliance ops needs w/US technology, systems
- Enhance US coalition warfighting capabilities
- Improve interoperability of US systems
- Facilitate integration of systems; develop standards
- Initiate activities of interest to US
- Promote US initiatives & perspectives
- Identify areas for cooperation/mutual benefit