NATO Code of Best Practice (COBP) for C2 Assessment

Future Directions

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**Report Documentation Page**

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Prescribed by ANSI Std Z39-18
• What’s Next After SAS-039?

• What’s the Future of Military Analysis?
• Tomorrow SAS-026 Members Will Review the Feedback Received During this Symposium
• May - June ‘02 Continue Consultations via WWW
• Informal Meeting at 2002 C2RTS (Monterey, California)
• Presentations on COBP
• Publish Revised COBP C2 Assessment
  – Web Version - Summer 2002, NATO Document to follow
• Potential Follow On to SAS-026
  – Lecture Series, COBP Experimentation, Special Topic in C2 Analysis
Purpose of Analyses are to Inform Decisions

To do so, Future Analyses Will Need to Effectively Deal With:

- Nature of Information Age Organizations
- Full Spectrum of Missions
- Characteristics and Capabilities of “Non-traditional”, Asymmetric Adversaries
- Uncertainty, Risk, Agility
Information Age Organizations

Will Have New Ways of

• Dealing With the Future (Uncertainties & Risks)
• Developing Capabilities
• Managing (Command and Control)
• Dealing with Information and Systems
Information Age Organizations

New Ways of Dealing With the Future

- Predict and Plan  ➔  Prepare and Adapt
- Perfect Tasks  ➔  Develop Agility
- Develop I&W  ➔  Develop Persistent Surveillance
New Ways of Dealing Developing Capabilities

- Define Requirements → Experiment
- Engineer → Grow
- Insert Technology → Co-evolve Mission Capability Packages
- Test Systems → Assess Operations
New Approaches to Command and Control

- Commander’s Intent ➔ Command Intent
- Do What I Tell You ➔ Do What Makes Sense
- Control ➔ Converge
- Constrain Subordinates ➔ Enable Subordinates
- Synchronize ➔ Self Synchronize
- Avoid Risk ➔ Manage Risk
New Ways of Dealing with Information and Systems

- System of Systems → Federation of Systems
- Server-Client → Peer-to-Peer
- Push → Pull
- Use and Distribute → Post Before Process
Full Spectrum of Missions

- From “Conventional” Terrorism to WMD
- Focus on Asymmetries
- Recognize the Intelligence of Adversaries
- Attention to what is important across the board
  - Quality Awareness
  - Collaboration
  - Shared Awareness
  - Agile C2
  - Inter-agency, Coalition
Non-Traditional & Asymmetric Adversaries

Collapse of Strategic Deterrence

People

Three Destabilizing Global Trends

Population Growth with “2% Social Defect Rate”

“Moore’s Law” of Weaponry (Kill Power Per Individual Unit)

“Small World Effects” (degree of interaction through transport and Communications)

Adapted from John Clippinger
• The Answer to Uncertainty and Risk is Agility
• Agility Has Five Components
Implications for Analysis

- **Problem Formulation**
  - New Measures of Merit
  - More Variables
  - Fewer Constraints on Variables

- **Models**
  - Increased Emphasis on Representation of Information and Cognitive Domains
  - Ability to Change Processes and Organizations
  - Ability to Generate Emergent Behaviors

- **Solution Strategies**
  - Scenario Independent Approaches
  - Move from Optimization to Generation of Response Surfaces

- **New Customers**
  - Experiments and Experimental Campaigns
  - Defense Strategists
Future Directions

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