



Master Classes

10.30 to 13.00

Effects-Based Approaches to Operations – the Next Generation: Connecting Stovepipes Well Left and Right of Boom

Workshop Leader:

Mark N. Clemente,
Senior Effects-Based Analyst
The Boeing Company

Rationale:

Iraq, Afghanistan, Stability & Reconstruction, Disaster Relief -- from Phase ZERO to Phase FIVE -- complex, cross domain challenges pull disparate, functional entities to the point of action, where they have to coordinate time, talent and resources, oftentimes ad-hoc. Organizations that do not all answer to the same drum, with different funding streams, and sometimes competing agendas --brought together -- whether they like it or not; whether they do it well, or poorly. Pulling together multivariate functional groups -- that tend to act as stovepipes -- will take more than a common network, common operating picture and compatible communications.

Benefits

- See how NATO views the implementation of EBAO at the same time they wrestle with how to blend defense, diplomacy, development and economic persuasion in a more “comprehensive approach” to global security.
- Understand how multivariate systems can better approach complex challenges.
- Understand why diverse teams are quantitatively able to solve a wider array of problems in a complex world than traditional industrial specialized teams.
- Learn how “sensitivity to Initial Conditions” influences linkage of effectors to effects in commanders' estimates
- Understand the nature of an effects-based environment, how effects develop and can be measured.

Workshop Leader

Mark Clemente joined Boeing's *Washington Studies and Analysis Group* in 2007 after a 27 year career in the U.S. Navy. He joined a small research analysis group that seeks insight on future warfighting capabilities and trends. His primary area of research is effects-based approaches to operations and whole of government solutions. He has presented papers at international C2 and complexity forums ... and most recently orchestrated and lectured at the NATO Research & Technology Organization Lecture Series on Effects-Based Approach to Operations.

He was also the Executive Director of the Chief of Naval Operations Executive Panel; which pulled together some of the best and brightest minds from academia, industry and government to help the last two Chiefs of Naval Operations make sense of difficult policy and strategy issues.

Going Beyond Current Competencies – Emphasising On The Development Of Capabilities And With Education And Training

Workshop Leader:

Lieutenant Colonel Arne Norlander,
Staff Officer Innovation and Capability Development
Swedish Armed Forces

**Rationale:**

As International MoDs strive towards interoperability amongst coalition operations, this masterclass will give you the insights and ability to discuss the best foundations for training and education for successful and seamless NEC implementation. Don't miss this opportunity to take the training and education in your agency to the next level and move towards becoming more efficient and productive.

Benefits:

- Operator training linked with formal academic training
- Building a common and shared knowledge base with government and industry
- Developing a common engineering practise
- International collaboration for NEC/C4I common international curriculum

Workshop Leader

LtCol Arne Norlander (Swedish Air Force) is currently assigned to a staff officer position where he directs innovation and capability development.

Previously LtCol Norlander held the position of Senior Scientist at the Swedish Defence Research Agency where he directed the agency's program for Network Based Defence Technologies, and conducted basic research in the domain of Complex Distributed Cognitive Systems.

His core research areas are computerized automation, human-machine interaction, control theory, mathematical modelling, cybernetics, cognitive systems engineering, distributed team decision making, and team training. Major application areas are command, control, communications and intelligence in joint and combined military operations, homeland security and emergency management.

LtCol Norlander is the author of over 50 peer-reviewed publications. He received the IBC International Order of Merit in the year 2000, and in 2001 he was awarded the ABI International Medal for Scientific Excellence for his outstanding research in the Human Factors and Systems Engineering domains.

14.30 to 15.00

Workshop Leader:

Fred Stein,
C3 Director,
THE MITRE CORPORATION

Explore the latest technologies in NCW: Asses how this influences Digital Natives and Digital Immigrants, and examine the impact on the design of your existing and future systems

Rationale:

This Masterclass will describe, discuss and inform on the foundation technologies that support the Information Age and NCW Operations. It will use current and future operational examples to set the stage to discuss the foundation technologies. Don't miss this opportunity to learn how you can surmount the technological, generational cultural and organisational barriers to NCW implementation.

Benefits:

The workshop will cover the culture, organizational , social, technical and generational challenges to implementing network centric operations

- The organizational aspect: addressing the issues of communities of interest
- Social and generational: Addressing the digital natives and their needs and under the technical
- Web Two technologies on information sharing, knowledge management and security



Fred is a retired Colonel of the United States Army, and joined the MITRE Corporation in April 1998. He is currently the MITRE's Senior Principal Engineer for Network Centric Warfare. His position and location at Ft. Hood, Texas within the Central Technical and Support Facility provide him the opportunity to interface directly with the Army as it digitizes its force and moves toward the Future Combat Systems. He currently supports the Army G8, Office of Force Transformation and Electronic Systems Command. Among Fred's accomplishments is the book, "Network Centric Warfare", which he co-authored with two colleagues, David Alberts and John Garstka. As technology continues to evolve, Fred Stein remains on the cutting edge of his profession as he continues to seek out innovative ideas and concepts as they apply to supporting Commanders and Staffs.

The Human Factors: Truth, Perception and Lies Cultural and Cognitive Systems analysis

Workshop Leader:

Dr. Christine MacNulty,
President and CEO,
APPLIED FUTURES

Rationale:

Future warfare is likely to include more action against terrorist groups and insurgents, more stability operations, and more operations in urban areas where our Armed Forces will have to deal with civilians as well as their targets. Even if the US acquires a peer competitor, our knowledge of its culture is likely to be less comprehensive than we would like. This means that we need to think very carefully about the effects and results we want to achieve, we need to ensure that the intelligence gathered by whatever "_INT" seems appropriate, is what we need.

Benefits:

This workshop/presentation emphasizes the importance of understanding both cultures and mind-sets. It is needed for our decision makers and planners. We must know what we are trying to achieve and *whether or not what we want to achieve is feasible*. This requires more than a knowledge of what our adversary is doing, where, with whom and how. It requires an understanding of WHY—what are his motivations?—because only then can we anticipate his reactions and what he will do next. Then we need to be able to craft strategies that will work in the particular culture and circumstances.

Christine MacNulty was one of our most well received speakers at Battlespace Information 2007, and has more than thirty-five years experience as a consultant in long-term strategic planning for concepts as well as organizations, technology forecasting, technology assessment and related areas, as well as cultural change.

For the last twelve years, she has worked mainly for the US Department of Defense. She has also worked for NATO ACT and NATO NEC. She was a major participant in the NDIA Single Integrated Picture (SIP) Study, where she coordinated the various focus groups' activities, and worked on the human element in SIP.