

The Role of Analysis in NATO Operational Experimentation



CAPT K. A. Shield, USN
Branch Head, Operational Experimentation
Allied Command Transformation

Objective

- Summarize the key issues facing operational experimentation analysis in NATO
- Illustrate how we conduct experimentation analysis in ACT
- Describe ways in which the MORS community can assist ACT's efforts

Key Issues

- ACT experimentation program is moving from embryonic to fledgling
- Experimentation must contribute to capability development
- Most of previous experimentation may be better classified as “discovery” or “demonstration,” rather than hypothesis testing
- Concept development in NATO is inherently slow
- Much of our experimentation is in the cognitive domain, further complicating analysis

Experimentation Team

- Experimenter
- Concept Developer
- Data Collectors
- Analyst

Problem: Currently these roles are quite often taken by the same individual, questioning objectivity and credibility. Team building is necessary.

Role of the Experimentation Analyst

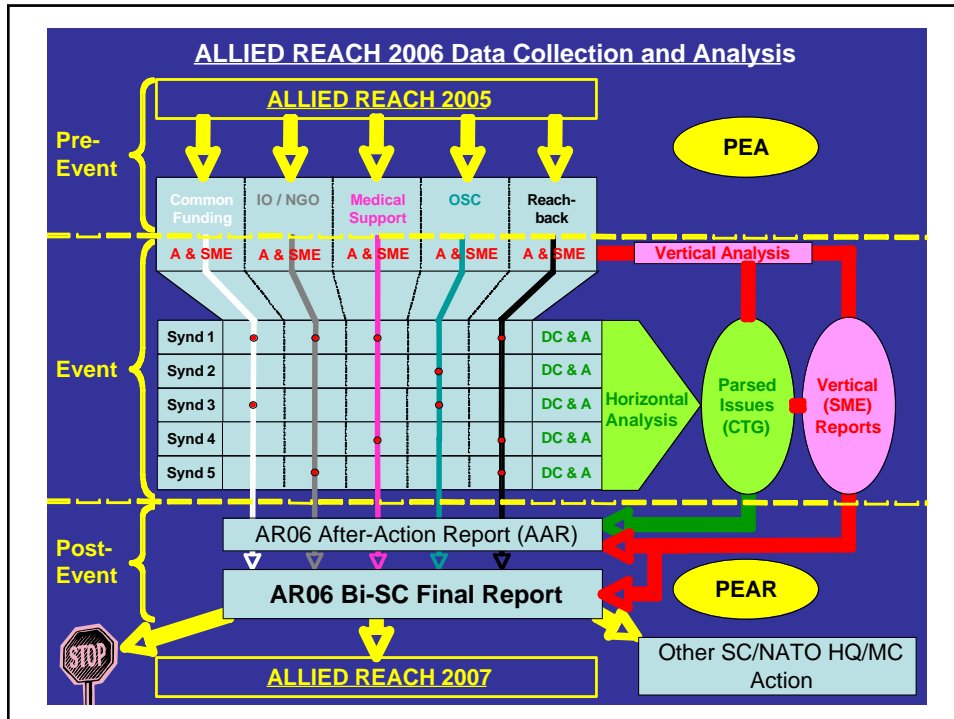
- Produces the Analysis Plan and Data Collection Plan
- Performs analysis of the underlying operational concept prior to the onset of experimentation
- Serves as an integral part of the team that designs and conducts the experiment
- Contributes to the construction of the experimentation hypothesis in the Experiment Design Document to meet the Aim and Objective
- Leads analysis activity before, during and after the experiment

NATO Operational Experimentation Process, October 2005

Data Collection in ACT Experimentation

Types of collection mechanisms

- Surveys
- Subject testing
- Human observation
- Automated
- Recording for later reduction



How can the MORS Community Help ACT?

- Establishment of suitable measures of effectiveness and measures of performance
- Selection of the appropriate data collection tools and techniques
- Analytical methodologies for use in political-military experimentation
- Statistical tools to better quantify experimentation results