Operational Test Agency Roundtable

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Roundtable Participants

• Major General Genaro Dellarocco, USA, Commander, ATEC

• Rear Admiral David Dunaway, USN, Commander, OPTEVFOR

• Major General David Eichhorn, USAF, Commander, AFOTEC

• Colonel David Reeves, USMC, Commander, MCOTEA

• Colonel Joseph Puett, USA, Commander, JITC
Current DOT&E Initiatives

Today’s focus – Integrated Testing
Integrated Test and Evaluation

• What is it?
  – Testing early in mission context and realistic environments
  – An efficient continuum of tests throughout DT, OT, LFT
  – Using data from one type of test for insight into other types
  – Using all test data to support evaluations
  – Not a replacement for independent OT&E

• Why is it important?
  – Discover problems early when they are cheaper and easier to fix
  – Understand system performance across operational envelope
  – Increase confidence in test results
Scientific Approaches Necessary for Successful Integrated T&E

• Structured and rigorous statistical tools
  – Stochastic simulations to supplement field tests
  – Methods for rigorous assessments of small sample sizes
  – Methods to combine data from disparate sources

• Design-of-experiments (DOE) principles
  – Quantitative response variables – mission-based for OT
  – Breadth of coverage of the operational environment – including realistic threats
  – Methods for strategically varying operational conditions
  – Objective measures of “How much testing is enough?”
  – Presentation of confidence based results
Opening Question #1

• How does your command define the mission context to be used in operational tests?
  – What is your view of how mission accomplishment should be evaluated?
Question #2

• How can (does?) your command enable Integrated Testing to occur in realistic operational environments?
  – How much influence can (do?) you have on the developmental test program?
A “Tail” of Getting Adequate LFT&E Funding

Original planned buy of 120 C-17, approximate acquisition cost $3B

- Cost of the LFT&E program $30M (1%)

Eventual buy over 200 aircraft

- Cost of one tail of one C-17, provided information to improve survivability for over 200 aircraft
Question #3

- The cost of DT and OT is a small percentage of a program’s acquisition costs; however the cost of testing is a large percent of the budget in the fiscal years in which it occurs.
  - The current environment of efficiencies appears to exacerbate concerns about the cost of testing.

- What do you think can be done to increase the relevance and perceived importance of government testing both DT&E and OT&E - to demonstrate its “worth”?
Interoperability is key to US military operations.

- Testing interoperability in a lab environment is straightforward. What are your challenges with testing interoperability in realistic environments?

- What can be done in terms of an incentive structure to get PEOs and PMs to assess their systems early on in a joint interoperability laboratory environment?
Question #5

• How do you see the role of M&S in the conduct of OT&E?
  • How can DT enable better use of M&S tools in OT?
  • How do you foster an appropriate and adequate VV&A program/plan?