An Operational Tester's Perspective on how Distributed T&E fits the Vision for Testing in the New Decade

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L/V/C – The Operational Tester's Perspective

- We must do it –
  - Time
  - Money
  - Security
  - Realism

Where are we Today?

- Some successes –
  - DJC2
  - PATRIOT
  - EA-18G
- Some work in progress –
  - DCGS-FOS
  - Ballistic Missile Defense System
  - CVN-21/*Gerald Ford*
  - GPS Enterprise
- Some areas still largely untouched

Why haven't we made more progress?

- The same factors (perceptions) are in play –
  - Time
    - We don't have time to build models, we are trying to produce something real
    - We need the final results before we spend money building models
  - Money
    - See above – (time is $)
  - Security
    - It takes too long to get the security agreements in place (if ever)
  - Realism
    - You will never build a model that is sufficiently realistic…
- On top of that, it is hard!
  - Phenomenology, lethality, environmental and communications models are essential yet they are also technically challenging and frequently lack sponsorship.

Why will things be different this time?

- The four imperatives grow increasingly strong –
  - Missile Defense
  - GPS Enterprise
  - Space systems
- Technology has improved the art of the possible
- We have amassed a wealth of experience over the last 3 years –
  - Projects such as the Joint IO Range have transitioned from demonstration to operation
- Investments are beginning to produce tangible results
  - Sandia National Lab experiment in conjunction with USAF program of record is examining the potential on a network system
  - Information Assurance Range participation in *Bulwark Defender 10*
- We are building stronger partnerships with the Developmental Test Community- much L/V/C work is “operationally realistic developmental testing”

Some Thoughts…

- Focus where the need is greatest…
  - Information Assurance/Defense of Networked Systems
  - Next generation command & control systems – such as the follow-on to the GCCS-FOS (Human Systems Engineering)
  - Ballistic Missile Defense Systems
  - Lethality
- Invest in the tools required to provide the data needed for rigorous analysis.
- Continue with small steps that build increasing capability (“Big Bang” approaches are too often obsolete when delivered.)
- Don’t let enthusiastic supporters over-promise.
- Experiment!