Early Developmental Test & Evaluation for Rapid Acquisition

or

How I Learned to Stop Worrying and Love the Test

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Outline

- **Definition of Rapid Acquisition**

- **DT&E in Requirements**

- **DT&E Assistance Pre-RFP**

- **Competitive Prototyping**

- **Early post-selection Prototype**

- **"Classic" Developmental Test and Evaluation**

Definition

Rapid Acquisition = 1 – 2 years from requirement to fielding
Rapid Fielding = 90 days – 6 months for the same

- **As many definitions of rapid acquisition as people you ask**
  - **Snipers**
- **For today's purposes:**
  - **Tactically relevant timeline**
  - **Warfighter focused capability**
  - **Interoperable as required**
  - **Supportable in theater**
- **Must already exist in a readily fieldable form**
  - **No time for serious R&D**
  - **May need to integrate into current ops schema**
- **Not to say that other definitions aren't valid for other purposes**
  - **Rapid may be 8 years for an aircraft carrier or 5 years for an aircraft from scratch**

Rapid Acquisition Basics

- **Good Leadership**
  - **If you don't start here, the rest is a crap shoot**
- **Motivated, committed team**
  - **Acq professionals, finance folks, users, congressional staffers, etc.**
- **Firm, fixed, well-understood requirements**
  - **Creep = failure**
- **Currently available products**
  - **Must pass the parking lot test**
- **Readily available funding**
- **Senior leadership support**
  - **The invisible hammer - hands off until/if needed**
- **Active warfighter/user involvement**
- **Firm goals/deadlines**

"You can get much farther with a kind word and a gun than you can with a kind word alone."   - Al Capone

The Parking Lot Test

- **Definition: "Bring it and set it up in my parking lot."**
- **Timing: Either industry day, 30 days after industry day (preferable), or as part of the RFP evaluation**
- **Purpose: Cuts out the "We're THIS close to having it ready" crowd**

DT&E in Requirements

- **Measurable, testable, operationally relevant**
    - **Just because you can measure it doesn't mean that you can readily test it**
    - **Just because you can test it doesn't mean it will solve the user's issue in the real world**
    - **The user should not want it if it doesn't meet the requirements**
        - **Deliver the required performance – don't skimp or gold-plate**
- **Art of the possible**
    - **What does the user really need?**
    - **Don't require an unobtanium mine**

DT&E Assistance Pre-RFP

- **Market survey**
  - **Test experience can help scope the art of the possible**

- **Risk assessments**
  - **What has bit us in the past?**
  - **Is the bar too high for a rapid effort?**

- **Testable criteria**
  - **Helps limit avenues for protest**
  - **Should make picking a winner easier**
  - **Must be operationally relevant**

Competitive Prototyping

- ## Early user involvement
    - Up front reality/heading check
    - Two edged sword – be careful what you ask for

- ## Requirements refinement
    - What unanticipated capabilities do the prototypes display?
    - What don't you need that seemed like a good idea earlier?
    - What's too hard to do in the time available?

Early Post-selection Prototype

- **Is the technology mature for fielding?**
  - **What technical risks remain to be retired?**
  - **If you did your job right, this will probably be an integration issue**
- **Have lessons learned from competitive prototyping been incorporated?**
- **Early user assessment**
  - **Refine the details**
  - **Know when to knock it off**
  - **What did you miss?**

"Classic" Developmental Test & Evaluation

- **Safe?**

- **Effective?**

- **Suitable?**

- **Sustainable?**

- **Technical risks retired?**

- **Ready for field testing in theater?**

Summary

Rapid acquisition is not a sprint, but neither is it a marathon. It's more like a 400m run. Pace your efforts accordingly.

If you don't involve T&E early and often, you probably won't get what you thought you'd get when you thought you'd get it at the price you thought you'd get it.

Questions?

Rapid Acquisition is ultimately about solving problems quickly