

Been There Done That  
Or  
How I Learned to Love  
Defense Acquisition

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To understand what to fix,  
you have to understand  
what is actually broken

OR

In God We Trust,  
all others must bring data

# DOD Acquisition Programs: Its All About The Incentives

- How to get a program started
  - Sell/demand unrealistic performance (What is a “requirement” anyway?) unconstrained by cost
  - Budget unrealistic costs
  - Plan to unrealistic schedules
  - Embrace the latest fad (spiral development, TQM, concurrency, lack of concurrency, fixed price development, streamlined acquisition, lean manufacturing, etc.) to justify your projections
- How to get a program in trouble
  - See the above
- This is a recipe for inefficiency

# The Unique Nature of DOD Acquisition

- DoD is not a commercial customer and defense industry is not a commercial supplier
  - Small production quantities
  - Sporadic and extended design cycles
  - Increasingly limited and specialized suppliers
  - Largely customer funded S&T and R&D
  - Pervasive political considerations
  - Virtually no true marketplace competition or incentives
- This is a recipe for inefficiency

# Some Artifacts of DOD Testing

- Focus on final phases of development and early production
  - Full up system level testing
  - Government dominated testing
  - Highly visible and political
    - Particularly OTE, LFTE
- This is the most inefficient time in the design process to discover problems
- BUT: It is much easier to fund fixing problems (convert the production money) than it is to get the funds to avoid them in the first place

# Priorities in the Acquisition and Testing Processes

- The rules are (or should be) different when you are at war
  - Cut every corner you can rationally justify cutting
  - Accept less than contracted performance if it is “good enough”
  - Fix things in the field if feasible and necessary
  - Rely on projected design fixes to problems
  - Go straight to Full Rate Production, skip full OT
- But usually we are not at war
  - Long term major acquisitions are almost never wartime priorities, unless they are already close to fielding
  - Time is less important than maximizing the return on DOD investments
  - Major acquisition test programs should be structured to be efficient; a combination of speed and other factors

# Comments on Accelerating Technology Insertion

- Urgent Needs (IEDs and RPG Defeat)
  - Throw out the “rules” and apply common sense
  - Tailor everything to the risk benefit relationship, particularly test programs
  - Try lots of things
  - Buy whatever level of performance the real operators will accept
- Not So Urgent Needs (P3I opportunities)
  - Insist on and pay for open architectures and design for growth

# Addressing the Problems

- Keep the “requirements” reasonable and flexible
  - Better cooperation between requirements and acquisition communities
  - Identify true minimums
  - Force the user to prioritize based on cost performance relationships
- Get the risk out before committing to design for production (haste makes waste)
  - Whatever happened to 6.3b?
- Test to verify the design, not to fix it
  - Avoid test, fix, test cycles
  - Invest in better design tools and processes (CAD, high fidelity modeling and simulation)
  - Create and maintain capable experienced design teams
- Testing Strategy
  - Don't skimp on the number of test assets
  - Tailor testing to avoid inefficiencies
    - Structure testing around nature of risk and consequences of failure



A Final (but not original) Thought

There is no free lunch