



Issues for Future Systems Costing

Panel – 17
**5th Annual Acquisition
Research Symposium**

Fred Hartman
IDA/STD

May 15, 2008

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 15 MAY 2008	2. REPORT TYPE	3. DATES COVERED 00-00-2008 to 00-00-2008			
4. TITLE AND SUBTITLE Issues for Future Systems Costing		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Institute for Defense Analyses ,4850 Mark Center Drive,Alexandria,VA,22311-1882		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES 5th Annual Acquisition Research Symposium: Creating Synergy for Informed Change, May 14-15, 2008 in Monterey, CA					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 9	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Two Costing Issues



- Determine how much and who pays for shared data and services in future net-centric programs
- Determine cost implications of including training plans early in the JCIDS and Acquisition processes

Considerations



- Streamlining Acquisition
 - **Lean 6 Sigma**
 - **Concept Decision Pilot Programs**
 - **Other**
- Costing of shared infrastructure
- Include detailed Training Plans and details up-front in Concept Decision and as Program KPPs

Streamlining Acquisition



-
- **Some problems with acquisition?**
 - **Slow**
 - **Significant labor requirements to satisfy the “process”**
 - **Services report they are spending too much time and money producing acquisition documents which no one reads**
 - **Capabilities frequently reach concept decision and enter into Milestone A or A/B without sufficient “concept refinement”**
 - **Senior managers request need for analysis driving decisions for program start up or go – no go earlier in concept process**
 - **Recent Improvement Initiatives**
 - **Lean 6 Sigma working group looked at documents and timing of process - outcome?**
 - **Four Concept Decision Pilot Programs were formed to expedite critical programs**
 - **Use Technology Readiness Levels to reign in “over optimism”**

GIG Background



Global Information Grid (GIG) – “is a globally interconnected, end to end set of information capabilities, associated processing, and personnel for collecting, processing, storing, disseminating, and managing information on demand”

- **Net-Centric Enterprise Services (NCES)**
 - **Service-Oriented Architecture Foundation (SOAF)**
 - **Collaboration**
 - **Discovery & Delivery**
 - **Portal**
- **Net-Enabled Command Capability**
 - **Net-Centric data strategy (2003)**
 - **C2 in a net-centric environment (2005)**
 - **Provide data and information needed for timely, informed decisions**

Allocating Shared Costs



-
- **DoD has no established process (or understanding of need?) for sponsoring enterprise-level efforts**
 - **DISA GIG programs example**
 - **Training Transformation (T2) business model gets at the issue to incentivize Services and Agencies to collaborate on common capabilities**
 - **Joint Simulation System**
 - **Net-centric environments of the future will require more sharing of infrastructure, data and models**
 - **Related issues**
 - **Systems interoperability**
 - **Joint Program Management across programs**
 - **Up-front systems engineering**
 - **Redundant costs across enterprise**
 - **Additional incremental costs for reuse**

Training Implications



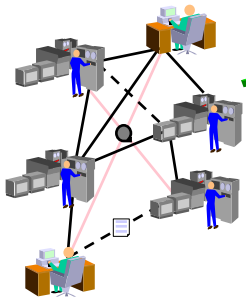
-
- **Focus on training during concept development**
 - Training Plans fleshed out in concept definition
 - Training objectives drive use of simulators, simulations and on-line training tools as part of systems design
 - Ensure learning and performance factors are considered
 - **Determine training needs over program life**
 - Establish training as a Key Performance Parameter
 - Include training simulators or training systems for operators/crews prior to introduction of hardware system
 - Include development and operational testing with engineering approach to training
 - **Related issues**
 - Safety
 - Joint Program Management
 - Up-front systems engineering
 - Provide continuous training environment

Questions?

Road to Net-Centric Operations

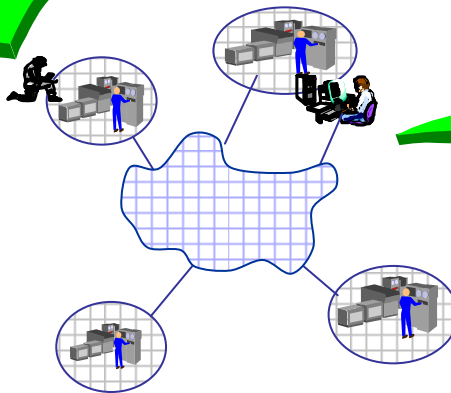


Pre-Web...



- *Stovepipe systems*
- *Little or no interoperability*
- *Some network connections*

...Today...



- *More networks*
- *Some web services*
- *Various directory & security services*
- *Uncoordinated Service/Functional IT transformations*
- *Few authoritative data sources*
- *Network-Centric, but not Net-Centric*

... Joint / Enterprise



The GIG

- *Pervasive networks*
- *Accurate, timely & relevant info to the edge*
- *...it's all about the data...*
- *Services Oriented*
- *Dynamically composable architectures*
- *Mission-effective applications*
- *Assured, interoperable enterprise services*