

“Connecting Life Cycle Costs to T&E”

Second Conference on the Economics of T&E

**Test & Evaluation Research and Education Center (TEREC)
Georgia Institute of Technology**

4 November 1999

**Arthur Fries, Institute for Defense Analyses
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**National Research Council
“DoD Workshop on Reliability Assessment”
June 2000**

Session Outline

- **Introductory Remarks**
 - Art Fries, IDA
- **Presentations**
 - “Life Cycle Costing and Its Relationship to T&E”,
Dev Devers, IDA
 - "Suitability Test Parameters: Predictors of Affordability ???",
Ronald Wagner, GTRI & GIT
- **Discussion**
 - Floor Questions & Panel Discussion

“Things I Never Thought I’d Talk About”

- **University of Wisconsin Winning Rose Bowl**
 - 1994
 - 1999
 - » UW National ranking = 6
 - » Georgia Tech = 11
 - » Georgia = 14
- **UW Heisman Trophy Candidate**
 - Ron Dayne
 - » “Tied with” Joe Hamilton, Georgia Tech
- **Life Cycle Costs**

NRC Committee on National Statistics

Recent DoD Studies

- **Workshop On Statistical Issues In Defense Analysis And Testing, September 1992**
 - DOT&E & PA&E Sponsorship
 - “Statistical Issues in Defense Analysis and Testing—Summary of a Workshop”, 1994
- **Panel on Statistical Methods For Testing And Evaluating Defense Systems, 1994-1998**
 - DOT&E Sponsorship
 - “Statistical Methods for Testing and Evaluating Defense Systems —Interim Report”, 1995
 - “Statistics, Testing, and Defense Acquisition —New Approaches and Methodological Improvements”, 1998
 - » 5 Conclusions & 38 Recommendations
 - » <http://www.nap.edu/catalog/6037.html>
 - “Statistics, Testing, and Defense Acquisition —Background Papers”, 1999

NRC Committee on National Statistics

Current DoD Study

- **DoD Workshop on Reliability Assessment**
 - DOT&E & USD(AT&L) Sponsorship
 - Early Planning Stages
 - » Two Days in June 2000
 - » Washington, D.C.
 - » Possible Topics
 - Structural reliability (active and stand-by redundancy, relationships between component and system reliability, optimal system design)
 - Parametric / non-parametric methods
 - Burn-in
 - Accelerated life testing
 - Reliability growth
 - Statistical process control
 - Combining data (OT, DT, modeling, etc.)
 - Software reliability \Leftarrow Cursory only
 - Reliability economics, life-cycle costs \Leftarrow !!!
 - Making use of field data, warranty data, truncated samples, archiving information

How Can T&E & LCC Communities Complement Each Other?

- **What Is Current Status?**
 - How is the LCC business currently done?
 - How is T&E information used?
- **How can T&E better support LCC estimation?**
 - During acquisition?
 - Post-deployment?
- **How can observed LCC data/results influence T&E planning?**
 - Current system?
 - Future systems?
- **What should be the role of data archiving?**
- **What should be the role of warranties?**