

Developmental Test and Evaluation Committee 2015 Status and Plans

**Joe Manas, Raytheon
Steve Scukanec, Northrop Grumman
Industry Co-Chairs**

Proposed 2015 Tasks:

1. **Case Study: Chief Developmental Tester Pilot Programs (First 17 CDTs certified by DASD-DT&E Dec 2015). Lessons Learned**
2. **White Paper: Cybersecurity DT&E (w/ SSE Committee Metrics & Measures project)**

Deliverables/Products

1. **CDT/ITL Best Practices documented, Developmental Evaluation Framework (DEF) workshop guidelines, Lessons Learned**
2. **Recommendations on how to apply the new Cyber DT&E guidance (from the DAG) for verification of SSE assurance cases – Early Cyber DT&E “Shift Left”**

Schedule / Resources

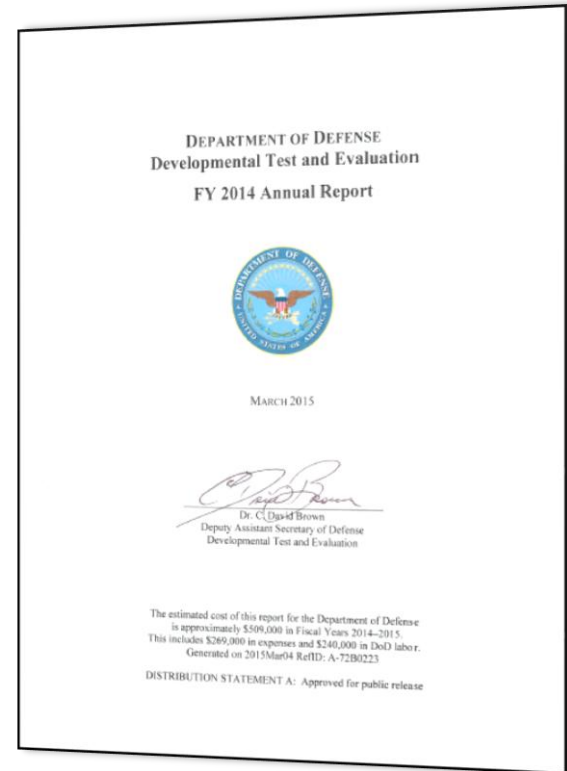
1. **2015Q2 – Programs being indentified for potential pilots to study CDT/ITL**
 - **DASD(DT&E) – Dr. Brown to assign POC**
2. **6/17/15 White Paper working meeting.**
 - **Industry POCs for authoring & review**
 - **Raytheon – Joe Manas**
 - **Lockheed Martin – George Little**
 - **NGC – Mike Rabens, Steve Scukanec**
 - **Boeing – Sandi Gianotas**
 - **TBD - TBD**

Status:

1. **CDT-ITL pilots - Reaching out to DT&E community to identify candidate programs where CDTs have been deployed –and programs are willing to participate.**
 - **Dr. Brown DASD(DT&E) to provide POC**
2. **Currently defining/assigning sections of the SSE white paper**

DASD(DT&E) 2014 Annual Report Cybersecurity DT&E

- ***“The cybersecurity DT&E process provides the Chief Developmental Tester and T&E community with a set of recommended developmental cybersecurity T&E objectives to consider when planning and assessing a system and outlines the procedures necessary to gather test data for a DASD(DT&E) program assessment supporting a major decision.”***
- ***“The guidance will be included in the next update of the Defense Acquisition Guidebook (DAG).”***



Systems Security Engineering Metrics & Measures Project

Overview:

The value of developing well defined, measurable, system security metrics is to be able to establish an indicator of a system's security mission effectiveness.

Goal:

Develop system security metrics that establish thresholds and trends that are predictive of the system's ability to perform within the mission threat environment.

Objectives:

1. Create levels of end system security performance metrics.
2. Develop indicators and trades of in-process security metrics.

Leverage of off previous work

- Lessons learned from the Draft Practical Measurement Framework for Software Assurance and Information Security report. – Bob Martin, Mitre
- The Air Force Program Protection Metrics Scorecard which includes questions with binary responses (Y/N). – Danny Holtzman & Brett Johnson, Mitre
- Development of a common scale for measuring security risk – Holly Dunlap, Raytheon
- What is measurable and evolution of measurement scales – Taz Daughtery
- Safety Community -The safety board uses assurance cases. Assurance cases are a compilation of performance (technical), artifacts (evidence) and activities (processes).

Draft Outline & Assignments

Cyber(?) System Security Metrics & Measures

1. Intro
2. Prior Work
3. Relationship of Cyber System Resiliency for Mission Assurance & System Security (Program Protection)
4. Framework
 - A. CONOPS
 - B. Mission Threads
 - C. System Performance Parameters
 - I. Architecting for Cyber Resiliency
 - II. System Security Risk
 - i. Common Scale
 - ii. Normalized Figures of Merit
 - III. System Cyber Availability Measure
 - IV. System Security Assurance Cases
 - i. Verify & Validate
 - V. Programmatic Progress
5. How to use the Framework
6. Conclusion
7. Appendix - Taxonomy

Need Authors!



Completed 2014 Projects Summary

DT&E Committee

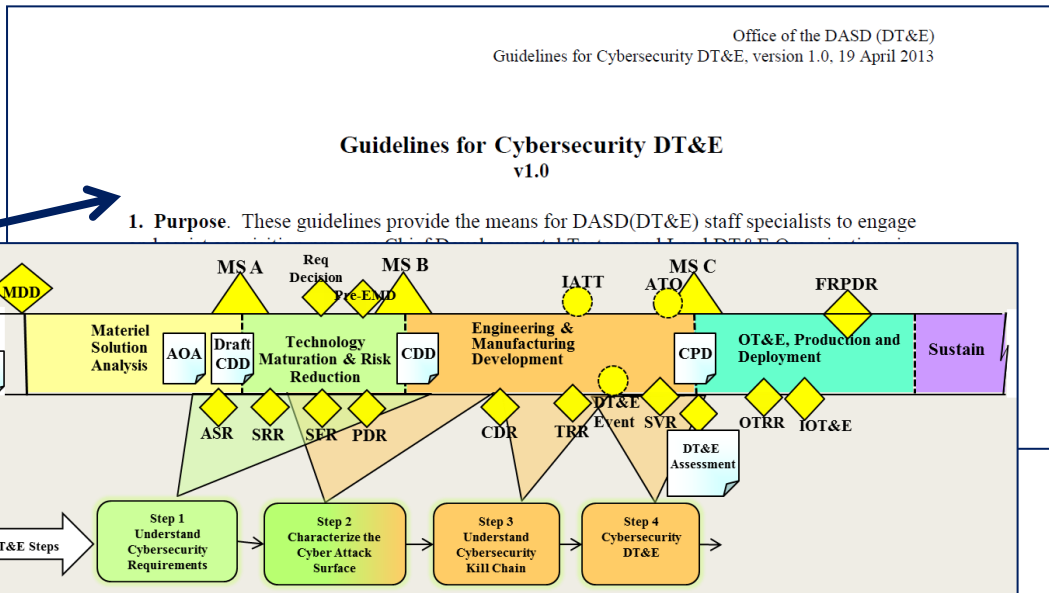
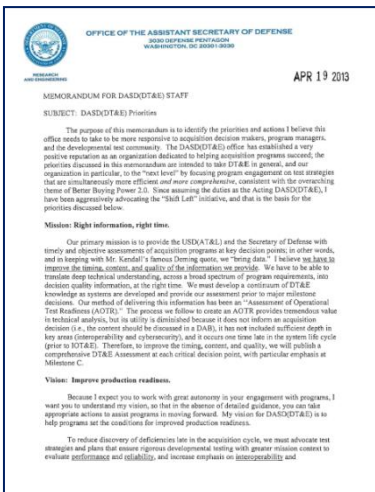
2014 Accomplishments



Activity	Plans for 2014	Status/Plans
NDIA T&E Conf	Panel members, CDT project awareness & status	Manas participated as panel member, CDT project also briefed at conference by Joe Manas.
NDIA SE Conf	DT&E tracks, Test Perspectives for Architecture	12 papers presented included joint tracks w/ M&S & Interoperability, Joe Manas presented (for Beth Wilson) "Test Perspectives for Architecture" paper
Cyber DT&E	Develop recommendations for Cyber Guidelines 2.0 in 2014	Completed paper, submitted to DASD-DT&E / DASD-SE, well received: <i>"Wish to express my thanks for this excellent feedback... thoughtful review."</i> –DASD-DT&E
Chief Developmental Tester Project	Develop recommendations for industry interaction with Chief Developmental Tester role	Completed 17 page white paper (reviewed & approved by (DT&E, ICOTE, T&E committees), in process with NDIA leadership for formal submittal to Mr. Kendall's office.

Cyber DT&E Guidelines Project

Project Name	Activities for 2014	Project Output
Cyber DT&E	Review what industry does for cyber testing, expand focus to include interoperability	<ul style="list-style-type: none"> Recommendations for Cyber Testing guidelines NDIA conference paper & ITEA journal



**Project Lead: Dave Desjardins
Joint Project with ITEA**

Cyber DT&E Project – Completed

- **Team comprised of Gov/Industry members**
 - Pete Christianson (MITRE) lead Gov rep.
- **Guideline paper completed by team & submitted to DASD-DT&E (Patrick Clancy) via Pete Christianson in March 2014**
- **Response from DASD(DT&E) was very positive**

“Wish to express my thanks for this excellent feedback...thoughtful review.”
- **Additional Comments from DASD(DT&E)**
 - DASD(DT&E) in collaboration with DASD (SE) and DOT&E are in the process of refining the initial Cybersecurity T&E guidance in order to support T&E across the acquisition lifecycle.
 - That guidance will ultimately be published in the upcoming updates to Chapter 9 of the Defense Acquisition Guidebook as well as the AT&L sponsored PM Cybersecurity Guidebook.
 - Mr Clancy has forwarded the suggested revisions to them for consideration as they finalize this guidance
- **Project team is exploring venues for paper/journal publishing on project (ITEA Journal 2015)**

Chief Developmental Tester Project

Project Name	Activities 2014	Project Output
Chief Developmental Tester	Review service policies for new role and industry implementations	<ul style="list-style-type: none"> Propose model for industry interaction White paper T&E/SE conference presentations

December 1, 2011

Ordered to be printed as passed

In the Senate

Resolved, That the titles (H.R. 1540) entities for fiscal year 2011 of Defense, for the activities of the Department of Defense, for personnel strengths for purposes,” do pass with the

AM

Strike out all

1 SECTION 1. SHORT TITLE

2 This Act may be cited as the

3 Chief Developmental Tester and Lead Developmental Test and Evaluation Organization Act for Fiscal Year 2011

3 SEC. 806. MANAGEMENT OF DEVELOPMENTAL TEST AND EVALUATION PROGRAMS.

4 EVALUATION FOR MAJOR ACQUISITION PROGRAMS.

5 TION PROGRAMS.

6 (a) CHIEF DEVELOPMENTAL TESTER.—Section 139b of title 10, United States Code, as amended by section 805(c) of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 110-181; 123 Stat. 2403), is further amended—

7 of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109-364; 120 Stat. 2530), as amended by section 805(c) of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 110-181; 123 Stat. 2403), is further amended—

8 Fiscal Year 2007 (Public Law 109-364; 120 Stat. 2530), as amended by section 805(c) of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 110-181; 123 Stat. 2403), is further amended—

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10 thorization Act for Fiscal Year 2010 (Public Law 110-181; 123 Stat. 2403), is further amended—

11 123 Stat. 2403), is further amended—

12 (1) by redesignating paragraph (6) as paragraph (7); and

13 graph (7); and

14 (2) by inserting after paragraph (5) the following new paragraph (6):

15 following new paragraph (6):

16 “(6) Chief developmental tester.”.

17 (b) RESPONSIBILITIES OF CHIEF DEVELOPMENTAL TESTER AND LEAD DEVELOPMENTAL TEST AND EVALUATION ORGANIZATION.—Section 139b of title 10, United States Code, is amended—

18 TESTER AND LEAD DEVELOPMENTAL TEST AND EVALUATION ORGANIZATION.—Section 139b of title 10, United States Code, is amended—

19 TION ORGANIZATION.—Section 139b of title 10, United States Code, is amended—

20 States Code, is amended—

The Secretary of Defense shall require that each major defense acquisition program be supported by—

“(A) a **Chief Developmental Tester**; and

“(B) a governmental test agency, serving as **Lead Developmental Test and Evaluation organization** for the program.

- Coordinating DT&E activities
- Insight into Contractor activities
- Oversee T&E activities
- Inform government PM about contractor DT&E results

**Project Lead:
Joe Manas**

CDT Project Status – Dec 2014

- **DT&E Committee Project team:**

Joe Manas (Lead) – Raytheon
Sandi Gianotas – Boeing (BTE)
Tom Simms – DASD(DT&E)
Joe Wascavage – NAVAIR

Brendan Rhatigan – Lockheed Martin
Steve Scukanec – Northrop Grumman
Paul Alfieri – DAU
Bram Lillard – DOT&E

- **Power Point paper version completed in July 2014**

Paper accepted to the following conferences:

NDIA 29th Annual National Test & Evaluation Conference ✓

07/21/2014 — 07/23/2014

The Westin Washington, DC City Center
Washington, DC

ITEA 31st Annual International Test and Evaluation Symposium ✓

10/6/2014 — 10/9/2014

Crystal Gateway Marriott
Arlington, Virginia

NDIA ICOTE Meeting ✓

7/21/2014

The Westin Washington, DC City Center
Washington, DC

NDIA 17th Annual Systems Engineering Conference ✓

10/27/2014 — 10/30/2014

Waterford at Springfield
Springfield, VA

- **White paper completed – November 14 ✓**

- Incorporated feedback received from ICOTE and T&E Division presentations
- Paper focuses on specific recommendations to shape future RFPs
 - Key Personnel Clauses around the Industry Test Lead
 - Key interaction between CDT & ITL and the output products
 - Developmental Evaluation Framework (DEF) – Recommend Workshop w/ key stakeholders
 - Continue to update and review the DEF / TEMP as needed during development

- **Final Review of with DT&E Committee & ICOTE Dec 4th 2014 completed ✓**