Configuration Management’s Brave New World
Panelists

- Mr. Daniel Christensen
  US Navy Naval Air Systems Command

- Mr. Michael Treadwell
  Northrop Grumman Corporation

- Mr. Patrick Dallosta
  Defense Acquisition University
Agenda

- Progression from Mil-Standard to Industry Standards
- Complimentary/Coordinated Family of CM Principles & Processes
- Path Ahead
- Open Discussion
- DAU Configuration Management Learning Assets
- Questions and Answers
Section 12(d) of the National Technology Transfer and Advancement Act of 1996, Public Law (PL) 104-113

“Federal Agencies shall use technical standards developed or adopted by voluntary consensus standards bodies, unless impractical or inconsistent with law. Federal Agencies shall participate in development of voluntary consensus standards, unless incompatible with Agency mission, priorities, or resources.”
From 1968 - 1992: a number of different Mil Standards 480, 481, 482, 483, 1521

These standards were replaced by a single Mil Standard 973 in 1992:
  • Required tailoring based on program phase and complexity
  • Listed 27 different status accounting reports

Mil Standards were “requirement” documents invoked on contracts
Mil-Standard 973 was viewed as a cost driver. Govt. and Industry encouraged to reduce redundant, non-value added practices.

A joint effort between Govt. and Industry produced EIA-649, containing CM principles rather than CM requirements (649B has 37 best practices).


Northrop Grumman Corporation (NGC) modified its internal CM procedures to address the call for industry “best value” practices.

The modified NGC process received DOD approval as a “SPI” and was “block changed” into all existing DOD contracts.

**DoD recognition and sanctioning of NGC CM practices**
Configuration Management Standards Working Group (CMSWG)

- The Navy stood up and chartered the CMSWG which included participants from the uniformed Services, the Coast Guard, the Defense Contract Management Agency, National Security Agency and the Defense Logistics Agency.
- The CMSWG generated a draft standard to the SAE G-33 Committee on Configuration Management in October 2013.
- The G-33 Committee developed an addendum to ANSI/EIA-649-B, identified as EIA-649-1, Configuration Management Requirements for Defense Contracts.
Complimentary/Coordinated Family of Standards of CM Principles and Processes

One Complimentary, Coordinated Family of Configuration Management Principles and Processes

EIA-649B Configuration Management Standard

EIA-649-1 Configuration Management Requirements for Defense Contracts


Source: SAE G33 Configuration Management Cmte
Complimentary/Coordinated Family of Standards of CM Principles and Processes

- **EIA-649B “Configuration Management Standard”**
  Industry standard intended for use when establishing, performing, or evaluating CM processes. The Standard synchronizes content and harmonizes terminology contained in both the GEIA-HB-649 and the MIL-HDBK-61A with its companion standard EIA-649-1 by consolidating the two handbooks.

- **EIA-649-1 “Configuration Management Requirements for Defense Contracts”**
  Defense unique standard to the non-government standard, that generates, manages and is controlled by the non-government standard body with Defense membership to provide requirements specific for Defense contracts. This standard is for placing tailored Configuration Management requirements on Defense contracts.

  Provides a one-stop shop for all CM professionals and practitioners to obtain recommended practice implementation guidance information that has actual use cases provided by Industry/Commercial and the Govt/DoD representing a cohesive and aligned community.
EIA-649-1 Adoption and Publication

- **EIA-649-1** was published on the 20th of November 2014.
- The Standard may be purchased from the SAE website for a fee.
  - Government offices should refer to
- DOD adopted [EIA-649B](#) and [EIA-649-1](#) on the 4th of March 2015.
- 10 Data Item Descriptions approved on the 7th of April 2015 and uploaded into the ASSIST db on 13 April 2015. Additional DID’s were updated prior.
## SAE-EIA-649B Principles and Applications

### Principle Definition

<table>
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<th>Principle</th>
<th>Definition</th>
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<tbody>
<tr>
<td>CM-1</td>
<td>Configuration Management implementation requires a balanced and continuous application of CM functions and their underlying principles throughout the product life cycle.</td>
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<tr>
<td>CMP-1</td>
<td>The foundation for CM Planning, which delineates the specific CM application methods and their levels of emphasis, is an understanding of the context and environment of the product to which the CM process is to be applied.</td>
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<tr>
<td>CI-1</td>
<td>Configuration Identification is the basis from which the configuration of products are defined and verified; products and their product configuration information are labeled; changes are managed; and traceability is maintained throughout the product’s life cycle.</td>
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<tr>
<td>CCM-1</td>
<td>Changes to a product are accomplished using a systematic, measureable change process.</td>
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<tr>
<td>CSA-1</td>
<td>Configuration Status Accounting (CSA) provides an accurate, timely information base concerning a product and its product configuration information throughout the product life cycle.</td>
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<tr>
<td>CVA-1</td>
<td>Verifying a product’s compliance with the physical, functional, and interface requirements in an approved product definition information confirms the basis for managing product configuration.</td>
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♦ Please refer to EIA-649B for the complete listing of Principles.
SAE EIA-649-1 Outline (1/3)

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Table 2 Data Item Descriptions (DIDs) and DD Forms

Table 3 Additional Associated DIDs

ANNEX A Tailoring Checklist
Current CM Documentation and Alignment

SAE EIA-649B

SAE EIA-649-1

Policy

DAG

Chapter 3

Other Chapters: 2, 5, 7, 12, and 13

MIL-HDBK-61A Configuration Management Guidance
SAE EIA-HB-649A Implementation Guide for Configuration Management (not adopted)

6 DD Forms
- 61 Request for Nomenclature (MIL-STD-196)
- 1692 Engineering Change Proposal (ECP)
- 1694 Request for Variance (RFV)
- 1695 Notice of Revision (NOR)
- 1696 Specification Change Notice (SCN)
- 2617 Engineering Release Record (ERR)

17 repetitive use DIDs
- DI-SESS-80463 Engineering Release Record (ERR)
- DI-SESS-80639 Engineering Change Proposal (ECP)
- DI-SESS-80640 Request for Variance (RFV)
- DI-SESS-80642 Notice of Revision (NOR)
- DI-SESS-80643 Specification Change Notice (SCN)
- DI-SESS-80858 Contractor's Configuration Management Plan
- DI-SESS-81022 Configuration Audit Summary
- DI-SESS-81218 Product Baseline Index (PBLI)
- DI-SESS-81211 Baseline Description Document
- DI-SESS-81245 Installation Complete Notification (ICN)
- DI-SESS-81248 Interface Control Document (ICD)
- DI-SESS-81253 Configuration Status Accounting Information
- DI-SESS-81646 Configuration Audit Plan
- DI-SESS-81830 As Built Configuration List-Common (ABCL-C)
- DI-SESS-81879 Configuration Item (CI) Documentation Recommendation
- DI-SESS-81856 Contractual Baseline Report
- DI-SESS-81011 Drawing/Model Number Assignment Report

SAE EIA-649B

SAE EIA-649-1

Handbooks

DD Forms

CM DIDs

IEEE 15288.1 and 15288.2

DAU Training

Policy

DAG

Handbooks

DD Forms

CM DIDs

IEEE 15288.1 and 15288.2

DAU Training

DoDD 5000.01 Enclosure 1
DoD 5000.02 Enclosure 3

Chapter 3

Other Chapters: 2, 5, 7, 12, and 13

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Source: SAE G33 Configuration Management Cmte
Tailoring EIA-649-1

- Start with the EIA-649-1 in concert with the EIA-649B
- Guidance from handbooks: GEIA-HB- 649A, MIL-HDBK-61A
- Tailoring EIA-649-1 requirements applied in contracts with suppliers means applying the only requirements (with the properly adjusted wording) that will be necessary to the contract or Statement of Work
- This saves time and money for both the Government and the supplier
- This tailoring activity will be aligned with the efforts of a US-NATO joint requirements setting effort as well as with another effort to update the MIL-HDBK-61A to 61B
Path Ahead

CM Standards

SAE EIA-649B

SAE EIA-649-1 Configuration Management Requirements

Requirements Tailoring

“Right-sized” CM Requirements

CM Guidance

SAE GEIA-HB-649A

MIL-HDBK-61A

Work Product

Source: SAE G33 Configuration Management Cmte
EIA-649B “Configuration Management Standards” is in the process of being updated to EIA-649C and revised IAW with the SAE five year review cycle.

Thus any changes to the principles and after the SAE balloting and approval process is completed the updated EIA-649-1A “Configuration Management Requirements for Defense Contracts”, updated GEIA-HB-649B “Configuration Management Implementation Guide Handbook” will be required for balloting and approval also.
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### LOG 204 Course Background / Overview

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<td>Course Description per iCatalog Concept Card</td>
<td>“The course provides a broad overview of requirements to design, develop, oversee and operate a configuration management program across the system Life Cycle.”</td>
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| Certification Course | • LCL “Choice of” Level II  
• ENG “Core Plus” Level II  
• PQM “Core Plus” Level II  
• PMT “Core Plus” Level III |
| Delivery Method/Length | Distance Learning / 15 Hours (Previously 18) |
| Target Attendees | Life Cycle Logisticians, Systems Engineers, Configuration Managers, Program Managers, others involved in development of systems and Life Cycle Support, approximately 2-4 years |
| Prerequisites | ACQ 101, Fundamentals of Systems Acquisition Management  
Distance Learning / 20 Hours |
| Other background information | • Classroom Course – 2003 / Distance Learning 2006  
• Primary CM course for both DoD Certification |
Thank you for the Opportunity to Support the DAU Acquisition Training Symposium