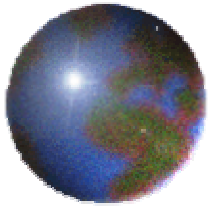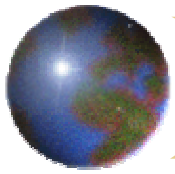# ANSI/EIA 649 Revision A (Draft) and EIA 649 Handbook Status

Sherman Weatherspoon III

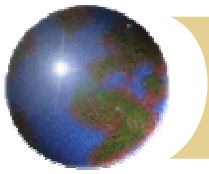**Lockheed Martin**

Sherman.weatherspoon@lmco.com

301.240.6413

Agenda

- **CM History**
- **CM Standards – History**
- **Rev A Summary**
- **Current Status**
- **649 Handbook Status**
- **Summary**
- **Contact Information**

- **Need for Item Standardization Realized**
  - **Industrial Age expansion**
  - **CM Issues became critical during World War II**

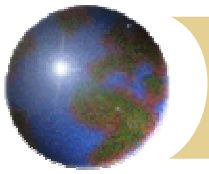- **Department of Defense (DoD) and Industry take Action:**
  - **To Identify and Adopt Existing Good Business Practices**
  - **To Define Procedures and Practices that Provide an Orderly Standard Process for Technical Management of Product Life Cycles**
  - **To Promote the Consistent and Rigorous Application of these Processes and Practices across Industry**
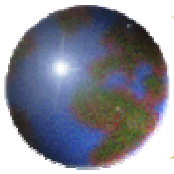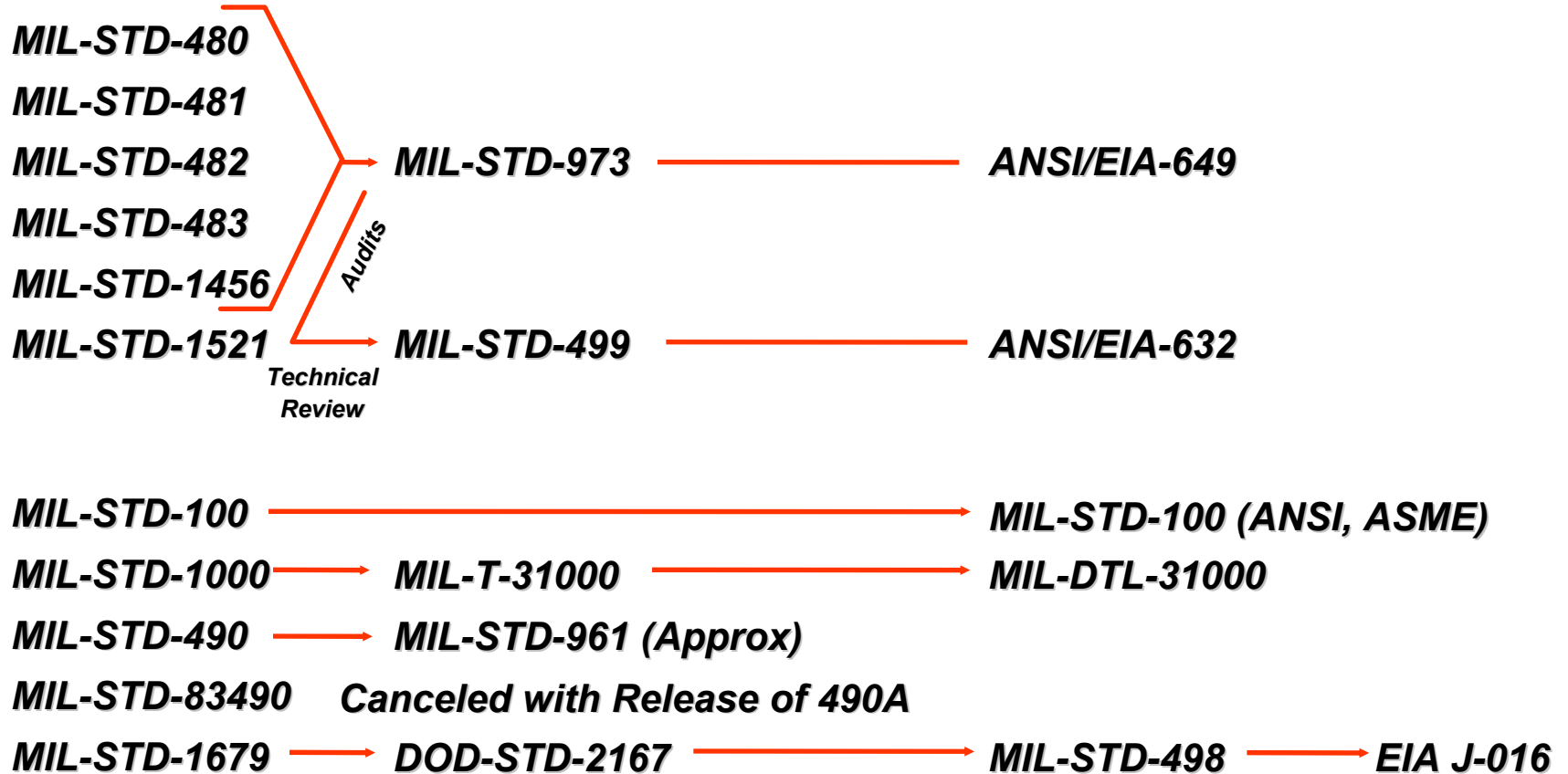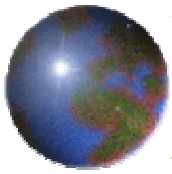
Benefits of Configuration Management

- **The Configuration Management Functions Facilitate Technical Management of Product Configuration Information for such Purposes as:**
    - **Producibility and Repeatability**
    - **Improved Performance, Reliability or Maintainability**
    - **Extended Life and Supportability**
    - **Defect Correction**
    - **Product Traceability**
    - **Program Cost/Schedule/Technical Integrity**
    - **Two-Way Interchangability**
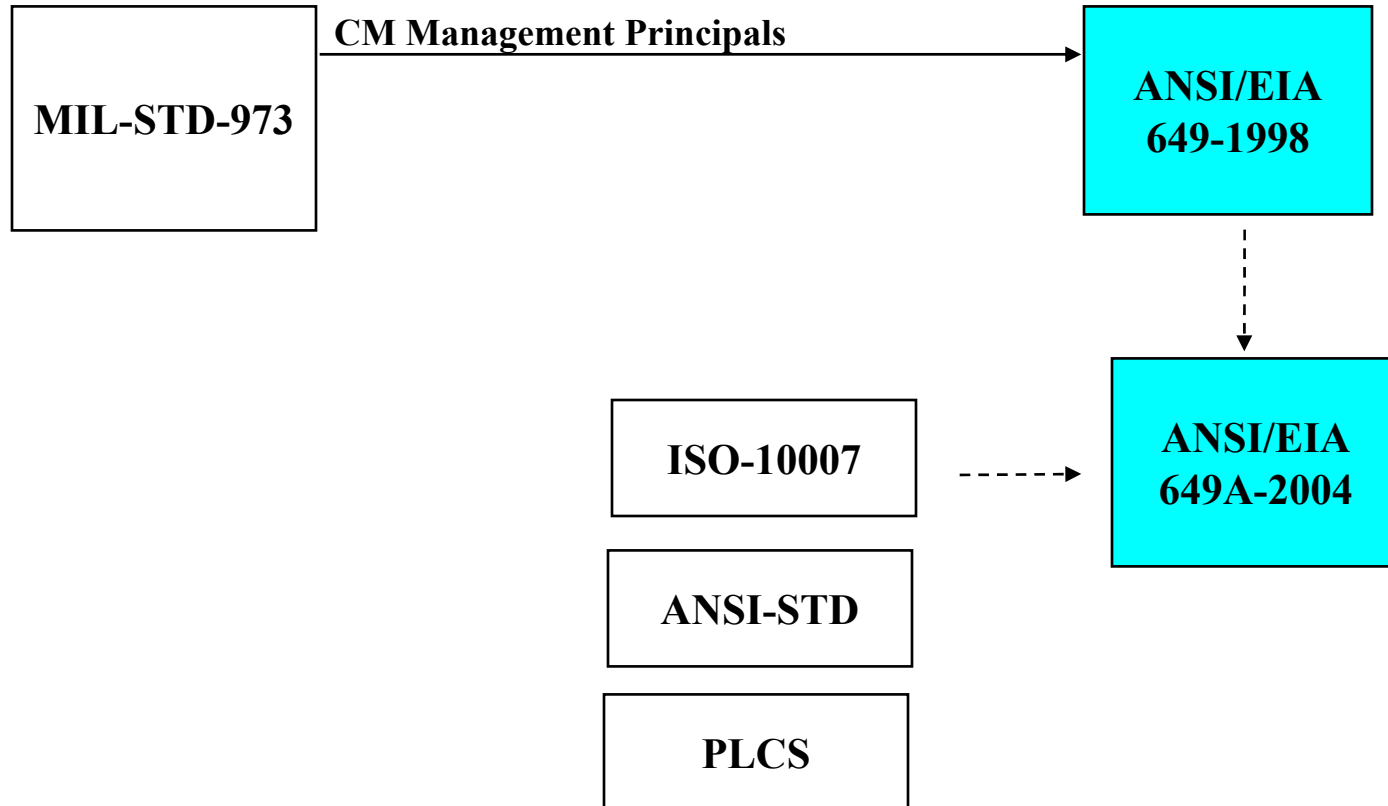   - **Cost Savings/Avoidance**

A History of CM Guidance

MIL-STD-480
MIL-STD-481
MIL-STD-482 → MIL-STD-973 ——————— ANSI/EIA-649
MIL-STD-483
MIL-STD-1456
MIL-STD-1521 → MIL-STD-499 ——————— ANSI/EIA-632

Audits
Technical Review

MIL-STD-100 ———————————————— MIL-STD-100 (ANSI, ASME)

MIL-STD-1000 → MIL-T-31000 ——————— MIL-DTL-31000

MIL-STD-490 → MIL-STD-961 (Approx)

MIL-STD-83490   Canceled with Release of 490A

MIL-STD-1679 → DOD-STD-2167 ——————— MIL-STD-498 → EIA J-016

ANSI/EIA 649 Evolution

```
┌──────────────┐   CM Management Principals   ┌──────────────┐
│ MIL-STD-973  │ ──────────────────────────▶ │  ANSI/EIA    │
│              │                              │  649-1998    │
└──────────────┘                              └──────────────┘
                                                     │
                                                     ▼
                   ┌──────────────┐           ┌──────────────┐
                   │  ISO-10007   │ - - - - ▶ │  ANSI/EIA    │
                   └──────────────┘           │  649A-2004   │
                   ┌──────────────┐           └──────────────┘
                   │   ANSI-STD   │
                   └──────────────┘
                   ┌──────────────┐
                   │     PLCS     │
                   └──────────────┘
```

ANSI/EIA 649 Revision A Team

Team Lead - Sherman Weatherspoon - Lockheed Martin (Handbook - Co-Lead)
Co-Lead - Larry Bauer – Boeing (Handbook – Team Lead)

Karen Chandler – Boeing
Bill Dean - US Air Force Institute of Technology
Bill Gold - Boeing
Rikki Gutierrez – Boeing
Ernie Hamm - CM2Hill
Mitch Kaarlela - Lockheed Martin
Jeff Klein - Boeing
Alan Lager - MLR Associates
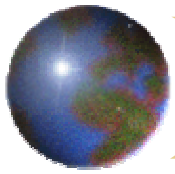**Dan McCurry II – Boeing**
Donna Paulson – DoD
Bill Ritter – Ritter Associates
Rick Schiappa – Lockheed Martin
Kimberly Shughrue - NSA
Tom Tyler – Go2Group
Ken Vannoy – NASA
Beth Worthington - SAIC

Scope of ANSI/EIA 649 Revision A

- **Expand to fully address**
  - **Total product lifecycle phases**
  - **Expand baseline methodology**
  - **Harmonize terminology and definitions with global standards (ISO, other ANSI-STD's, etc..)**
  - **Best practice CM global functions and principles**
- **Five functions (5) and forty one (41) defining Principles**
- **Ensure Integration with related standards**
- **Integrate digital data throughout the standard**
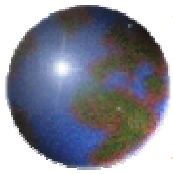
Revision Development Strategy

- **Leave Normative Information**
  - **Terms**
  - **Definitions**
  - **Principles**
  - **Clarifying Text**
- **Remove Informative Information**
  - **Clarifying Legacy Examples**
  - **Legacy CM Practices**
  - **Legacy Implementing Considerations**
- **Move Informative Information to Handbook**
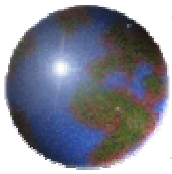
ANSI/EIA 649 Schedule Review

- **Submitted 649A for G33 Leadership review (Jan '02)**

- **Disposition G33 Leadership comments (Feb-June)**

- **Resubmit to G33 Leadership (August 02)**

- **G33 649A Workshop tutorial (Sept 02)**

- **G33 Ballot (Jun – Aug 03)**

- **Comment Disposition (Sep 03 –Jan –04)**

- **G33 Membership companies review (Jan –04 –Feb -04)**

- **ANSI Ballot (March 04– April 04)**
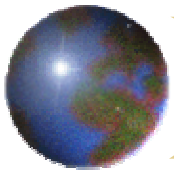
ANSI/EIA 649 Revision CCB

- Weekly Telephone Conferences
  - **11:00-12:00 AM Pacific, 2:00PM Eastern**
    - **ANSI/EIA Working Group Team Only**
    - **Adhoc Team members as needed**
- **Contact:**
  - **sherman.weatherspoon@lmco.com or 301-240-6413**
 - **larry.d.bauer@boeing.com or 425-342-1759**

Handbook 649

- **Task Description:**
  - **Use informative data removed from ANSI/EIA-649, Annex C data, Handbook 61 data, and other examples identified, in preparing an Implementation Guidance Handbook to supplement and complement ANSI/EIA-649.**
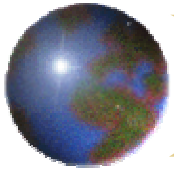
Handbook 649 Objective

- **Users guide for implementing CM regardless of project size, complexity, customer, or business objectives.**

- **Reflective of EIA-649 Rev A. and consistent with the principles of ISO10007, CMMI and other CM Standards.**

- **Best practice examples for Industry on how to apply the Functions and Principles of EIA-649 .**

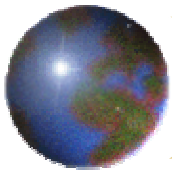- **Government (DoD) specific annex to Handbook was but on hold by OSD 18 months ago pending MIL-HB-61B update.**
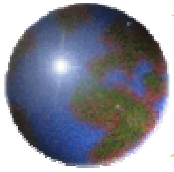
Handbook 649 Purpose

- **Provide implementation guidance for:**
  - **Tailoring to fit various applications.**
  - **Preparing CM plans.**
  - **Evaluating of CM systems.**
  - **Creating CM Metrics.**
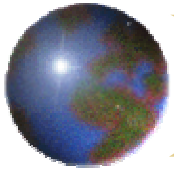 - **Demonstrating Compliance with Principles.**

Handbook 649 Development Plan

- **Initial sections were authored by subteams using a standard template.**

- **Annexes will be identified as section material is developed -**
  - **Initial Annexes Identified are:**
    - **Table demonstrating compliance to individual principles.**
    - **Sample CM Plan Outline.**
   - **Government Specific Material (Content TBD)**

- Integrate team drafts and edit for consistency of presentation and style.

- Present preliminary draft for Panel review, discussion, and input at the September 2003 EIA Annual Conference.
  - Government/Industry integration panel

- Prepare plan for final draft development, review and approval.

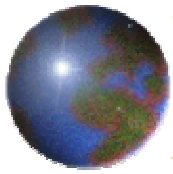# *HB-649 PARTICIPANTS*

- 58 PANEL MEMBERS - GOOD MIX OF GOVERNMENT AND INDUSTRY

- MINIMUM EXPERIENCE 2 YRS

- MAXIMUM EXPERIENCE 40+ YRS

- AVERAGE EXPERIENCE 17.8 YRS

- TOTAL EXPERIENCE 1032+ YRS
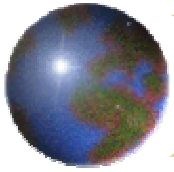
THE TASK

- **CREATE AT LEAST 2 EXAMPLES PER PRINCIPLE**
  - **TABLES**
  - **CASE STUDIES**
  - **FORMS**
  - **FLOWS**
  - **FIGURES**
  - **SAMPLES**
- **SHARE EXPERTISE**

WORK GROUPS

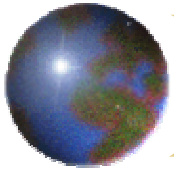- **PLANNING AND MANAGEMENT**
  - **TOM TYLER & STAN BEITSCH**

- **IDENTIFICATION**
  - **BILL DEAN & KAREN CHANDLER**

- **CHANGE MANAGEMENT**
  - **RICH OTTO & KIM SHUGHRUE**

- **CONFIGURATION STATUS ACCOUNTING AND VERIFICATION AND AUDIT**
  - **KEN VANNOY & PHIL PROVENCE**

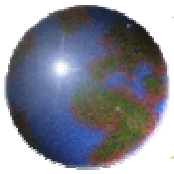## PLANNING AND MANAGEMENT (10)

- 20+ Examples
- Refined Characteristics of CM Implementation Phases Table, Sample Best Practices
- Developed Team Follow-on Action Items to Gather Detailed Sample CM Plans, etc.

IDENTIFICATION (12)

- 26 Examples Created
  - 15 Diagrams/Tables
  - 5 Flow Charts
  - 6 Case Studies

- **CHANGE MANAGEMENT (12)**

  - **36 Examples Created**

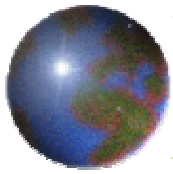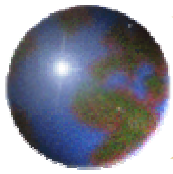 | | |
    |---|---|
    | **10 Tables** | **1 Sample** |
    | **11 Flows** | **7 Charts** |
    | **4 Forms** | **3 Figures** |

- **STATUS ACCOUNTING AND VERIFICATION AND AUDIT (7)**

  - **20+ Examples Created**

WHAT'S NEXT?

- **CONTINUE WEEKLY MEETINGS TO INCORPORATE MATERIAL OBTAINED AT THIS CONFERENCE**
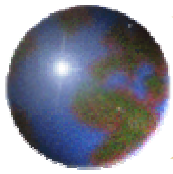
- **REVIEW, EDIT, AND SUBMIT FOR GEIA APPROVAL**

Contact Information

- **Larry Bauer**
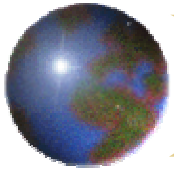
  larry.d.bauer@boeing.com

- **Sherman Weatherspoon**

  sherman.weatherspoon@lmco.com

Weekly Meeting Information

- **Thursdays at 8:30 AM Pacific (non-holidays)**
- **The numbers and passwords are:**
  - **National toll free: 1-866-235-8350**
    - **Pass code: 734537#**
  - **Puget Sound access: 206-655-2988**
    - **Pass code: 734537#**
- **The WebEx sign-on is:**
  - **https://boeing.webex.com/boeing**
  - **Meeting number: 821961461**
  - **Password: handbook**

- ANSI/EIA 649 is a guidance Configuration Management Standard that establishes the Principles and Terminology which can be applied to any project environment

- Coming soon…GEIA HB-649 "Implementation Guide for Configuration Management"