Overview of Defense Standardization Program (DSP)

DSP Industry Day
January 24, 2017

Lloyd Thomas III
Defense Standardization Program Office

U.S. Defense Policies & Procedures for Standards Development & Use

- ➢ **Public Law 82-436, Defense Cataloging & Standardization Act**
  - Directs development of a single DoD-wide standardization program
  - Requires achievement of highest practicable degree of standardization of items and practices used throughout DoD
  - Requires U.S. to standardize equipment, ammunition, fuel, etc. for the use of U.S. armed forces under the North Atlantic Treaty or at least to make that equipment interoperable with equipment of other members of NATO
  - DoD Instruction 4120.24, Defense Standardization Program*
  - DoD Manual 4120.24, Defense Standardization Program Procedures*

- ➢ **Public Law 104-113, National Technology Transfer and Advancement Act**
 - Gives preference to development and use of non-government standards instead of government standards
  - OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities**

*Available from http://www.dtic.mil/whs/directives/
**Available from https://www.whitehouse.gov/omb/circulars_default/

Defense Standardization Program (DSP) Responsibilities

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│      Secretary of Defense       │
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┌─────────────────────────────────┐
│     Under Secretary of Defense  │
│   for Acquisition, Technology,  │
│          and Logistics          │
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│  Assistant Secretary of Defense │
│      for Research & Engineering │
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│   Deputy Assistant Secretary of │
│   Defense, Systems Engineering  │
│                                 │
│  Defense Standardization Executive │
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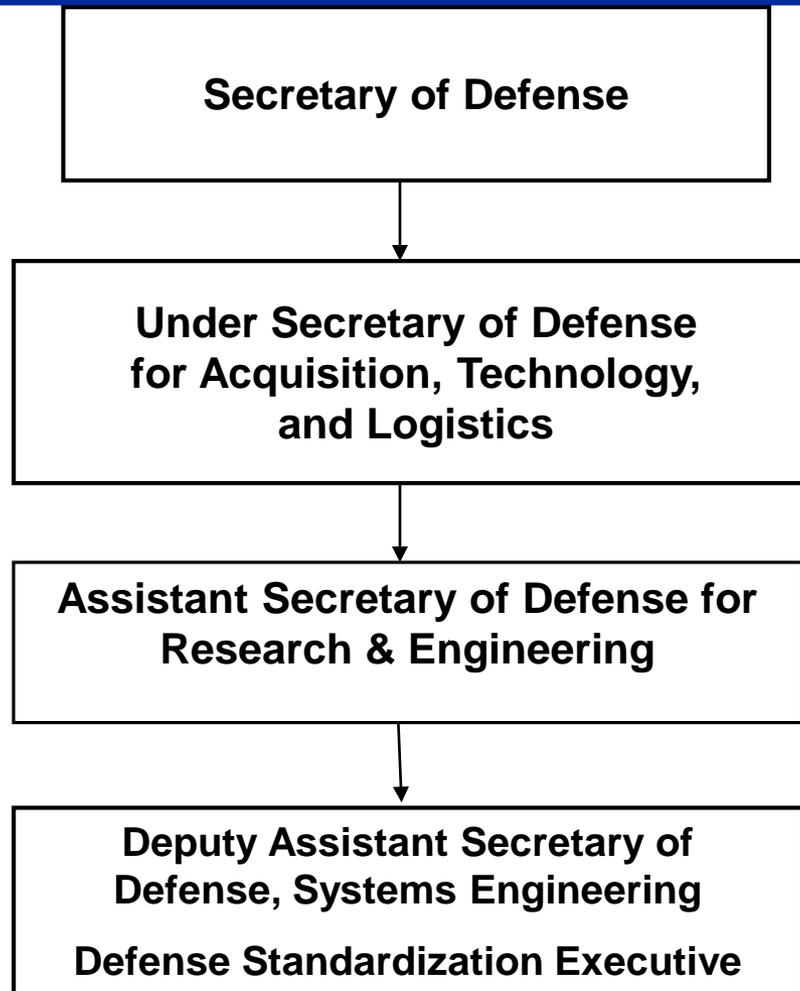
DSP Structure

Centrally Managed

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                    ┌──────────────────────────────┐
                    │ DEFENSE STANDARDIZATION       │
                    │ COUNCIL*                      │
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ARMY DepSO**	NAVY DepSO**	AIR FORCE DepSO**	DLA DepSO**	Other DoD Agencies

MAJOR SUBORDINATE COMMANDS, CENTERS (E.G. TACOM)	SYSTEMS COMMANDS CENTERS LABORATORIES TECH. FACILITIES (E.G. NAVSEA)	FIELD COMMANDS CENTERS/DIVISIONS LABORATORIES DEV. CENTERS (E.G., ASC, ALCs)	DLA CENTERS

MORE THAN 100 STANDARDIZATION OFFICES IDENTIFIED IN ASSIST DATABASE***
TO DEVELOP, ADOPT, REVIEW, AND MAINTAIN STANDARDS

Decentrally Executed

* Chaired by Defense Stdz Exec with Component Stdz Execs from MilDeps & Defense Agencies
**DepSO = Departmental Standardization Office
**ASSIST is an online database that contains approved DSP documents and metadata; approved POCs, standardization project module, document coordination tool, and other useful information and tools. https://assist.dla.mil.

DoD Standardization Activity Roles

- ➢ **Roles Assigned Based on Expertise/Interest in Standardization Area or Federal Supply Class (FSC)**
  - – 45 Standardization Areas That Cover Engineering Practices, Processes, & Technologies (E.g., Sys Eng, IT, Soldering, Packaging, Drawing Practices, Product Support, Forging)
  - – 725 FSCs for Commodities (E.g., Fuzes, Valves, Clothing, Plastics, Medical Equipment, Engines, Lubricants, Fuel, Microcircuits)
- ➢ **Each Service/Agency Authorizes Offices to Become Standardization Activities, Defines Roles, and Lists in ASSIST Database**

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Types of DSP Documents

- **Military Specification - Defines requirements & tests for military unique items**
- **Military Standard - Defines requirements for military unique processes, test methods, practices**
- **Military Handbook - Provides guidance for selection of items or engineering approaches**
- **Data Item Description (DID) – Provides content and format requirements for data deliverables listed on Contract Data Requirements Lists (CDRL)**
- **Federal Specification – Defines requirements & tests for federal government unique items**
- **Federal Standard – Defines requirements for federal government unique processes, test methods, practices**
- **Commercial Item Description (CID) - Defines requirements for commercially available items**

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Types of DSP Documents

➢ **International Standardization Agreement (ISA) - An agreement between treaty organization nations to standardize on interfaces, material, parts, equipment, etc. for military purposes (e.g. NATO STANAG). This is not private sector international standards, such as ISO, IEC.**

➢ **Non-Government Standard (NGS) - Also known as a voluntary consensus standard, it is a standardization document developed by a national or international private sector association, organization, or technical society that plans, develops, establishes, or coordinates standards, specifications, handbooks, and related documents. It does not include company standards.**

Types of Standardization Documents Used by U.S. DoD

28,700+ Active Documents as of May 2016

Pie chart:
- MilSpecs & MilStds 42%
- NGS 30%
- CIDs 11%
- ISAs 8%
- FedSpecs & FedStds 5%
- DIDs 4%
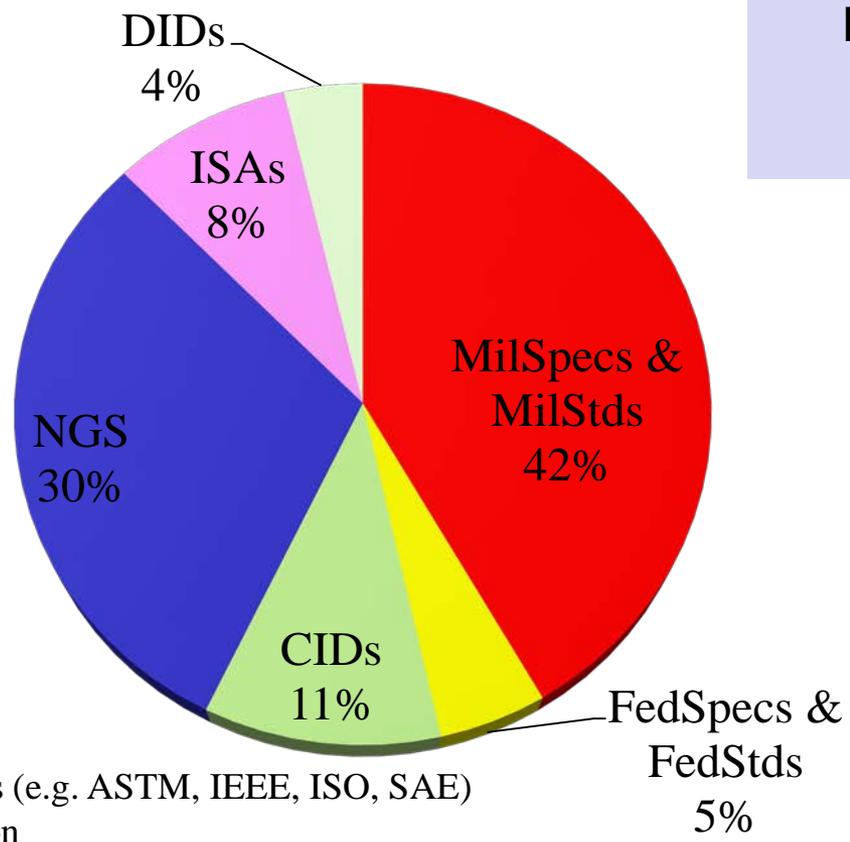
NGS = Non-Government Standards (e.g. ASTM, IEEE, ISO, SAE)
CID = Commercial Item Description
DID = Data Item Description
ISA = International Standardization Agreement (e.g. NATO, ABCA)

DSP Responsibilities

- **Standardization Management Activities (SMAs) authorized by their Department/Agency may function as**
  - Lead Standardization Activity
  - Document Preparing Activity
  - Document Adopting Activity
  - Document Review Activity

- **SMA role for each DSP document shown in ASSIST database**

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Lead Standardization Activity (LSA)

- **Only one LSA for each standardization area or FSC**
- **Defense Standardization Program Office (DSPO) assigns LSA**
- **LSA must approve all standardization projects in its Area**
  - New documents
  - Updates to existing documents
  - Cancel or inactivate documents
  - Reinstate canceled or reactivate inactive documents
- **LSA is "guardian of gate" for "official" DoD standardization documents in system**
- **LSA approval process via ASSIST Standardization Project Request Module**

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LSA

- ➢ **LSA Considerations for Project Approval**
  - – Is this the correct standardization area or should document be somewhere else?
  - – Does document duplicate existing one?
    - – Existing government document
    - – Existing non-government standard
  - – Could existing document be modified to satisfy requirement?
  - – Should a non-government standard be developed instead of government document?
  - – Will document be fully coordinated (all Services) or limited coordination (single Service)?
  - – Other considerations
- ➢ **All draft documents coordinated with LSA in Standardization Area**
- ➢ **Mediate disputes in Standardization Area**
- ➢ **Guide standardization direction in Area**
  - – May hold meetings
  - – May organize committees
  - – May be active in Non-Government Standards Bodies

Preparing Activity

- **Prepares DSP documents following procedures in DoDM 4120.24**
  - MilSpec content & format per MIL-STD-961
  - MilStd content & format per MIL-STD-962
  - MilHdbk content & format per MIL-STD-967
  - DID content & format per MIL-STD-963
  - Federal specs, stds, & CIDs format & content per GSA Federal Standardization Manual
- **Above available in Library at www.dsp.dla.mil.**
- **Must get LSA approval for standardization projects using the ASSIST Project Approval Module**
- **Must coordinate documents using ASSIST coordination module and other means**
- **Must resolve comments per DSP policies**
- **Must submit final approved document in PDF to ASSIST using electronic document submission module**

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Adopting Activity

➢ **DoD Adopts Non-Government Standards following procedures in DoDM 4120.24**

➢ **Issues Adoption Notice**
   – Requires standardization project through ASSIST
   – Coordinates through ASSIST
   – Final approved notice entered into ASSIST through electronic document submission module

➢ **DoD POC on Non-Government Standard**

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Review Activity

- ➢ **Reviews and comments on document prepared by others**
- ➢ **Preparing Activity must coordinate with all Review Activities designated in ASSIST for a document**
- ➢ **Preparing Activity must resolve "essential" comments made by a Review Activity**

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DoD Standards Development Process

Step 1 - Planning

- Establish need for standardization document
- Can existing document be used or modified?
  - **Yes** → Use that document
  - **No** → Contact LSA for standardization project approval → Approval?
    - **No**
    - **Yes**

Step 2 - Development

- Draft document
- Urgent need for document?
  - **No** → Coordinate document
  - **Yes** → Issue interim document to meet need. Continue process
- Comments resolved?
  - **Yes** → Edit final copy
  - **No** → Submit to higher authority
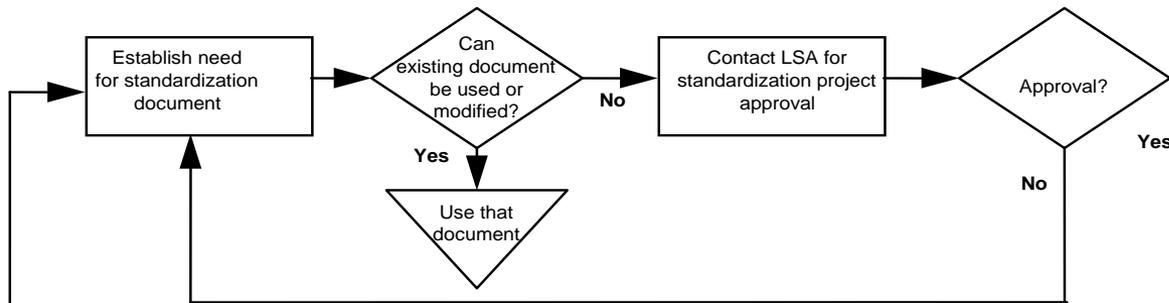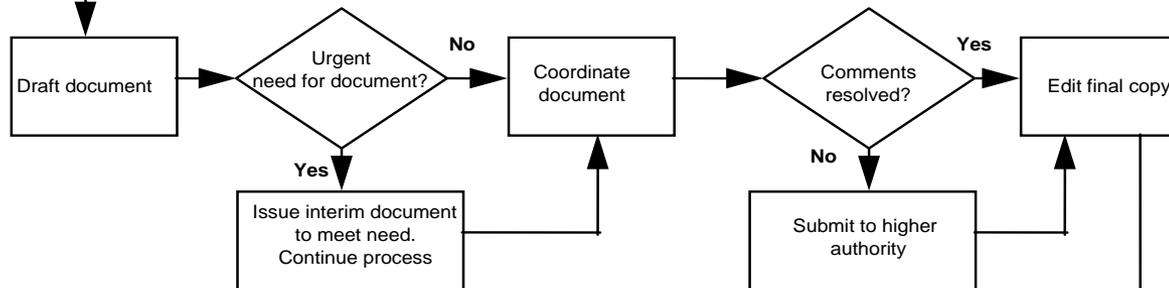
Step 3 - Approval and Publication

- Approve and date final document → Send electronic document to ASSIST → User feedback

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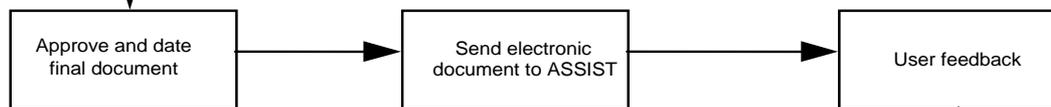
The Future?

> ## New standardization areas?

- Autonomous system technology
- Biomedical
- Counter IED
- Counter WMD
- Counterfeit prevention and detection
- Cybersecurity
- Electronic warfare/protection
- Energy & power technology
- Materials & manufacturing processes (e.g. additive manufacturing)
- Sensors & processing
- Space
- Unmanned systems

The Future?

➢ **System of Systems Interoperability**

- FY17 National Defense Authorization Act (NDAA) requires
  - System architectures to be logically and functionally segmented
  - Interfaces between major system elements to be established and allow content flow to enable integration and interoperability

➢ **Standards to Support Modularity**

- Well-defined interfaces between platform and its components or between components to allow addition, removal, or replacement of components without redesign
- FY17 NDAA requires modular interfaces be consistent with widely-supported, consensus-based standards

➢ **Semantic Web for Interoperable Specifications & Standards**