State of the Defense Standardization Program

An Overview of the DSP

March 2018
Executive Summary

The Defense Standardization Program (DSP) is a comprehensive, integrated standardization program linking DoD acquisition, operational, sustainment, and related military and civil communities. The Defense Standardization Program Office (DSPO) serves as the executive agent, under the oversight of the Defense Standardization Executive and Defense Standardization Council, for the centrally managed and de-centrally executed DSP. The DSP exists to identify, influence, develop, manage, and provide access to standardization processes, products, and services for warfighters, the acquisition community, and the logistics community to promote interoperability, reduce total ownership costs, and sustain readiness.

In 2018, DoD continues to experience rapid changes in technology, threats, and operational environments, as well as a significant turnover of the DoD workforce. The “State of the DSP” is intended to provide an overview of the DSP’s programs, tools, and training. It outlines the capabilities, challenges, and initiatives of the DSP to maintain and modernize the tools, processes, and standardization documents and to leverage modern technological capabilities to better serve the needs of the engineers, logisticians, and acquisition workforce. It is intended to serve as a snapshot in time of DSP programs and initiatives, and to be a reference and introduction for standardization professionals, engineers, logisticians, and acquisition professionals new to the DSP.

This report provides a brief description of each of the programs in DSPO. Each section will begin with a “Scope and Purpose” and close with a candid view of “Challenges.” Between those, relevant statistics, tools, processes, and other things will be described.

DEFENSE STANDARDIZATION PROGRAM

The 27,829 active and 102,949 total documents of the Defense Standardization Program are the technical, engineering documentation that undergirds our weapons systems—design, acquisition, support, quality assurance, and so forth. With more than 3,000 document transactions each year, including an average 2,500 revision, notices, or new documents every year, most documents are current, relevant, and accurate. However, there are too many overage documents (6,212), and too many projects take too long to complete. Overall, DSP policies and procedures facilitate providing the documents needed by the military departments, but we can do better to ensure they are up to date.

QUALIFICATION

The DSP’s Qualification Program provides confidence to buyers that qualified products meet certain requirements that are impractical to perform at time of purchase, either because test equipment is very expensive or tests require a very long time. There are 728 qualified products lists (QPLs) covering 19 million parts numbers. QPLs are authorized exemptions to competition, thus they are carefully monitored and controlled. Of the 728 QPLs, less than 25 percent have one or fewer sources and our buying commands continually work to qualify additional sources.

USE OF NON-GOVERNMENT STANDARDS

DoD leads all federal agencies in making use of non-government standards in accordance with law and Office of Management and Budget Circular A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities.” The 8,525 adopted non-government standards make up about one third of all of the documents in the standardization program. We are extremely successful in implementing requirements to use non-government standards whenever possible in order to avoid development of government unique documents, and DoD personnel participate in non-government standards activities at all levels. The cost of participating in non-government standards bodies, licenses, and access agreements—and gaining DoD-wide access to non-government standards—remains a significant challenge.
DATA ITEM DESCRIPTIONS

Data item descriptions (DIDs) are prepared and approved by the military departments and defense agencies to be placed on contract to identify the content and format requirements for data to be prepared for use by the government. Of the 1,602 DIDs in ASSIST, 1,109 are active and 493 have been cancelled. While document validation procedures have improved the general quality of DIDs in ASSIST, ensuring that only relevant and required DIDs remain active in ASSIST is a consistent challenge.

INTERNATIONAL STANDARDIZATION

Standardization is essential for deepening interoperability with our military partners, specifically accelerating foreign partner modernization and the ability to integrate with U.S. forces, as we train and execute complex combat missions in our alliance, bilateral, and multinational exercises and operations. ASSIST provides DoD personnel and defense contractors with access to 4,517 international standardization agreements (ISAs) for materiel, operations, and administration, covering a variety of subjects such as unmanned aerial vehicles, fuel, and intelligence, surveillance, and reconnaissance (ISR). While DSPO has successfully facilitated the development of NATO standardization policy, arranged training, and worked to improve interagency coordination, ISA management remains a challenge, requiring process and tool improvements, as well as training for DoD personnel.

PARTS MANAGEMENT AND OBSOLESCENCE

Parts Management has been a long-standing DSP program that, through enhanced standardization and parts selection early in the acquisition process, improves reliability, availability, maintainability, quality, and cost of system parts. Parts Management practices are proven, on average saving $27,500 for each new part not introduced into the inventory, meaning a program with 10,000 parts can easily save $5 million through parts management. Although proven effective, awareness of parts management practices remains a challenge, and parts management requirements are sometimes overlooked or nonexistent.

DSPO is also working to institutionalize the Diminishing Manufacturing Sources and Materiel Shortages (DMSMS) or “Obsolescence” program. Current practices are often ad hoc and dependent on personal relationships. DSPO is planning to combine the DMSMS program with Parts Management. The consolidation of efforts will provide a more cohesive set of best practices and coordination of engineering and sustainment practices across the acquisition life cycle.

GIDEP AND COUNTERFEIT PARTS

The Government–Industry Data Exchange Program (GIDEP) supports around 450 government sites and 3,000 industry sites, promoting and facilitating sharing of technical information between government agencies and industry partners to increase systems safety, reliability, and readiness and to reduce systems development, production, and ownership costs. Membership has increased 50 percent in the past 5 years, to over 10,000. Over the course of the program, members have reported over $2 billion in cost avoidance as a result of the information made available through sharing. Anticipated growth is placing increased stress on GIDEP’s aging infrastructure, so the program is currently working to modernize its IT infrastructure to handle the increased demand. More than 500 of the 13,000-plus documents processed by GIDEP each year are non-conforming and suspect counterfeit reports. Counterfeiting of parts is a growing business, estimated to have doubled between 2008 and 2010. Many DoD organizations and defense industry prime contractors have counterfeit prevention leads, and they share their knowledge across DoD. Like hacking, counterfeiting is inherently difficult to keep up with. As counterfeiters learn of new detection methods, they adapt. Further complicating efforts, new production counterfeits are being found in a market once comprised primarily of refurbished and reclaimed products.
JOINT STANDARDIZATION BOARDS

The Defense Standardization Executive has chartered six active Joint Standardization Boards to make acquisition, standardization, and sustainment decisions while supporting and facilitating multi-Service standardization programs. The six groups cover the following topics: Aerial Refueling Systems, Fuze/Initiation Systems, Intermodal Equipment, Mobile Electric Power, Power Source Systems, and Tactical Shelters and Expeditionary Basing Systems. A general lack of awareness of standard sets, and compliance and enforcement of standardization, remains challenging.

DSP TOOLS

ASSIST

The primary user interface of the DSP is the ASSIST Online suite of tools, which offers many more functions today than when it first began providing online access to defense standards and specifications. At the core of ASSIST is the repository of 27,829 active standardization documents adopted by DoD, and a system of analytical and workflow tools used by DoD to develop, maintain, search, and implement standardization documents. Over the years, additional functions and tools—such as the Qualified Products Database, the Weapons System Impact Tool, and Pin Point—have been integrated with ASSIST to automate processes and analysis for those who use standardization documents.

Qualified Products Database

The Qualified Products Database (QPD) is the official source for DoD qualification data including QPLs and qualified manufacturers lists. Although the number of documents requiring qualification is small—about 3 percent of the active documents in ASSIST—the QPD serves a critical role in identifying and minimizing single-source and no-source QPLs.

Weapons System Impact Tool

The Weapons System Impact Tool (WSIT) enables users to trace the use of standards and specifications by weapon systems and parts. With WSIT, users can assess the impact of document changes on weapon systems.

Pin Point

Pin Point is a government-only query engine for researching parts on the federal supply chain. It provides users with access to structured data on government-approved component parts across the supply web. As legacy systems, these web-based standardization tools face significant challenges for modernization. Automated process design, capabilities such as XML (Extensible Markup Language) conversion, and semantic-web technology show promise for improving ASSIST maintenance and usability, but without a back-end refresh, each change has made the system more complex.

DSP Website

Defense standardization news and information is provided to the public and standardization stakeholders worldwide via the DSP website (www.dsp.dla.mil). The website is hosted by the Defense Media Activity, DoD Public Web program, and it receives more than 80,000 visits annually.

TRAINING

Finally, DSPO serves as the DoD proponent for standardization training courses. The systems engineering courses have been transitioned to the Defense Standardization Workshop, available on a fee-for-service basis. The workshop is a one-day course. Nine continuous learning modules—on market research, standardization, parts management, and DMSMS—are also available via the Defense Acquisition University. The graduation rate of the continuous learning modules is 78 percent, with more than 6,000 enrollments per year. Additionally, GIDEP provides several training opportunities for its members.
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Introduction

Specifications, standards, handbooks, and the associated documents, tools, and programs are the essential technical data and engineering descriptions for the products that make up and support DoD weapons systems and support equipment. They define technical requirements, lessons learned, acceptability criteria, and performance requirements and aspirations. The Defense Standardization Program (DSP) establishes the policies and procedures and creates and maintains the infrastructure to develop, maintain, and use these essential documents and tools. It has been doing so with increasing effectiveness and efficiency for more than 65 years. While the DSP has an enviable record of success, and private-sector programs have emulated many features and policies of the DSP, it continues to face many challenges as the needs and capabilities of the Department of Defense evolve and as we adapt to changes in threats, operational environments, and technology. The purpose of the DSP—to champion standardization throughout DoD, to reduce costs and improve operational effectiveness—is as relevant today as ever. Today, DoD faces rapid advances in technology, rapidly evolving threats, and a looming transformation of the engineering and standardization workforce.

Standards and technological advances interact in three ways. First, standards provide a structure for introducing new technologies while maintaining interoperability with legacy systems, and they are increasingly used in frameworks for modular solutions and open system architecture approaches. Second, completely new technologies and new uses of technology often result in the need for updates to existing standards or the development of new standards. Third, technological advances can also be leveraged to improve the way we manage standardization documents and their implementation. As we move forward in 2018, we will modernize DSP tools and practices to leverage advances such as machine-readable formats for standardization documents as well as automated tools for developing, maintaining, and tailoring standardization documents. These capabilities will support advances in digital engineering practices and modeling tools, and modular open system approaches, to provide defense engineering, acquisition, and logistics experts with more efficient tools to design, acquire, and sustain systems that enable a ready, lethal force—and a force that is capable of fighting alongside its allies and partners.

Programs related to the DSP and managed by the Defense Standardization Program Office (DSPO) enhance our capabilities and provide further support to the entire acquisition system. These include the Government-Industry Data Exchange Program (GIDEP); the Diminishing Manufacturing Sources and Material Shortages (DMSMS) program, to reduce readiness and cost risks; and initiatives to address the increasing threat of counterfeiting. Integration of these programs with others in the DSP leverages strengths and increases our capability.

Standardization is an essential enabler for the warfighter, regardless of the changes in threat systems, operational environments, and types of warfare. Throughout the history of the United States, from the
Revolutionary War to today, senior leaders continue to recognize how essential standardization of parts, ammunition, fuel, and arms is to effective warfighting. Regardless of who, what, and where the threat is, the warfighter’s need for rapid insertion of new technology, for information superiority, and for equipment that is interoperable with international partners is made possible through standardization.

Standards and related documents are essential tools of the acquisition system, providing the engineering knowledge and the contract “shorthand” to ensure that the things we buy meet our needs and provide optimum value to the American taxpayer.

This report provides DSP stakeholders with the current “state of affairs” of the DSP, including an overview of programs managed by DSPO, the current challenges, and future plans and focus areas for the DSP. As we face constant changes in our technology, our competition, and our people, we must refine our tools, our processes, and our skills to support military readiness, strengthen alliances, and bring business reform to DoD. The dedication of the standardization management activities and engineers across DoD is always encouraging, as well as our industry and international partners and the non-government standards bodies that develop and maintain the standardization documents that provide the warfighter with equipment that is interoperable, reliable, technologically superior, and affordable.

DSP Overview

The DSP that exists today originated with the 1952 signing of the Cataloging and Standardization Act, which directs the Secretary of Defense to establish a single, unified standardization program for the development and maintenance of specifications and standards. It also requires that DoD achieve the highest practicable degree of standardization of items and practices. The provisions of the act are implemented in DoD Instruction 4120.24, “Defense Standardization Program (DSP).” The fundamental policies established in this instruction are that there shall be a single integrated standardization program in DoD; that non-government standards shall be used in preference to developing and maintaining government specifications and standards; and that DoD standardization documents be developed and maintained in accordance with DoD Manual 4120.24, “Defense Standardization Program (DSP) Procedures.”

The authority, direction, and control of the Defense Standardization Program have been delegated to the Defense Standardization Executive who oversees DSPO, which serves as the executive agent for the DSP. The DSP Procedures (DoDM 4120.24) organizes the DSP as a centrally managed and de-centrally executed program, designating departmental standardization offices responsible for overseeing implementation of the DSP in their military department or defense agency. More than 100 different offices across DoD execute the implementation of DSP policies and procedures, technical decisions, and the development, maintenance, and management of standardization documents.

The goals of the DSP are to improve military operational readiness, reduce total ownership costs, and reduce cycle time. In order to improve military operational readiness and maintain technological superiority, capabilities must support interoperability with multinational partners, provide information superiority, and accommodate rapid technology insertion. This is achieved through the standardization of physical, electronic, and functional interfaces, data, and performance requirements; and in accordance, standardization documents that establish commonality in products, materials, and processes.
TYPES OF STANDARDIZATION DOCUMENTS

The DSP Procedures define nine main types of standardization documents, distinguished by their originating authority and purpose. Documents that describe processes, practices, procedures, and methods are referred to as “standards,” whereas documents that identify specific technical requirements for products are referred to as “specifications.”

- **Defense Specification**—describes the essential technical requirements for military-unique materiel or substantially modified commercial items.

- **Defense Standard**—establishes uniform engineering and technical requirements for military-unique or substantially modified commercial processes, procedures, practices, and methods. There are five types of defense standards: interface standards, design criteria standards, manufacturing process standards, standard practices, and test method standards.

- **Defense Handbook**—provides standard procedural, technical, engineering, or design information about the materiel, processes, practices, and methods covered by the DSP.

- **Data Item Description (DID)**—a completed form that defines the data required of a contractor. DIDs specifically define the data content, preparation instructions, format, and intended use.

- **Federal Standard**—a standard issued or controlled by the General Services Administration (GSA) that covers processes, procedures, practices, and methods for use by all federal agencies.

- **Federal Specification**—a specification issued or controlled by the GSA for commercial or modified commercial products, which contains requirements or tests too extensive to be suitable for a Commercial Item Description.
• **Commercial Item Description (CID)**—an indexed, simplified product description managed by the GSA that describes, by functional or performance characteristics, the available, acceptable commercial items that satisfy the government's needs.

• **International Standardization Agreement (ISA)**—the record of an agreement among several or all of the member nations of a multinational treaty organization to adopt like or similar military equipment, ammunition, supplies, and stores.

• **Non-Government Standard (NGS)**—a national or international standardization document developed by a private-sector association, organization, or technical society that plans, develops, establishes, or coordinates standards, specifications, handbooks, or related documents. This term does not include the standards of individual companies. NGSs adopted by DoD are listed in ASSIST.

Table 1 shows the number of active DSP documents in the ASSIST database as of February 1, 2018. These numbers can fluctuate daily, as documents are revised, inactivated, or added.

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<th>Abbreviation</th>
<th>Active</th>
<th>Total</th>
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<td><strong>Total Documents</strong></td>
<td></td>
<td><strong>27,829</strong></td>
<td><strong>102,949</strong></td>
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Figure 1 provides a summary of open standardization projects by preparing service or agency, and the number of those that are overdue. In February 2018, there were 1,246 projects initiated and underway, 119 of which were past their planned completion date. Similarly, Figure 2 depicts the total active documents by service or agency, and the number of those that are overage. Overage documents are those that are overdue for validation, cancellation, or revision. Documents remain valid for 5 years, or 10 years when identified as stable documents.
Figure 1. Projects Initiated and Underway/Not Completed
Project Status by Service/Agency
(as of February 2018)

Figure 2. Overage Documents
Project Status by Service/Agency
(as of February 2018)
STANDARDIZATION TOOLS

All of the data presented above and the documents that are enumerated in these figures are available via the ASSIST Online suite of tools. ASSIST is more than a repository for federal and DoD documents; it is a workflow management tool for managing standardization projects, coordinating documents for review, and publishing standardization documents. It also provides analytical tools for tracking standards and their use and impact on defense systems. Today, ASSIST contains more than 28,000 active documents, down from more than 45,000 before MIL-SPEC reform (1994–2001), the majority (more than 30,000) of which were defense standards and specifications. For more information on MIL-SPEC reform and the preference for non-government standards, see the section titled “Non-Government Standards.”

Since ASSIST Online was first launched, several additional tools and capabilities have been added and continue to be improved to automate processes and enable analysis for those who use standardization documents. The Qualified Products Database (QPD) and the Weapons System Impact Tool (WSIT) are now integrated and accessible via ASSIST Online. QPD is the official source for DoD qualification data, including qualified products lists (QPLs) and qualified manufacturers lists (QMLs). WSIT enables users to trace use of standards and specifications by weapon systems and parts. For more information on other DSP tools, such as Pin Point, and ASSIST modernization plans, see the corresponding section in this document.

DSP ACTIVITIES AND PROGRAMS

Within the Defense Standardization Program, DSPO is responsible for several standardization and standards-related programs, and it serves as the DoD proponent for standardization training courses. DSPO manages the Parts Management Program, the DMSMS program, and GIDEP and is also involved in DoD efforts to reduce the infiltration of counterfeit parts into the DoD supply chain. Additionally, the Defense Standardization Executive currently charters six Joint Standardization Boards to provide a DoD-wide forum for cross-cutting standardization issues, new or rapidly evolving technology areas, and other standardization issues as identified by the DSE. Each of these activities and programs, and the DSP training provided in partnership with the Defense Acquisition University (DAU), are described in the following pages.
DEFENSE SPECIFICATIONS, STANDARDS, AND HANDBOOKS

Scope and Purpose
Section 2452 of Title 10, U.S.C.,\(^1\) establishes the Secretary of Defense’s authority and responsibility “to establish, publish, review, and revise within the Department of Defense, military specifications, standards, and lists of qualified products.” The U.S. DoD uses defense specifications and standards (MIL-STD or MIL-SPEC) to establish requirements for military-unique products, processes, procedures, practices, or methods or to modify non-government standards to meet military-unique requirements. Office of Management and Budget (OMB) Circular A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,” and Section 12 of the National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, further clarified that the development and use of defense specifications and standards is to be limited to military-unique products and processes.

A third type of military-specific standardization document, the Defense Handbook (MIL-HDBK), is used to provide additional guidance on procedural, technical, design information or selection, or application criteria for products, processes, practices, and methods. Defense handbooks are developed and used in much the same way as defense specifications and standards; however, they are for guidance only and must not be used to specify mandatory requirements.

Tools

Status
Under MilSpec Reform (1994–2000), more than 29,000 defense specifications and standards were assessed—resulting in the cancellation of 6,100 without replacement, and 3,500 superseded by non-government standards, performance specifications, commercial item descriptions, or guidance handbooks. Since 1995, the Defense Standardization Council has authorized reinstatement of only four of those cancelled defense standards. From 2010 to 2017, only 21 new defense standards have been approved.

Future
As long as DoD has specialized or otherwise unique, modified, and sensitive or classified equipment requirements, there will be a need for defense specifications and standards to address those military-unique requirements that cannot be addressed by non-government standards. However, the use of non-government standards remains a preferred approach for lowering life-cycle costs, enabling the rapid insertion of new technology, providing improved reliability, and attaining greater availability of parts and logistics support provided by the commercial industrial base. The FY17 National Defense Authorization Act reiterates the preference for the use of non-government standards, and it established a waiver requirement for the use of defense specifications. DSPO is working with executive leadership in the defense acquisition and standardization communities to respond to these requirements.

**Challenges**

With more than 3,000 document transactions each year, maintaining defense standardization documents is challenging, as evidenced by the more than 6,000 documents that are overage. We need to maintain a high standard of quality for our documents and to do a better a job of ensuring that the documents for our engineering, acquisition, and logistics specialists are up to date. Additionally, about 10 percent of the standardization projects underway are past their planned completion date. DSPO and the Department Standardization Offices (DepSOs) are reviewing existing processes and identifying the best practices from standardization management activities across DoD for maintaining documents with the dwindling number of standardization and technical subject matter experts in DoD.

**QUALIFICATION**

**Scope and Purpose**

The purpose of qualification is to ensure continued product performance, quality, and reliability for the completion of long or highly complex evaluations and tests prior to, and independent of, any acquisition or contract. Qualification comprises the entire process by which a manufacturer’s products (as shown on electronic QPLs) or processes and materials (as shown on electronic QMLs) are proven to be in conformance with the governing specification. Products or processes and materials meeting the qualification requirements are entered in the QPD as electronic QPLs or QMLs.

The primary benefit of qualification is to improve the availability of products and shorten the procurement process by completing long or highly complex evaluations and tests of manufacturers or products prior to and independent of contract award. Qualification improves readiness by improving the availability of products with requisite quality, reliability, performance, and safety. Qualification can also help reduce costs by eliminating repetitive surveillance audits and tests.

The DoD Qualification Program is prescribed by statute (10 U.S.C., Section 2319) and by regulation (Federal Acquisition Regulation, Subpart 9.2). These statutes and regulations are codified in DoD Manual 4120.24, “Defense Standardization Program Procedures,” Enclosure 14, and SD-6, “Provisions Governing Qualification.”

**Tools**

The Qualified Products Database is the official source of DoD qualification data. As a workflow system, QPD allows qualifying activities to manage their QPLs and QMLs in near real time. The system tracks retention of qualification data and contains pertinent qualification point-of-contact information for manufacturers and suppliers as well as the government’s and manufacturers’ part numbers. QPD is an integrated part of the ASSIST Online web-based application, accessible via the public restricted ASSIST enclave. See the ASSIST summary in the “Tools” section for more details.

**Status**

There are 728 QPLs in the QPD containing 19 million manufacturers’ part numbers. There are 58 qualifying activities managing qualification for the military departments and defense agencies. In FY 2016, QPD had more than 7,800,000 hits.

Only 3 percent of all documents in ASSIST have a qualification requirement. Of all military departments and defense agencies, the Navy has the highest percentage of QPLs, followed by the Defense Logistics Agency (DLA), the Air Force, and the Army, respectively (see Figure 3).
Because QPD alerts the qualifying activities when QPLs require maintenance, the qualifying activities are able to keep qualification data current. Since 2006, qualifying activities have used this automated system to manage qualification data more effectively, ensuring that both buyers in government and industry can purchase QPL parts with confidence. As a result, qualifying activities have reduced the number of overdue certifications by 81 percent, as shown in Figure 4.
Challenges
One of the challenges affecting the Qualification Program is avoiding single-source and zero-source conditions. A QPL can have a single-source or zero-source condition for any number of reasons; however, allowing these conditions to exist for an extended period affects both the acquisition of parts and the logistical support for DoD systems. The more qualified suppliers and manufacturers listed on a QPL, the more robust the qualification program can be.

Qualifying activities do a good job at keeping zero-source QPLs to a minimum. Single source are a bit more difficult, as occasionally manufacturers and suppliers merge with other companies, get bought out by a company already producing a competitive product, or, for business reasons, decide not to manufacture the product at all and request to be pulled from the associated qualification listing. These circumstances can create single-source conditions that may leave voids should the manufacturer experience quality control or supply chain issues. To help mitigate this, DSPO provides the qualifying activities and the DepSO reports on zero-source and single-source QPLs on a quarterly basis. These reports assist the services by alerting them of these sourcing issues. (See Figure 5.)

![Figure 5. Single-Source and No-Source QPLs](image)

NON-GOVERNMENT STANDARDS

Scope and Purpose
The primary purpose of the Non-Government Standards Program is to provide guidance for implementing federal and DoD NGS policy. The program establishes procedures for understanding the roles and responsibilities for DoD personnel participating in non-government standards bodies (NGSBs), and it provides direction for determining whether developing or using an NGS vice military-unique document is the most appropriate approach for meeting DoD requirements. The NGS program sets forth both processes for NGS adoption and practices relative to DoD’s involvement in developing or using NGS documents. One of
the more important purposes of the program is to foster relationships with NGSBs so they might better understand both DoD’s priorities and its policies, practices, and procedures related to the adoption process and use of NGS documents.


**Tools**

Adoption notices for NGSs are available in ASSIST. For a more complete description of ASSIST and its capabilities, see the ASSIST summary in the “Tools” section.

**Status**

DoD began promoting the use of non-government standards in 1962, when the Defense Standardization Program brought the first 12 NGSs into its document system. Since the early 1980s, governmental policies have increasingly directed the department to consider using existent NGSs or supporting the revision or development of an NGS to meet DoD needs in preference to using defense or federal documents when feasible and consistent with law and regulation. The types of documents that DoD uses to meet its requirements have changed throughout the years. Prior to the DoD Acquisition Reform initiative, the majority of documents were military standards and specifications. During the period from 1994 to 2000, at the direction of the Defense Standardization Improvement Council, the military departments and defense agencies performed a 100 percent review of defense specifications, standards, and handbooks, resulting in the transfer of many hundreds of “dual use” military documents to NGSBs. At this time, policies, procedures, and training were also put into place to ensure that NGS use or development was given priority over reliance on military-unique documents.
Due to the consistent application of policy and guidance, DoD has made tremendous strides in embracing the concept of adopting and using NGSs. Figure 6 shows the dramatic decrease in reliance on military standards and specifications and the increase in adoption and use of NGSs. Since MIL-SPEC reform, NGSs have consistently made up one third of the standardization documents used by DoD.

**Figure 6. ASSIST Holdings by Document Type**

There are various commodity groups that lend themselves more readily to reliance on NGSs as procurement vehicles; and each service and defense agency interprets and implements NGS policy and guidance differently. Therefore, the number of NGS adoptions varies among the various military organizations. Figure 7 shows the 8,525 total active NGS adoptions by service or agency. Because of the types of items procured by DLA, almost one-half of the total NGSs used by DoD have been adopted by this agency.
Historically, DoD has collaborated with a substantial number of NGSBs, and DoD personnel have participated in the development of hundreds of NGSs. DoD has adopted documents from a diverse set of NGSBs: the American Dental Association, the Pipe Fabrication Institute, and the Truck Trailer Manufacturers Association. As noted in Figure 8, DoD adopts NGSs primarily from 10 NGSBs whose documents are in areas vital to DoD interests. The number of active documents per NGSB is noted after each organization name.

**Figure 8. DoD Adopts NGSs From a Variety of NGSBs**

DoD Adopts Documents from 90 Organizations
90% of Adopted NGSs from 10 NGSBs

- ASTM, 2,242
- SAE, 3,525
- AIA, 1,177
- ANSI, 118
- ASME, 168
- UL, 180
- ECIA, 58
- IPC, 89
- IEEE, 53
- NEMA, 66
- Other, 849
Since the inception of the DoD NGS program, there has been progress in the adoption and use of NGS documents. The policies and procedures enacted since the 1990s have ensured that the department does not overly rely on the use of military-unique documents to meet its requirements. Continual oversight and leadership involvement in standardization activities has contributed to the steady increase in adopted NGSs.

To identify crucial NGSs within the DoD adoption system, the department initiated a two-tiered adoption system, implemented in the September 2014 revision to DoDM 4120.24, “Defense Standardization Program Procedures.” Tier I adoptions are for documents of such high importance to DoD that adoption should be reevaluated with each revision to the NGS, to ensure that user requirements are met prior to adopting the document. The Tier II adoptions are a one-time event; therefore, updates to these documents do not need to be adopted. The vast majority of DoD-adopted NGSs are categorized as Tier II documents.

**Future**

As of December 2017, DSPO and the DepSOs are continuing to pursue consolidation of NGS access agreements and are extending that access to better meet the needs of the acquisition and engineering experts across DoD.

A legislative proposal has been drafted to strike the NDAA Section 875(b)(2) waiver language and replace it with language that reinforces existing practices and processes that prevent the reinstatement or development of defense standards without a clear showing that there is a unique requirement that can only be met with a military document.

**Challenges**

1. **Enterprise-wide access to NGS.** Purchasing NGSs individually from an NGSB or document distributor can be cost-prohibitive for many activities. Creating licensing agreements between the holder of NGSs and a user organization is another method for gaining access to documents. Many industry organizations and a few DoD entities have purchased enterprise-wide licenses to NGSs to ensure their personnel are able to use NGSs on a more cost-effective basis. However, these agreements can be costly and may not ensure that all users’ requirements are accommodated.

DoD enterprise-wide access to NGSs has been studied and discussed for over 14 years but has not yet succeeded, primarily due to funding limitations. Because of budgetary priorities, ad-hoc funding for individual activity access has been more palatable for the services and defense agencies. There have been instances, however, when a few service or agency activities banded together to establish licensing agreements. The outcome of these grassroots initiatives has been generally positive—lower costs, greater access.

The National Defense Authorization Act for Fiscal Year 2017 (NDAA), Section 875(f), tasks the “Under Secretary of Defense for Acquisition, Technology, and Logistics to negotiate licenses for standards to be used across the Department of Defense and shall maintain an inventory of such licenses that is accessible to other Department of Defense organizations.” The inclusion of NGS licenses language within the NDAA sparked a bit of enthusiasm for revisiting the enterprise-wide access issue. Currently, the DepSOs are working with DSPO to develop a plan to address the NDAA requirements.
2. **Waiver.** NDAA Section 875(b)(2) requires "a waiver for the use of military specifications." The intent of this requirement is to promote the use of commercial or non-government standards and to discourage the reinstatement or development of military documents. Prior attempts to implement a waiver system to ensure greater reliance on NGSs have resulted in military documents not being used in the most appropriate of circumstances. DoD is working on addressing the waiver requirement.

3. **DoD participation in NGSB activities.** Restrictions on attendance at conferences as well as funding for travel have contributed to a decline in DoD personnel participation in NGSB activities. DoD subject matter experts continue to dwindle in vital technology fields, thus DoD NGSB participation in these same areas suffers identical decline. However, active participation in NGSB committees and NGS development ensures that DoD interests are preserved. Perhaps language contained within NDAA Section 875(d), Development of Non-government Standards, directing the Under Secretary for Acquisition, Technology, and Logistics to form partnerships with appropriate industry associations to develop NGSs will encourage DoD to support greater participation in NGS activities.

**DATA ITEM DESCRIPTIONS**

**Scope and Purpose**

DIDs identify the content and format requirements for data to be prepared for use by the government under the terms of a contract. DIDs ensure that the data requirements are specified in ways that will meet the contract objectives. Data format and content requirements must be clearly stated. Whenever possible, contractor format should be allowed. Mandatory formats should only be required when a specific format is required to meet interface requirements. Each DID covers a single deliverable data product. If a single work task generates more than one deliverable data product, a separate DID shall be selected or prepared for each product. There are two types of DIDs: (1) repetitive-use DIDs, approved for repetitive use; and (2) one-time DIDs, when a data requirement is a one-time requirement, or when time constraints preclude preparation and approval of a repetitive-use DID. Both are prepared in accordance with (IAW) MIL-STD-963, “Data Item Descriptions."

IAW DoDM 4120.24 (Enclosure 12), DIDs must be prepared by DoD preparing activities to define the data content, preparation instructions, and format of data required of a contractor. DIDs are prepared IAW MIL-STD-963. MIL-STD-963 complies with the provisions of Public Law 104-13, Paperwork Reduction Act of 1995.
Tools
Each military department and defense agency designates a DID approval authority, responsible for approving and processing DID actions (new, revise, cancel) via ASSIST. ASSIST is the official source for the processing and housing of repetitive-use DIDs. DIDs in ASSIST are available for use by all the military departments and defense agencies. One-time DIDs are not processed or available in ASSIST but are issued at the discretion of the cognizant military department or defense agency DID approval authority. For a more complete description of ASSIST and its capabilities, see the ASSIST summary in the “Tools” section.

Status
As of May 15, 2017, there were 1,548 DIDs in ASSIST. Of those, 1,059 are active and 489 are cancelled. Cancelled or superseded DIDs must not be used on new solicitations or contracts. However, if a DID is cancelled or superseded subsequent to the release of a request for proposal but prior to the award of a new contract, the cancelled or superseded DID may still be cited. Cancelled or superseded DIDs that are in use on a current contract may be used on follow-on contracts for the same item when continuity of data format and content is required. Where a DID has been superseded, the newer DID should be reviewed for possible application on the new or follow-on solicitation or contract.

In the Paperwork Reduction Act of 1995, DoD, in cooperation with OMB’s Office of Information and Regulatory Affairs, established a methodology for controlling the paperwork burden imposed by federal agencies on the public. Compliance with the Paperwork Reduction Act requires an OMB control number be assigned to each data requirement imposed on a contractor by DoD. As such, all repetitive-use DIDs are assigned OMB Control No. 0704-0188. Every 3 years, DSPO must provide a report to OMB that details the burden hours imposed by DoD as a result of its data requirements. The formula for determining the burden hours imposed is based on the number of active DIDs in ASSIST.

Challenges
Ensuring that the active DIDs in ASSIST are still relevant and required remains a consistent challenge. Now that DIDs are included as one of the standardization documents that need to be validated every 5 years, we have a better handle on this. Being that the goal of the Paperwork Reduction Act is to reduce the burden hours on the public, the more active DIDs that are in ASSIST, the higher the burden hours will be. In our report to OMB every 3 years, it is always our hope that the number of burden hours has decreased from the prior report. DSPO will also do periodic reviews of DIDs to ensure that they do not reference cancelled defense specifications or standards. In such cases, the preparing activity will be informed that it needs to revise or cancel the DID.

Before developing new DIDs, ASSIST must be searched to determine whether an existing approved DID can be used as is, tailored down (requirements removed), or revised. DIDs must be cancelled when they are no longer needed. If the specification or standard that contains requirements for the preparation of a data deliverable is cancelled, the DID must be cancelled or revised to remove the reference to the cancelled specification or standard.

INTERNATIONAL STANDARDIZATION

Scope and Purpose
This International Standardization Program (ISP) promotes implementation of standardization as one of the essential elements to ensure interoperability with allies and coalition partners. According to the 2015
National Security Strategy, “our closest partners and allies will remain the cornerstone of our international engagement.” Standardization is a key enabler to the ability of multinational forces to work together effectively and efficiently on missions that span the globe. DSPO's involvement in the ISP focuses on policies and procedures that manage international standardization agreements generated by military treaty alliance organizations, including the North Atlantic Treaty Organization (NATO); Air and Space Interoperability Council (ASIC); and European Union, European Defense Agency-related activities.

**Status**

ASSIST provides DoD personnel and defense contractors the access to ISAs that enable international engagement and cooperation. The DSP archives U.S.-ratified ISAs in ASSIST and makes them available to personnel who have a “need to know” (see Table 2).

Table 2. Total Number of ISAs in ASSIST

<table>
<thead>
<tr>
<th>Multi-Treaty Organization</th>
<th>Active</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCA</td>
<td>367</td>
<td>682</td>
</tr>
<tr>
<td>ASIC</td>
<td>167</td>
<td>1,014</td>
</tr>
<tr>
<td>NATO</td>
<td>2,076</td>
<td>2,665</td>
</tr>
<tr>
<td>Other</td>
<td>153</td>
<td>156</td>
</tr>
</tbody>
</table>

Figure 9 shows the most downloaded ISAs by subject matter, with ISR standards being the most downloaded.
DSPO has facilitated the development of standardization policy within NATO, arranged training and workshops to discuss global standardization topics, and helped to improve interagency coordination across standardization domains: materiel, operational, and administrative. Over the past 10 years, the ISP has worked with DoD components and multinational treaty organizations on the following:

1. **Establishing international standardization policy**
   - Chairman of the Joint Chiefs of Staff 2700.01, Rationalization, Standardization, and Interoperability Activities
   - Department of Defense Instruction 2010.06, Materiel Interoperability and Standardization with Allies and Coalition Partners
   - Department of Defense Directive 5134.01, Under Secretary of Defense for Acquisition, Technology and Logistics

2. **Increasing interagency coordination**
   - Coordinate with military departments and defense agencies to support the development, review, and ratification of materiel international standardization agreements and initiatives that affect materiel standardization
   - Help determine—or support the development of—the U.S. position on NATO Committee for Standardization

3. **Encouraging the use of civil (non-government) standards to satisfy standardization requirements**
   - Initiate and participate in studies and on ad-hoc working groups to determine the best solution

4. **Making unclassified ISAs and meta-data for classified ISAs available in ASSIST**

5. **Improving standardization management within NATO by chairing Standardization Management Group and predecessors.**
Challenges

Although the DSPO has successfully contributed to DoD’s efforts toward greater standardization with allies and coalition partners, there are still obstacles to bridging the interoperability gaps. The following is a list of current challenges that require attention:

1. **ISA management.** There is a need to reduce process variation within DoD when working on NATO standardization initiatives. International standardization matters are de-centrally managed and executed by DoD components; however, there is not a mechanism in place to ensure that each DoD component implements, records, or responds to standardization efforts in a similar manner.

2. **Implementation and traceability.** The United States ratifies standardization agreements and subscribes to approved standardization documents without a mechanism for tracking their implementation.

3. **Document maintenance.** The United States has a poor track record with regard to responding to ratification requests in a timely manner and managing updates to previously submitted responses.

4. **Training.** Due to insufficient resources and budget constraints, many DoD components have reduced their training budgets or are, simply, unable to train staff on participating in and representing the United States on ISA-related working groups. Therefore, staff may not completely understand their roles and responsibilities in the standardization arena, and how what they do fits into the overall picture of interoperability with allies and coalition partners.

PARTS MANAGEMENT

Scope and Purpose

The purpose of the Parts Management Program is to establish parts management best practices across DoD to increase weapon system availability and reduce total ownership costs. Selecting preferred parts during weapon system design drives positive outcomes throughout the life cycle of a system. DoDM 4120.24, dated September 24, 2014, states, “Program offices must apply standardization processes to improve parts commonality, which may include cross program technical requirements and a business case analysis. Program offices should ensure that a parts management process is used to reduce the proliferation of parts and associated documentation and promote the use of parts with acceptable performance, quality, and reliability, as specified in MIL-STD-3018” (reference Enclosure 4, Paragraph 2c, “Mandatory Standardization Considerations—Parts Management”). The Parts Management Program encompasses part selection during design and applies to all military departments and agencies, defense industry, academia, and industry standards organizations.

Status

In an effort to meet the challenges of reducing the logistics footprint for parts and addressing problem parts–type issues, MIL-STD-965, “Parts Control Program,” was issued in 1977. This document contained requirements that prescribed both how, and often times which, parts should be selected for design use in a weapon system or equipment acquisition program. During the acquisition reform timeframe, MIL-STD-965 was cancelled and subsequently replaced by MIL-HDBK-512, “Parts Management,” a guidance document that was not prescriptive in nature, but process based. Once the effort became voluntary, DoD insight into industry parts management decreased and variations in parts management practices between companies increased. Because of this, DLA requested relief from the DoD Parts Management
Program in 2003. The Deputy Assistant Secretary for Materiel Readiness decided not only to retain the program, but to reengineer it as well. DSPO established the Parts Management Reengineering Working Group in 2004 to establish parts management best practices across DoD.

Today, DSPO charters and chairs the Parts Standardization and Management Committee (PSMC) to help implement Parts Management Reengineering Working Group recommendations. The PSMC meets twice a year, providing a forum for government, industry, and academia to come together and discuss current standardization issues and challenges and to share ideas for moving forward. The PSMC subcommittees work on tasks, such as providing appropriate parts management guidance and keeping it current, addressing counterfeit parts and risk management issues, providing helpful parts management tools and data, and addressing parts obsolescence (DMSMS).

The PSMC’s accomplishments include the following: developing MIL-STD-3018, Parts Management, and DID DI-SDMP-81748, which replaced MIL-HDBK-512 and its accompanying DID; updating SD-19, Parts Management Guide, to provide additional guidance; developing a Parts Management Business Case; developing and updating DAU Course CLL-206, “Introduction to Parts Management”; and developing the “Pin Point” database, a part selection tool. Additional PSMC accomplishments include developing parts management case studies and inserting parts management language into the Defense Acquisition Guidebook chapters on life-cycle management and systems engineering. The PSMC now coordinates with the DMSMS program regarding updates to guidance to address current issues, such as materials of concern and supply chain risk management.

The benefits of implementing parts management include enhanced standardization; improved reliability, availability, maintainability, quality, and producibility; lower documentation costs; reduced part and supplier qualification costs; reduced inventory costs; and enhanced economy of scale through larger-volume part-type buys. Parts management can result in savings during a weapon systems life cycle due to cost avoidance (i.e., money not spent, materials not handled, facilities not required, labor not expended, and time not used). By not introducing a single new part into the inventory, parts management can save an average of $27,500 (depending on part complexity), and a program with 10,000 parts can easily save $5 million through parts management. These benefits result in a reduced logistics footprint, enhanced operational and logistics readiness, increased interoperability, and reduced system total ownership costs.

For example, the Virginia Class Submarine Program reduced costs by using standard parts and commercial off-the-shelf components. A Parts Board was established early in the program, and the use of standard parts was tracked as a technical performance measure throughout design and construction. Over the life of the Virginia class program, the $27 million investment in parts standardization is projected to lead to $789 million in cost avoidance (reference DSP-Case Study-15, “The Virginia Class Submarine Program”).

**Challenges**

Limited requirements and program funding for parts management are the main challenges to parts management at the DoD level. Parts management is not mandatory and some of the largest weapon system programs do not have a parts management requirement. As a result, parts management implementation remains varied. Additionally, restrictions on travel funding have limited in-person attendance (especially government representatives, but also recently impacting industry) at semi-annual PSMC and annual DMSMS meetings, as well as program office engagement to understand how parts management contributes to the overall systems engineering mission in the risk identification and management and life-cycle focus areas.
DMSMS/OBSOLESCENCE

Scope and Purpose
The Diminishing Manufacturing Sources and Material Shortages program facilitates the implementation of proactive DMSMS management throughout DoD in order to reduce, where possible, adverse impacts of DMSMS issues on readiness, schedule, and cost. To accomplish this, we do the following:

- Develop and revise DoD DMSMS policy, guidance, and management strategies
- Champion proactive DMSMS management best practices, synergies, and standardization through education, training, and outreach throughout DoD and industry
- Define and assess DMSMS management effectiveness across DoD
- Establish and pursue DoD-wide strategic DMSMS objectives

Status
An Office of the Secretary of Defense (OSD) DMSMS Roles and Responsibilities Group is working to institutionalize DMSMS management-related interactions among four principal stakeholders:

- Systems Engineering
- Supply Chain Integration
- Material Readiness
- Manufacturing and Industrial Base Policy.

This group called for an assessment of the health of DMSMS management across the department. The assessment identified gaps that were translated into a set of approved strategic objectives, representing the department’s initial roadmap to address deficiencies.
Progress on the Strategic Objectives

• **DoD DMSMS policy and DoD DMSMS Working Group (WG) charter.** DoD policy and guidance issuances do not adequately address DMSMS management and may unintentionally impede the use of best practices. These shortcomings impact the effectiveness of the DoD DMSMS WG, which also lacks a governance framework. This strategic objective identifies DoD DMSMS policy and guidance needs, aligned with the DoD DMSMS WG charter. The DoD DMSMS WG has recommended changes to key policy documents and drafted a charter.

• **Contracting.** When DMSMS management requirements in contracts are inadequate, some aspects of proactive DMSMS management may not be possible. This strategic objective was established to develop best practice request for proposal and contracting language for proactive DMSMS management. Best practice contract language has been developed and is being reviewed within the DMSMS community. The need for associated contract data requirements lists and data item descriptions has been identified, and efforts to draft them are just beginning.

• **Programming and budgeting.** In many cases, DoD program offices lack the capability to forecast DMSMS issues (especially for redesigns), and the relationship between such forecasts and programming and budgeting is unclear. This strategic objective seeks to identify and promote best practices whereby all programs formally program and budget for all DMSMS activities, with the funding justified on the basis of a systematic methodology, and money formally earmarked for DMSMS functions. More than 20 program offices have been interviewed to identify such best practices.

• **DMSMS commonality assessment.** Limited sharing of resolution data leads to lost opportunities for common resolutions. This strategic objective will demonstrate the value (including reduced costs, improved program schedule, and other efficiencies) of a proactive DMSMS program leveraging information sharing. Initial efforts are focused on identifying the extent of parts commonality among databases used by DMSMS predictive tools. Significant commonality has been demonstrated already in a limited context; a much more comprehensive set of item data has been collected, but not yet analyzed.

• **Metrics.** There is no consensus on what records should be kept or what metrics should be collected for tactical or strategic purposes. As a result, neither the state of DMSMS management across the department nor high-leverage opportunities for improvement are well understood. This strategic objective
seeks to establish best practices for the types of DMSMS management information that should be collected and maintained by programs, to initiate reporting activities where needed to inform management, and to identify areas for process improvement. At this point, best practice record-keeping requirements have been drafted and an assessment is underway to determine their feasibility.

• **Readiness.** Readiness issues associated with reactive DMSMS management are difficult to measure, and standard readiness metrics are not tied to DMSMS issues. This strategic objective focuses on demonstrating the feasibility of developing qualitative and quantitative measures of the effect of both reactive and proactive DMSMS on readiness. Data have been collected on various approaches to the problem. A decision on how to further pursue this objective is forthcoming.

• **DMSMS technology and capability resource guide.** The effectiveness of a DMSMS resolution is dependent in part on experience with the capabilities of resolution providers; however, program offices are limited in their familiarity with a wide variety of such options. The goal of this strategic objective is to create an easy-to-use database of organizational capabilities that program offices can use to help determine the most cost-effective approach to resolve DMSMS issues. Thus far, an updated matrix of government organic capabilities has been developed.

• **Incentives: commercial industry.** DoD needs to develop incentive strategies that encourage its contractors to perform effectively and to take DoD-desired actions because it is in their best interest to do so. This strategic objective was established to develop and promote best practices for incentivizing proactive DMSMS management behavior in industry. Industry associations have been asked to develop a white paper on this subject.

• **Incentives: internal DoD.** Program offices have insufficient incentive to be proactive, in part because there are competing priorities for resources and the negative effects of reactivity may not be felt until years later, after management has changed. To make matters worse, program offices have limited repercussions for being reactive. This strategic objective is designed to develop and promote best practices for incentivizing proactive DMSMS management behavior in programs and their chains of command. Efforts to pursue this objective are not formally underway.

• **Data.** Robust DMSMS management begins with an analysis of technical data to determine the items that should be monitored proactively for obsolescence, based on a DMSMS risk perspective, to develop and then implement resolutions early. To wait until an item cannot be purchased before a resolution is implemented generally results in higher costs and potential readiness and schedule impacts. Many systems do not purchase the requisite technical data to facilitate proactive DMSMS management. This strategic objective will identify DMSMS technical data needs and how and when they should be used in the DMSMS management process, recommend how and when to obtain or create the data as applicable, and identify where the DMSMS community can influence the process to improve data. Efforts to pursue this objective are about to get underway.

• **Software.** DMSMS management for software is in its infancy. Software obsolescence (and its connection to hardware obsolescence) is not well defined, and current DMSMS planning tools are not generally capable of capturing the connection between hardware and software. This strategic objective will have collaboration from agencies, academia, and the services to leverage best practices and lessons learned, document the shortfalls, and create a mitigation plan and processes to share with the DMSMS community. Efforts to pursue this objective are about to get underway.
Challenges
The strategic objectives address many of the challenges to effective DMSMS management. Progress is being made, but additional challenges persist. The following represent the obstacles to be overcome:

- **DoD DMSMS instruction.** Thus far, the policy and guidance strategic objective has focused on revising existing documents. Such changes are necessary but sub-optimal. For example, revisions to logistics issuances will clearly be institutionalized in that community, but responsibilities for program management and engineering included in logistics documents will not normally be communicated to the affected people. An overarching DoD DMSMS instruction is the only way to reach all stakeholders equally.

- **Lack of coordination.** While communication is improving, there is still a long way to go before stove-piping can be overcome. For example, changes were recently made to important DMSMS management-related policy and guidance without coordination with DMSMS management stakeholders.

- **Dedicated funding.** Pursuing strategic objectives requires substantial time and analytical expertise. Funding is essential to pursue this in an effective manner. Currently, OSD funding is only available through ad-hoc channels, and that funding is not sufficient to address the initial deficiencies.

- **Supply chain deficiencies.** The processes and systems by which DoD supply chain organizations (DLA and the entities that manage the services’ working capital funds, e.g., NAVSUP and LOGCOM) support resolution of DMSMS issues are inconsistent, and they’re often inadequate to completely resolve the issue. For example, some programs use their supply systems to store DMSMS life-of-need buy material, whereas many others cannot. The result is a prematurely exceeded supply of DMSMS items, DMSMS mitigation options that are dependent on ad-hoc personal relationships, and delayed communications resulting in higher resolution costs.

COUNTERFEIT PARTS

**Scope and Purpose**
The purpose is to identify and reduce economically motivated counterfeiting (vice nation-state malicious efforts) by implementing policies, procedures, and best practices to reduce the infiltration of counterfeit parts into the DoD supply chain.

For DoD, counterfeit is defined as “an unlawful or unauthorized reproduction, substitution, or alteration that has been knowingly mismarked, misidentified, or otherwise misrepresented to be an authentic, unmodified item from the original manufacturer, or a source with the express written authority of the original manufacturer or current design activity, including an authorized aftermarket manufacturer. Unlawful or unauthorized substitution includes used items represented as new, or the false identification of grade, serial number, lot number, date code, or performance characteristics.” An important distinction from the purely legal definition is that DoD considers used authentic parts sold as “new and unused” as counterfeit.

Many of the early counterfeit parts that DoD encountered (2007–2012) were from recycled e-waste. More recently, DoD has uncovered pristine, new-manufacture, cloned devices. The range of offenders encompasses small, opportunistic, economically motivated businesses to nation-state malicious efforts.
**Status**

Counterfeiting of parts is a growing business. Estimates by the Department of Commerce showed approximately 5,000 incidences of suspect counterfeits in the Defense Industrial Base in 2008 and 10,000 in 2010. Customs and Border Protection has seen an increase in attempts to bring counterfeits into the country.

DoD has established its expectations for industries that supply systems, subsystems, and parts. These expectations include the following:

1. DoD does not accept counterfeit parts, and penalties are in place should a business willfully do so.
2. DoD expects all businesses to have a system in place to prevent counterfeit intrusion into the DoD supply chain.
3. DoD expects organizations to use a risk-based approach to balance the costs with the risks as seen by the customers.
4. Suspect counterfeit parts that are discovered should be reported to GIDEPE.

Most of the Deputy Assistant Secretaries of Defense (DASDs), all of the services, and all of the prime contractors have a counterfeit prevention focal point as well as numerous integrated product teams. Many industry organizations (e.g., AIA, NDIA, SIA) have counterfeit prevention committees. These organizations share their knowledge across the DoD team through meetings and conferences.

We are currently working with these various teams and committees to search for common solutions as well as to determine which methods work best in which circumstances.

**Challenges**

Many of DoD’s weapon systems are “long in the tooth” and, despite occasional mid-life upgrades, are made of subsystems that DoD intends to keep until the next generation of weapon systems comes online. As a result, system availability is sometimes compromised by supply issues related to parts that were manufactured years ago. This obsolescence makes a program vulnerable to counterfeit parts during repair and maintenance, as the supply chain can no longer rely on the original manufacturer or its authorized distributors. This, coupled with the new trend of cloned devices, presents a challenge to DoD and its partners in the executive branch (e.g., Department of Homeland Security, Department of Energy [National Nuclear Security Administration], National Aeronautics and Space Administration [NASA]).

The solutions in this problem space are wide ranging, and they are driven by various factors such as criticality, cost, urgency, and risk tolerance. For example, there are some programs for which cost is not a factor given the criticality while, for others, the impact of an 11-cent part going up to 12 cents is too much.

While organizations across government and industry are willingly sharing their “counterfeit prevention” methods, there is still a reluctance to share the full recipe of the “secret sauce.” For example, many businesses that rely on obsolete parts...
parts have moved from having many suppliers of parts to a single source responsible for screening incoming parts for suspect counterfeits. This is an extremely effective way to prevent counterfeit intrusion. However, the single-supplier model success relies both on the supplier’s purchasing, inspection, and testing techniques and the prime contractor’s contract provisions. Many primes consider the contract provisions to be competition sensitive—the “secret sauce.” At the same time, the prime is reluctant to reveal its preferred supplier without disclosing the associated contract provisions to avoid another business using that single supplier but not achieving the same level of success and holding the prime accountable.

As counterfeiters learn of the new detection methods, they adapt their processes to get around the barriers that the DoD supply chain has put up. Initially most counterfeits were reclaimed and refurbished product. Now we are seeing new production counterfeits, suggesting that there are big business ventures at play.

**GIDEP**

**Scope and Purpose**

The Government-Industry Data Exchange Program is a Department of Defense program established to promote and facilitate the sharing of technical information between government agencies and industry partners, to increase systems safety, reliability, and readiness and to reduce systems development, production, and ownership costs. GIDEP has been designated by OMB as the federal government’s central database for receiving and disseminating information about nonconforming and suspect counterfeit products and materials. Similarly, DoD has designated GIDEP as its Diminishing Manufacturing Sources and Material Shortages centralized database for sharing DMSMS information among DoD and industry groups.

GIDEP is open to all federal agencies and their industrial bases (e.g., DoD, NASA, Department of Energy, Department of Transportation) and Canadian Defence and Space. GIDEP is the mechanism for industry and government to share information. GIDEP does not create the information. It relies on the industry and government participants to share unclassified technical information on common items.

Most information concerns piece parts—the lowest common denominator for all weapon systems and also the ones with the least technical data security concerns.
**Status**
GIDEP supports around 450 government sites and 3,000 industry sites. There are more than 10,000 registered users, a 50 percent increase in the past 5 years.

Every year, GIDEP processes more than 13,000 documents covering more than 300,000 parts:

- More than 500 non-conforming and suspect counterfeit reports
- More than 5,000 DMSMS and product change notices covering more than 300,000 parts
- More than 100,000 downloads of metrology and calibration procedures
- Several hundred reliability and engineering reports.

Each document is downloaded hundreds of times by participants.

Over the course of the program, members have reported over $2 billion in cost avoidance as a result of the information made available through sharing.

GIDEP continues to evolve. Various allied militaries have requested membership in GIDEP (Australia, United Kingdom, Republic of Korea), and many others have inquired. Several regulations, instructions, and policies reference reporting to GIDEP and screening information in GIDEP. The program is working to modernize the 1990s-era IT infrastructure.

**Challenges**

- The proposed Federal Acquisition Regulation on GIDEP reporting and screening is currently on hold pending assessment of new administration rule-making direction.
- There is an aging workforce and succession planning for the GIDEP Operations Center (NSWC, Corona, CA).
- As we make it easier for our customers to consume the information from large corporations, the large corporations lose the will to submit information into GIDEP.
- Anticipated demand growth is placing increased stress on an aging infrastructure.

**Future**

- GIDEP is currently undergoing a technical refresh of the IT system that should permit integration of the extended international supply chains into the GIDEP community while still maintaining control of the information supplied by the current community. This technical refresh will also lay the groundwork for admission of allied nations into GIDEP.
- GIDEP is currently drafting changes to policies and procedures to accommodate international supply chains and allied nations.
- GIDEP is working to establish an executive steering committee to provide oversight and compliance with reporting requirements to address the issues highlighted in Government Accountability Office study 16-236, “COUNTERFEIT PARTS—DoD Needs to Improve Reporting and Oversight to Reduce Supply Chain Risk.”
JOINT STANDARDIZATION BOARDS

Scope and Purpose
The Joint Standardization Boards (JSBs) provide a forum for DoD services and agencies, defense industry, academia, and international (NATO and non-NATO allies) participants to achieve common, mutually satisfactory standardization solutions. The JSBs address standardization challenges that (1) cut across multiple federal supply classes, federal supply groups, or standardization areas and cannot be handled by a single lead standardization activity (LSA); (2) cover an evolving technology or commodity that does not have an assigned LSA; or (3) address standardization issues identified by the Defense Standardization Executive that may not result in a standardization document.

JSBs make acquisition, standardization, and sustainment decisions while supporting and facilitating multi-service standardization programs. Each JSB plays a key role within the DSP by providing a joint forum for high-level oversight and advocacy of strategic standardization initiatives, and it is responsible for defining enterprise-wide standardization objectives and strategies for a designated commodity area. JSBs advance interoperability, logistic readiness, and cost efficiency within their areas of responsibility by providing standardization advocacy, guidance, and executive-level support. They provide leadership to address commodity-related issues and needs, and they establish priorities to help the standardization community wisely allocate resources.

Status
The Defense Standardization Executive currently charters six JSBs:

1. **Aerial Refueling Systems**—fulfilled by the Aerial Refueling Systems Advisory Group
2. **Mobile Electric Power Generating Sources**—fulfilled by the project manager, Expeditionary Energy & Sustainment Systems (formerly, DoD project manager, Mobile Electric Power)
3. **Intermodal Equipment**—fulfilled by the Joint Intermodal Working Group
4. **Tactical Shelters and Expeditionary Basing Systems**—fulfilled by the Joint Committee on Tactical Shelters
5. **Fuze/Initiation Systems**—fulfilled by the Fuze Engineering Standardization Working Group

The JSB for Aerial Refueling Systems (ARSAG) is a robust, multi-service JSB, with members from NATO and non-NATO nations as well as from industry. It exists to promote and maintain standardization and interoperability in all aspects of international aerial refueling. The ARSAG JSB is chaired by NAVAIR and the U.S. Air Force (AFLCMC/EZFA) on a rotating basis.

ARSAG develops aerial refueling guidance documents and recommendations for defense specifications and standards and for NATO standardization agreements (STANAGs) as well as operational learning documents for JSB members. It has contributed to the development of several STANAGs and is continually monitoring for revisions thereto.
Recent accomplishments include the following:

- General specification for Aerial Pressure Refueling Type MA-5 Coupling, with justification for qualification
- Boom nozzle specification changed to guide document
- Developed nozzle specification—MIL-N-25161
- Developed STANAG 7218—Hose Color and Markings
- Prepared the Maintenance, Sustainment, and Support Reference Guide
- Guide to Obtaining AAR Refueling Clearances & Compatibility Certification, to be published by NATO as ATP 3.3.4.2 SRD 1, “Nozzle, Aerial Pressure Refueling, Type MA-2”
- Developed AR boom and drogue test plans
- Developed the Clearance Process Guide with Attachment AR Tanker/Receiver Clearance Compatibility Assessment Checklist
- Automated Aerial Refueling CONOPS

New projects proposed include the following:

- Aerial refueling incident investigation procedures guidance tool
- Aerial refueling and cyber-vulnerability of modern aerial refueling equipment and methods.

The JSB for Mobile Electric Power (MEP) Generating Sources was chartered as a JSB 10 years ago for its work on standardizing MEP systems across DoD. Chaired by the project manager (PM), Expeditionary Energy & Sustainment Systems, formerly PM MEP, the JSB’s primary current effort is the revision of DoD Directive 4120.11, “Standardization of Mobile Electric Power Generating Sources,” to DoD Instruction 4120.11, “Mobile Electric Power Systems.” The ODASD (Operational Energy) has been a major contributor to the rewrite and to the JSB.
JSB MEP also intends to provide input for a proposed revision to DoD Instruction 5000.02, "Operation of the Defense Acquisition System." The goal is to broaden awareness of the DoDI 4120.11 and MEPS requirements. It is not the Department’s goal to enforce absolute standardization across all MEPS; however, the proliferation of non-standard generators, notably when integrated as a component within a parent system, has become an area of concern. The goal in revising both DoDD 4120.11 and DoDI 5000.02 is to improve capability through increased energy performance, interoperability, and supportability. There exists a waiver process to using the standard MEPS and OSD encourages its use.

The JSB for Intermodal Equipment (JSBIE) is composed of the Joint Intermodal Working Group (JIWG), which was designated and chartered as a JSB in 2006. It is chaired by the Army, Navy, and Air Force, rotating every 2 years, and is currently chaired by USAF AFLCMC with support from USTRANSCOM Intermodal Programs. The JSBIE was established with the goals to draft standards for intermodal equipment to achieve reduced inventory, shorter logistic chains, and improved readiness; to establish liaisons with various standards bodies and industry; and to provide the interface for commercial and/or military integration to optimize the DoD distribution process (e.g., to improve end-to-end distribution and enhance integration and interoperability).

The JSBIE will achieve standardization and interoperability objectives through the following:

- Participate in the development of national and international standards through national and international standards associations and organizations
- Promote commonality of component parts (as applicable) to enhance supportability
- Promote standardization in designs for testing and evaluation
- Interface with industry, academia, and government agencies as needed to keep pace with progressing technology
- Establish and maintain adequate and uniform technical records (e.g., background history and documentation)
- Provide a mechanism for the exchange of technical information among military departments, industry, and allied organizations related to interoperability and commonality of equipment, components, and operational requirements
- Facilitate the coordination of draft documents with the industry and industry associations to ensure that quality and performance requirements meet the appropriate industry standards
- Review, assess, and analyze input from government and commercial sources to recommend, develop, support, and coordinate the establishment of joint intermodal equipment standards.
- JSBIE also led the effort to make using the Joint Container Management System mandatory. The mandate facilitates collective efforts to simplify and standardize tactics, techniques, procedures, and training across the DoD container community.
- The JIWG/JSBIE is presently working to accurately quantify the number of ammunition-grade containers the services are required to maintain in order to meet requirements. Included is the requirement to determine how many ammunition-grade containers are in the inventory and their condition/serviceability, and to develop or examine proposed courses of action to resolve ammunition-grade container shortfalls (if any).
The JSB for Tactical Shelters and Expeditionary Basing Systems (JOCOTAS) was chartered in 2006 with the purpose of providing senior-level visibility for standardization and interoperability initiatives; establishing non-government standards or DoD standards (IAW DoDM 4120.24, Defense Standardization Program Procedures); improving interoperability of joint and coalition forces; providing materiel development standardization considerations to program offices and buying commands; providing a forum for recommending, creating, and coordinating joint policy doctrine; defining joint doctrine, tactics, techniques, and procedures; establishing standardized parts and components that have lowered costs, reduced inventories, shortened logistics chains, and improved readiness; developing joint solutions to issues that affect the tactical shelters and expeditionary basing domains; and providing the interface for commercial-military integration.

In 2015, JOCOTAS and DSPO revised the JSB charter to add expeditionary basing, as related to tactical shelters, to address the requirements of DoDD 3000.10, “Contingency Basing Outside the United States.” Specifically, the revision encouraged the JSB to develop and improve joint processes and procedures to facilitate the design, development, and acquisition of prefabricated structures equipment or systems and expeditionary basing systems that are identical (to the maximum extent possible) and common, while maximizing interoperability; and to authorize, approve, and manage the development and maintenance of specifications and standards (IAW DoDM 4120.24, “Defense Standardization Program Procedures”) that support prefabricated structures, tactical shelters, special purpose covers, shelter accessories, and expeditionary basing systems.

In 2017, the JSB began coordinating with the Joint Expeditionary Basing Working Group (JEBWG), which is chartered to examine engineering standards and determine where opportunities existed to capitalize on equipment commonality and interoperability in a deployed environment. A joint JOCOTAS-JEBWG team evaluated the unique roles and responsibilities of each organization to identify redundancies and inefficiencies. The JOCOTAS JSB and the JEBWG are planning to consolidate activities in 2018.
The JSB for Fuze/Initiation Systems was chartered in 2006 to maintain a DoD-wide working arrangement to prepare and review in an effective and timely manner the U.S. and NATO standards, guidelines, and handbooks for fuzes and other initiation systems.

The JSB serves as a continuing group to facilitate the standardization of fuzes and other initiation systems inclusive of fuze/initiation systems design concepts, evolving fuze/initiation systems technologies, fuze/initiation systems packaging and logistics techniques, and testing and evaluation procedures, with an emphasis on ensuring fuze/initiation systems design safety and interoperability.

The JSB functions under the following detailed scope of work:

- Provides for reviewing and updating, as required, U.S. military fuze/initiation systems standards and handbooks and NATO fuze/initiation systems standards and guidelines
- Interfaces with industry, academia, and government agencies as needed to establish new fuze/initiation systems standards, guidelines, and handbooks that are necessary to keep pace with progressing technology
- Establishes and maintains adequate and uniform technical records—that is, background, history, and documentation
- Provides a mechanism for the timely exchange of technical information between military departments as related to reviewing and updating of standardization documents and to initiating and developing new standardization documents
- Establishes ad-hoc task groups for the purpose of revising or preparing individual standardization documents under assigned DoD standardization projects
- Ensures that all military departments accept all documents, prior to approval and publication
- Ensures the coordination of documents with industry for its input regarding the ability to document requirements. Essential quality or performance requirements shall not be sacrificed. The JSB ensures the coordination and development of draft documents with other government agencies and NATO nations as appropriate.

The JSB for Power Source Systems (PSS) was established under the DSP in 2006 from the Defense Battery Technical Working Group. The objective of the JSB is to achieve common, mutually satisfactory solutions to shared requirements and problems.

JSB PSS authorizes, approves, and manages the development and maintenance of specifications and standards (IAW DoDM 4120.24, “Defense Standardization Program Procedures”) that support the development and manufacture of batteries and power source systems. It will develop and improve joint processes and procedures to facilitate the design, development, and acquisition of power source systems that are identical (to the maximum extent possible) and common, while maximizing interoperability.
The DSP leverages several user-centric, web-enabled tools and technologies to assist DoD personnel and defense contractors in meeting the acquisition needs of DoD. The following is a list of the capabilities managed by DSPO:

**DSP TOOLS AND CAPABILITIES**

- DSP website—http://www.dsp.dla.mil
- ASSIST—https://assist.dla.mil
- Pin Point—https://pinpoint.xsb.com
- Weapons System Impact Tool—https://wsit.xsb.com
- Qualified Products Database—https://assist.dla.mil or http://qpldocs.dla.mil
- GIDEP—http://www.gidep.org

**Future Initiatives**

DSPO is managing several automation endeavors to maximize the use of modern technology to modernize and enhance DSP tools. They are as follows:

- Automate workflows associated with the development, distribution, and maintenance of DSP documents
• Improve the productivity of standardization management activities and the DSP Automation Office
• Distribute standardization, qualified products, and parts information to DoD stakeholders who span the globe
• Reduce the time, costs, and expenses associated with maintaining standards and standards-related data and information
• Leverage Extensible Markup Language (XML) to convert documents to interoperable, digital data and then write them to the user’s desired output format
• Optimize search engine keywords and metatags, related website referrals, and staff marketing strategies to keep stakeholders abreast of DSP capabilities.

DSPO is also assisting DLA Research and Development with evaluating Semantic Web for Interoperable Specifications and Standards (SWISS)—based tools, such as Spectacle, for the transition of specifications and standards from paper-based documents (i.e., PDF) to digital data. The SWISS platform provides a framework for interoperable digital models and for composing derivative works such as test plans or work instructions. The lessons learned from these observations will provide valuable feedback for the DSP automation initiative to convert documents to XML.

DSP WEBSITE

Purpose
The DSP website provides news and defense standardization information for the public and standardization stakeholders worldwide. The DSP website (www.dsp.dla.mil) is hosted by the Defense Media Activity, DoD Public Web (DoDPW) program.
Status
The DoDPW provides a DoD enterprise-level cloud service consisting of website hosting using a consolidated content management system (CMS). The use of a CMS has made it easier for DSPO to update websites and provide faster access to standardization-related information because it does not require staff to know HTML tags or computer programming. The DSP website is designed to function normally under all modern browsers, and it can scale down to fit tablets and mobile devices. The website is always available, and it features contact forms to facilitate inquiries and feedback from the public to DSPO staff and DSP leadership.

Website Analytics
1. **Visits.** A visit is one individual visitor who arrives at our website and proceeds to browse (see Table 3). From February 1, 2017, to February 1, 2018, the DSP website received 82,133 visits from around the globe. The website received visits from 179 out of the 195 countries in the world. The top 20 unique visits emanated from the United Kingdom, China, Spain, India, Japan, South Africa, South Korea, Germany, Canada, Philippines, Italy, Switzerland, Poland, Australia, Turkey, Italy, Mauritius, Brazil, Romania, and Russia.

<table>
<thead>
<tr>
<th>Profile Name</th>
<th>Date</th>
<th>Visits</th>
<th>Page Views</th>
<th>Hits</th>
<th>Average Length per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.dsp.dla.org">www.dsp.dla.org</a></td>
<td>2017–2018</td>
<td>82,133</td>
<td>254,444</td>
<td>524,167</td>
<td>1 minute 02 seconds</td>
</tr>
</tbody>
</table>

2. **Page views or impressions.** Once a visitor arrives at a website, he or she will search around on a few more pages. Each individual page a visitor views is tracked as a page view. On average, DSP website visitors looked at about three pages per visit.

3. **Top keywords.** The following are keywords used the most by potential visitors to search for or to land on the DSP website: DISR, GIDEP, parts management, DSP Industry Day, and DSP Journal. In the near future, the DSP Web Team will update metatags and keywords to make them more relevant to the types of files and pages accessed the most, and to improve web traffic.

4. **Top content.** The following is a list of the top content accessed in the past one year:

   - Top downloads:
     - DISR Standards Guidance
     - Guidance on the relationship between DSP and DoD IT Standards and Profile Registry
     - DSPO Brochure
     - JSB Charters
     - DSP Template
     - DSP Journals from October 2016 (Agency Standardization), December 2015 (Open Systems), and July 2011 (Materiel Readiness)
     - Report on Military Standards and Specifications Requiring Defense Standardization Council Approval to Reinstate or Reactivate Report Military Standards Requiring Approval
5. **Hits.** A hit is a request for one file from a web server. A hit also refers to the number of files downloaded on a website; this could include photos, graphics, and so forth. A hit counter measures and displays the number of times visitors have viewed a single page on a website. It is quite common for one visitor to generate dozens or even hundreds of hits during a single visit. The DSP website received 524,167 hits a year.

6. **Traffic sources.** Visitors arrive at the DSP website through a variety of sources, including search engines and direct links. In the past year, the top sources for DSP website traffic are as follows:
   - Direct navigation (typed in URL, bookmarks, email links without tracking codes, etc.): 42,707 visitors
   - Referral traffic (from links across the web) from QPL DOCS: 1,517 visitors
   - Organic search (queries that sent traffic from any major or minor web search engines):
     - Google: 18,277 visitors
     - Bing: 1,976 visitors
     - Unknown: 8,041 visitors.

**ASSIST**

**Purpose**

ASSIST is a web-based application that integrates with internal and external systems, such as the Qualified Product Database, NATO Standardization Document Database, and Weapon System Impact Tool. It is a comprehensive information system used to develop, coordinate, distribute, and manage the following:

- Defense specifications and standards
- Federal specifications and standards
- Defense handbooks
- Commercial item descriptions
- Data item descriptions
- Qualified products lists
• Qualified manufacturers lists
• International standardization agreements.

In addition to providing DoD personnel and defense contractors with access to standardization documents, ASSIST continues to provide an environment for 408 Standardization Management Activities (SMAs) personnel to draft, develop, and maintain DSP documents. SMAs within DoD, federal agencies, and industry use ASSIST to manage DSP documents prepared in accordance with DoD Manual 4120.24, “Defense Standardization Program Procedures.” Registered users may search for documents, identify standardization points of contact, generate numerous standard or custom reports, and establish profiles to receive customized email alerts when a preparing activity undertakes a project to develop or modify a document, posts a draft for coordination, or publishes a new or revised document.

**Status**

ASSIST is hosted in three distinct isolated enclaves (networks):

1. Public unrestricted:
   • ASSIST QuickSearch—http://quicksearch.dla.mil
2. Public restricted:
   • ASSIST/QPD—https://assist.dla.mil
3. Private:
   • ASSIST Common Access Card—https://assistca.dla.mil
   • ASSIST Maintenance.

These enclaves help segregate the level of access and provide added security for DSP documents with restricted distribution.

The following overview of ASSIST user and document statistics provides a high-level characterization of the variety of users and uses that ASSIST supports:
1. **User account breakdown.**
   - There are currently 110,652 registered ASSIST users.
   - Of those registered, only 20 percent are active (logged in) users, which suggests that most users access DSP documents by using ASSIST QuickSearch, which provides access to public documents without user login.
   - Of those registered, 58 percent are DoD personnel, 31 percent are commercial users, and 10 percent are defense contractors (see Figure 10). Defense contractors are commercial users who have been granted access to additional modules (e.g., to serve as LSA, or preparing activity) or documents (e.g., locked documents).

   ![Figure 10. Active ASSIST Users](image)

   **Active Users by Account Type**
   - DoD: 12,628
   - Defense Contractors: 2,093
   - Commercial: 6,863
   - Other: 147
   - Federal Government: 97

2. **Web server analytics.** Figure 11 depicts ASSIST web views in the past 12 months and the number of hits by robots (also known as Spiders). As expected, ASSIST has a high number of hits on QuickSearch as opposed to the other enclaves, because it is the most flexible web service. It allows users to view unclassified information quickly, without having to log in to the password-protected side of ASSIST. However, viewer access is limited to Distribution A (approved for public release) standardization documents.

   ![Figure 11. ASSIST Visits in the Past 12 Months](image)

   **Server** | **Hits** | **Robot Hits** | **Average Hits/Day**
   --- | --- | --- | ---
   QuickSearch | 76,428,813 | 1,492,907 | 206,505
   ASSIST Public-Restricted | 57,880,566 | 49,487 | 165,795
   ASSIST CAC | 11,743,441 | 504 | 31,653
   **Total** | 146,054,820 | 1,542,898 | 403,953
3. Documents in ASSIST. There are 102,949 standardization documents published in ASSIST, of which 27,829 are active. As shown in Figure 12, most of the active DSP documents are non-government standards and military specifications and standards.

The number and status of documents archived in ASSIST can change daily. As of May 2017, there were 1,362 standardization projects in process to revise existing, develop new, or cancel standardization documents.

Figure 12. Active DSP Documents in ASSIST

4. Most frequently downloaded documents. As of February 2018, the top downloaded standardization document was MIL-STD-810, “Environmental Engineering Considerations and Laboratory Tests.”

Table 4 provides a closer look at the top 10 downloaded documents. In summary:

- The most downloaded document is MIL-STD-810. In the past 12 months, it was downloaded more than 18,000 times. As noted in the “International Standardization” section of this report, STANAG-4370, an environmental international standardization agreement developed by NATO, was the second most downloaded ISA in the past year.

Table 4. Top 10 Downloaded DSP Documents

<table>
<thead>
<tr>
<th></th>
<th>MIL-STD-810G(1)</th>
<th>Environmental Engineering Considerations and Laboratory Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>MIL-DTL-5541F</td>
<td>Chemical Conversion Coatings on Aluminum and Aluminum Alloys</td>
</tr>
<tr>
<td>4</td>
<td>MIL-DTL-38999M(2) SUP 1</td>
<td>Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, or Breech Coupling), Environment Resistant with Crimp Removable Contacts or Hermetically Sealed with Fixed, Solderable Contacts, General Specification</td>
</tr>
</tbody>
</table>
5. **Data feeds to external interfaces.** The Extensible Markup Language (XML) module contains publically releasable information and document details pertaining to DSP documents, for example, military specifications and military standards, in XML format. Standards information in XML format is available to users by approval of DSPO staff. End users with such access download standards metadata and DoD standards in XML format to further process the data—for example, to add DoD standards to their own standards database systems or to build bibliographies.

There are federal government, non-government standards bodies, and industry partners that have been granted access to the XML module data feeds. They may use XML data feeds to update their own systems—for example, IHS Markit includes data, information, and documents obtained from ASSIST in its index of specifications and standards made available to its users but directs them to ASSIST as the authoritative source. If not for ASSIST, the following approved users of the XML module would not have a repository of DSP documents in their databases:

- DoD users: DLA, Army, NASA, and Navy
- NGS bodies: ANSI, ASTM, and DIN
- Industry: Bid Link, Boeing, Document Center Inc., Edaptive Technologies, IHS Markit, Marvin Engineering Co., Northrop Grumman, Techstreet, SBC Global, and XSB.

**Future**

ASSIST is a legacy system with significant financial and technical challenges to overcome, including automated process design, XML conversion, and personnel to operate and maintain the modernized system. ASSIST functionality has evolved to meet the changing needs of the DSP and SMAs, and each new change made the overhead of the system more complex. ASSIST continues to undergo modernization to upgrade the current capability and address additional standardization needs. Currently, the ASSIST team is focused on developing functional and non-functional requirements for the next-generation ASSIST for a future acquisition of technical services.

**PIN POINT**

**Purpose**

Pin Point is a government-only query engine for researching parts in the federal supply chain. It provides users with technical and logistics information about items of supply from more than 20 different databases.
Status

MIL-STD-3018, “Parts Management,” laid the groundwork for the development of a common parts library between the government and its major equipment manufacturers. The standard encourages engineers to select component parts that the government has already approved and to which it has assigned National Stock Numbers (NSNs) or to select parts that are readily available from the existing defense supply chain. Selecting these “preferred parts” helps the government avoid the proliferation of functionally similar parts and also helps to discourage the use of “boutique” components with little use beyond a single weapon system. The major obstacle has been the lack of a single source where government and supplier data were aggregated and standardized so a user can search and compare component characteristics across all data sources. Pin Point addresses this issue by enhancing parts data from FLIS, a DLA system that catalogs parts for DoD, with technical, management, and reference data about NSNs and commercial parts on government contracts aggregated from multiple sources.

In 2012, Pin Point incorporated the Strategic Materials Assessment Response Tool (SMART). SMART was developed to enable a proactive response to a dynamic regulatory environment where changes in material regulations have a direct impact on the supply chain and the availability of parts to support DoD weapon systems. SMART determines the presence of regulated materials in component parts by extracting information about material constituents and regulatory compliance (REACH, RoHS, DoD emerging containments) from a variety of publicly available sources. SMART’s built-in alert component acts as an early warning system for weapons systems’ program offices and the industrial base advising them of the impact of these regulations.

Figure 13 diagrams Pin Point’s supply chain functions and business transactions.

Future

There is a contractual initiative underway to make some improvements to Pin Point.
WSIT

Purpose
The Weapon System Impact Tool provides access to information about weapon systems and specifications associated with National Stock Numbers. The system helps to group parts influenced by a specification and evaluate the impact of specification changes on weapon systems.

Status
This application was developed to show the relationship between specifications and standards in ASSIST and the weapons systems that use parts (specifically, NSNs) derived from those specifications. WSIT uses Weapons System Designator Codes developed by DLA, and using artificial intelligence, gathers information about weapon systems and their specifications from multiple data sources, such as cataloging data and procurement history files. With WSIT’s query features, users can explore the relationships between specifications and weapons systems. For example, a user can estimate the impact on a weapon system if a specification is changed or canceled, or if a manufacturer no longer supplies a part that supports the weapon system. If a part conforming to a specification fails its testing requirements, WSIT can be used to identify other items on the weapon system that were tested using that specification, as well as what other weapon systems could possibly be affected by the failed part. WSIT can be used to generate a list of weapon systems in which a specified document (e.g., a defense specification, federal specification, commercial item description, or non-government standard) is called out. Also, it can provide a list of the NSNs and controlling part numbers associated with that document.

ASSIST communication with WSIT is one-way. Links are constructed to the WSIT site using information that WSIT uses to authenticate the user to its site.

Users with a valid CAC may log onto WSIT directly at https://wsit.xsb.com.
Training

DSP TRAINING

Scope and Purpose
DSPO sponsors a wide array of courses that provide instruction on DoD policies and procedures for the development, management, and use of non-government standards, parts management, commercial item descriptions, and specifications and standards. Courses are also offered on GIDEP and DMSMS. Courses are offered in both classroom setting and continuous learning formats, and most are offered through the Defense Acquisition University learning platform.

While the specific target of DSP training is for those employed by DoD, training is also provided on a space-available basis to other U.S. government affiliations, including non-DoD federal agencies, members of the defense industry (DoD contractors), and international students (Foreign Local National, Foreign Military Sales, NATO).

Courses
The following courses are offered through DAU. More information on these courses, including syllabus and course objectives, can be found at http://icatalog.dau.mil/.

Training Courses/Resident Delivery Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSW</td>
<td>Defense Standardization Workshop (course offered on a fee-for-service basis)</td>
</tr>
</tbody>
</table>

Continuous Learning Modules/Online Delivery Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLE 028</td>
<td>Market Research for Engineering and Technical Personnel</td>
</tr>
<tr>
<td>CLE 064</td>
<td>Standardization in the Acquisition Life Cycle</td>
</tr>
<tr>
<td>CLE 065</td>
<td>Standardization Documents</td>
</tr>
<tr>
<td>CLE 206</td>
<td>Introduction to Parts Management</td>
</tr>
<tr>
<td>CLE 200</td>
<td>Diminishing Manufacturing Sources and Material Shortages (DMSMS): What Program Management Needs To Do and Why</td>
</tr>
<tr>
<td>CLE 201</td>
<td>DMSMS Fundamentals</td>
</tr>
<tr>
<td>CLE 202</td>
<td>DMSMS Executive Overview</td>
</tr>
<tr>
<td>CLE 203</td>
<td>DMSMS Essentials</td>
</tr>
</tbody>
</table>
Additional Training
The Government Industry Data Exchange Program conducts several training opportunities for GIDEP members. Training is either conducted at the GIDEP Operations Center or at various locations throughout the United States. GIDEP training is provided in the form of narrated slide presentations offering an introduction to key aspects of GIDEP; quarterly, in-person GIDEP training sessions for new members; monthly training webinars; and biannual GIDEP training clinics for new users. The training clinics—which are held in different geographic regions in order to ease the burden on travel funds—cover all aspects of GIDEP as well as provide hands-on, computer-based tutorials.

Statistics
Most of our enrollment numbers show a small increase between FY 16 and FY 17 (see Figure 14), with CLE 028, Market Research, posting a slight decrease in enrollment in the same period. CLE 028 has high demand because it’s an elective in the Core Plus Development Guide for Production, Quality and Manufacturing Level II Certification.

![Figure 14. Classes Conducted in FY 16 and FY 17](image)

The graduation rate for the CLEs and CLLs averages 78 percent, which is within the DAU average.

Progress
Converting resident delivery training courses to continuous learning modules increased visibility and flexibility, providing training on demand. By having courses available in near real time, we are better able to train the Acquisition, Program Management, Engineering, Life-Cycle Logistics, Test and Evaluation, Production, Quality, Manufacturing, and related career fields that need training on standards and standardization.
Challenges
In addition to the continuous learning modules, DSPO sponsors a Standardization Workshop (DSW) that trains using individual and group practical exercises, emphasizing the application of standardization tools, policies, and procedures, as described in CLE 028, Market Research for Technical Personnel; CLE 064, Standardization in the Acquisition Lifecycle; and CLE 065, Standardization Documents. This workshop—formerly known as SYS 120—was offered as an elective course through DAU. The course, however, was retired from the DAU Catalog in 2016 and now is offered under DAU’s Mission Assistance Workshop Training, available on a fee-for-service basis, delivered on demand by DAU faculty at the customer’s location. It awards 14 Continuous Learning Points for participants. Because SYS 120 was not mandated as either a core or elective class through a certification program, DAU curriculum managers were hesitant to commit resources to sponsoring the workshop due to tight budgets and existing certification needs. As a result, the new course—DSW—is now only offered on a fee-for-service basis through DAU.

If SYS 120 or DSW were to be introduced as either an elective or core requirement into a program leading to certification, DSPO is confident the workshop would have high demand, and it could be included on the DAU catalog once again. CLE 028, Market Research for Technical Personnel, proves that if a course is part of a certification program (either elective or core), demand is much greater than those courses not part of a certification program.

Course Descriptions

- **DSW, Defense Standardization Workshop.** This workshop is designed for professionals who have responsibility for developing, reviewing, coordinating, and managing DoD specifications and standards or who otherwise support the Department of Defense in making standardization decisions. Individual and group practical exercises emphasize the application of standardization tools, policies, and procedures. Prerequisite courses include CLE 028, Market Research; CLE 064, Standardization in the Acquisition Life Cycle; and CLE 065, Standardization Documents.

- **CLE 028, Market Research for Engineering and Technical Personnel.** This continuous learning module is designed for acquisition personnel who are in the Program Management, Engineering, Life-Cycle Logistics, Test and Evaluation, Production, Quality, Manufacturing, or related career fields, and who are involved in developing acquisition requirements, conducting tradeoff evaluations with users, or determining the commerciality of suppliers or services. This course addresses market research team membership, sources for obtaining market data, and techniques for technical evaluation and documentation of market information.

- **CLE 064, Standardization in the Acquisition Life Cycle.** This continuous learning module is designed for acquisition personnel involved in the development and management of standardization documents. This course discusses the principles of standardization and its application across all phases of the acquisition life cycle, standardization policy in DoD, and the management and use of standardization documents.

- **CLE 065, Standardization Documents.** This continuous learning module is designed for members of the acquisition workforce who are interested in learning about DoD standardization documents. This course covers the technical details of the specific purpose of each type of document; how to distinguish each type of document based on the document identifier; general rules for stating requirements in standardization documents; and format and content requirements for commercial item descriptions, along with defense specifications.
• **CLL 206, Introduction to Parts Management.** This continuous learning module is designed for parts management practitioners and provides a comprehensive overview of parts management, including policy and contractual implementation requirements, costs and benefits, the parts management plan, and tools used by practitioners.

• **CLL 200, Diminishing Manufacturing Sources and Material Shortages (DMSMS): What Program Management Needs To Do and Why.** This continuous learning module provides program management with information about DMSMS and what can be done to reduce its impact on the DoD supply chain and industrial base.

• **CLL 201, Diminishing Manufacturing Sources and Material Shortages (DMSMS) Fundamentals.** This continuous learning module provides professionals with a working-level overview of DMSMS issues.

• **CLL 202, Diminishing Manufacturing Sources and Material Shortages (DMSMS) Executive Overview.** This continuous learning module is for executives or program managers who require an understanding of how DMSMS impacts their operations regarding reliability, maintainability, supply chain efficiency, funding, policy, procedure, and staffing. This module offers the executive a perspective of management actions necessary to enable effective DMSMS mitigation, thereby enhancing mission readiness, efficiency, and cost-effectiveness.

• **CLL 203, Diminishing Manufacturing Sources and Material Shortages (DMSMS) Essentials.** This continuous learning module is for professionals who have a working knowledge of DMSMS regulations and policies (prerequisites for this course include CLL 201 and CLL 202). This module focuses on DMSMS problems regarding electronics, as well as with mechanical items and materials. The module introduces professionals to DLA’s DMSMS programs and capabilities and will review basic techniques for component research.