Standardization and NSN Data Cleansing: Land and Maritime Effort Streamlines Procurements

By Tom Hess and Gary Watson

The Defense Logistics Agency (DLA) Land and Maritime Document Standardization Division has undertaken the effort to evaluate all national stock numbers (NSNs) controlled by a standardization document for which they are the preparing activity (PA). DLA Land and Maritime is currently the PA for more than 10,000 military specifications, standards, and drawings that are referenced by more than 100,000 NSNs. These NSNs are in more than 70 different federal stock classes (FSCs) covering parts from rubber hose, wire, and cable to high-reliability military microcircuits.

Background

Early in 2016, the Document Standardization Division started a program of reviewing engineering support requests on materials covered by military specification devices for which they are the PA prior to military service review. Requests were generated in many cases to items that were either unprocurable or otherwise unidentifiable. Standardization engineers and technicians discovered in many instances that the NSNs had not been properly catalogued with the appropriate military document number or part number. Engineers and technicians also found instances of typographical errors, incorrect part numbers, and obsolete document references that have led to numerous delays and a significant increase in hands-on review of NSNs prior to solicitations. The automated buy system will kick out errors for manual intervention, which delays procurements, increases lead times, and can ultimately create back-order situations for those highly active NSNs.

Forward Thinking

Several weeks of reviewing engineering support requests led to a pattern of these types of actions and a discussion about how to look at the entire national stock system to correct unwanted errors in a methodical yet timely manner. The idea of focusing on one particular FSC did not seem to provide the most efficient solution. The initial evaluation began with looking at those items that had current specification actions during the previous month. The Document Standardization Division averages approximately 135 completed specification projects per month across the MilSpecs and Standards Program, the Standard Microcircuit Drawing Program, the Vendor Item Drawing Program, and the Land and Maritime Drawing Program. By using the list of completed drawings from the previous month, Veterans Affairs associates began researching all of the NSNs associated with each document and taking the appropriate action to correct cataloging and standardization errors.

After the first 6 months, more than 8,000 actions were generated to correct part number, document number, and sourcing information. Updating this information has allowed the automated buy system to generate solicitations for warfighter support without manual intervention, thus reducing delays, decreasing lead times, and ultimately getting the right items to the warfighter.

The sheer volume of errors led DLA Land and Maritime management to focus the preparing activity in making these corrections a high-priority work item. The Document Standardization Division

developed a team of engineers and technicians from across the spectrum of FSCs in an effort to have the expertise to expedite this review. As new team members have been brought on board, they are focusing attention on high-priority NSNs to further support the warfighter. As distressed items are identified, all of the NSNs associated with a specific document are reviewed for accuracy and corrected as necessary.

The Process

Gary Watson, item reduction and standardization expert, is the designated leader of the Document Standardization Division team and has developed a process flow that includes correcting all errors associated with MilSpec NSNs and working with electronic cataloging (E-Cat) to properly code the cataloging for these NSNs. This newly developed review and correction process will streamline the procurement process by allowing solicitations and awards to flow with less or no manual review.

To verify that NSNs are first cataloged correctly and subsequently bought correctly, they first have to be identified that they are associated with a standardization document. Various data sources and techniques are used to identify this relationship. After identification of all NSNs, the team has to then validate the reference number section in the Total Item Record (TIR) for each NSN by comparing the format of the reference number to the format defined in the standardization document. If there is a format issue in the TIR, a cataloging request is made to Defense Logistics Information Services to correct the reference number. If the MilSpec requires qualification, the next step of the process is to ensure that the government designation listed in the Qualified Products Database (QPD) matches the format defined in the standardization document. If the data format doesn't match, a request is made to the qualifying activity to either add or correct the QPD. Ultimately, once all three data sources match, an unencumbered, streamlined acquisition with no manual intervention can be accomplished, expediting the delivery of material to the warfighter (see Figure 1).

Figure 1. Standardization Document NSN Cleansing Flow
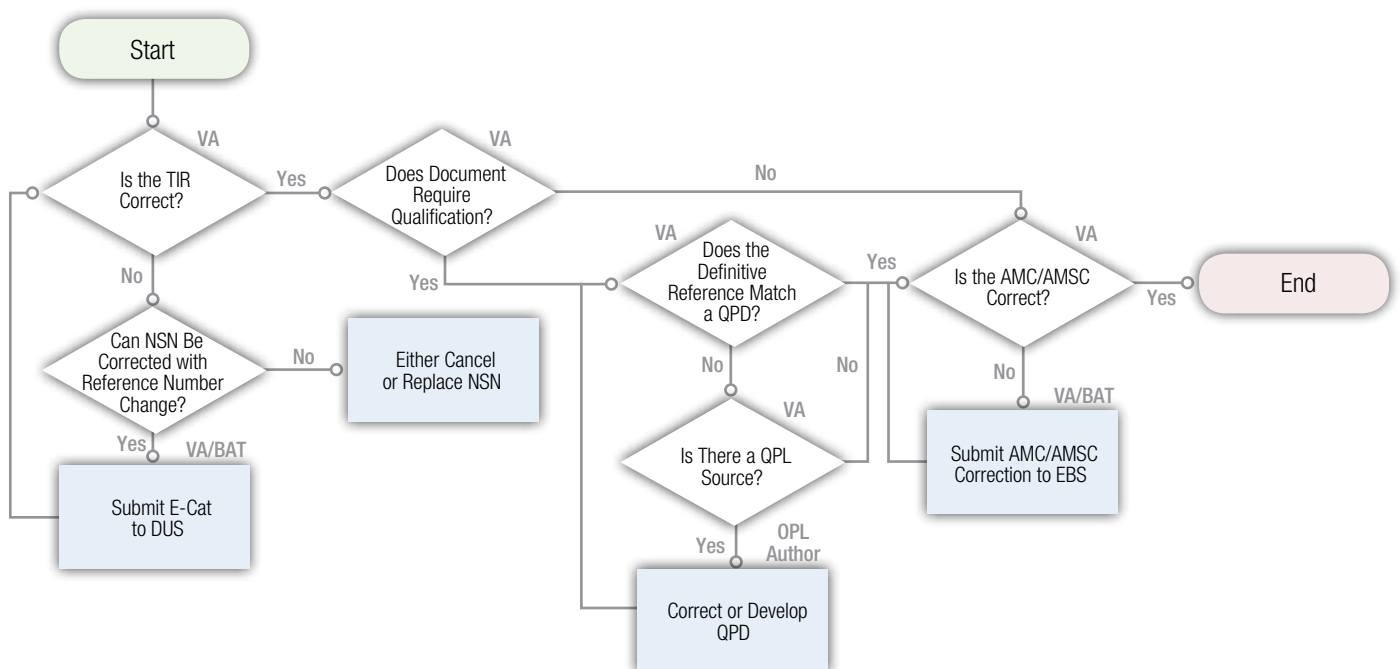
Additional Benefit Captured

There is currently an effort underway to streamline the procurement of NSNs that have qualification requirements. As of today, DLA's system functionality does not store Qualified Products List (QPL), Qualified Manufacturers List (QML), or Qualified Sources List (QSL) information that is needed in the automated procurement processes (solicitation, evaluation, or award). The acquisition specialists have to determine the approved sources or send a pre-award referral to the product specialist. The time to award is increased on purchase requisitions (PRs) for materials where QPL, QML, Qualified Source List of Distributors (QSLD), or Qualified Source List of Manufacturers (QSLM) applies.

To accomplish automated solicitation and automated awards for MilSpecs requiring qualification, a change was needed in SAP to include data on qualified products. Once this change is completed, the time to award on PRs for materials where QPL, QML, QSLD, or QSLM applies will be greatly reduced by automatically soliciting and awarding them using the automated one-time buy process. The new functionality will allow DLA to track QPL, QML, and QSL information more efficiently. For this change to work properly, all of the information associated with each NSN has to be pristine. The work that Mr. Watson and his team are doing to "cleanse" the NSN data will be crucial to the success of the change being made in DLA's computer systems for NSNs that require qualification.

Early Results

As of July 2016, more than 8,516 E-Cat requests have been submitted for 9,616 NSNs reviewed (88 percent) and 81 standardization documents have been reviewed. Mr. Watson and his team continue to refine their process flow and are becoming more efficient in their reviews, which translates into more NSNs with "clean data." As mentioned earlier, the Document Standardization Division is the PA for more than 10,000 military specifications that have more than 100,000 associated NSNs. There is still much to be accomplished; however, early results are showing significant benefits to the DLA Land and Maritime procurement process. The plan for the Document Standardization Division team is to first concentrate its efforts on NSNs that are the most active and have the highest dollar value. This will have the greatest return on investment for the supply chain.

The NSN data cleansing project will play an integral role in the success of auto solicitation and award, especially for those NSNs that require qualification. Over the next several years, this NSN data cleansing process will become part of the normal flow for all standardization projects for which the Document Standardization Division is the PA. The lesson learned through this project is that manual input is necessary but can introduce errors that render the automated process useless. DLA's computer systems are only as efficient as the accuracy of the data they rely upon.

About the Authors

Tom Hess is a supervisor/electronics engineer and the chief of the Active Devices Team at Land and Maritime. His team is the preparing activity for MIL-PRF-38535, MIL-PRF-19500, and MIL-STD-750. Mr. Hess has 30 years of experience in the standardization of microelectronics, semiconductors, and radiation-hardened devices.

Gary Watson has 30 years of item reduction and standardization experience.