

DISCUSSION PAPER ON
INTEROPERABILITY
AS SUPPORTED BY
THE DEFENSE STANDARDIZATION PROGRAM

Interoperability is one of the primary goals for military operational capability outlined in Joint Vision 2020. In order to successfully meet our operational goals of coalition and joint warfare, it is essential the U.S and allied forces be interoperable. In recent years, many have come to think of interoperability in terms of being able to communicate with each other and share information. But interoperability means so much more than this. Simply defined, interoperability is systems or key elements of systems being able to work with each other. Having same size ammunition is essential if we are to share ammunition. Having interoperable fueling nozzles and receptacles is essential if we are to be able to refuel each other's aircraft in flight. Having interoperable replenishment-at-sea capabilities is essential if ships from different nations are to transfer munitions and supplies between ships at sea. While most would agree that interoperability is vital to joint and coalition warfare, it is not always easy to achieve and to maintain. This is where the Defense Standardization Program can help.

Joint Vision 2020, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01A, "Requirements Generation System," and DoD 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs" are the key documents in the DoD that define the template of how we will conduct war in the future, how we will define our requirements, and how we will buy and support the major systems all emphasize the importance of interoperability. Three of the basic tenets of Joint Vision 2020 depend on interoperability. Coalition warfare and joint operations will only be possible if our systems are able to work together. And the future success of operations is going to depend heavily on information superiority -- knowing things about the enemy and being able to transmit that information to your allies and communicate a course of action. Information superiority can only happen if we can all electronically communicate with each other and this requires interoperability of communications equipment and information systems. Lastly, if we are to minimize our logistics tail, we must do a better job at sharing parts, components, and subsystems. These pieces don't have to be identical, but they have to be interoperable. To support the interoperability goals of Joint Vision 2020, the CJCSI Instruction 3170.01 makes interoperability a key performance parameter to be included in the operational requirements document. And from the acquisition side, DoD 5000.2-R requires program managers to identify interoperability requirements and how they plan to meet them.

The Defense Standardization Program can help program managers and others achieve their interoperability objectives. It's important to remember, however, that the Defense Standardization Program does not dictate the interoperability requirements. The operational community and program office set such requirements, but the Defense Standardization Program can support interoperability in many different ways.

The Defense Standardization Program have over 100 technical offices supported by thousands of government and contractor support engineers who have the technical expertise to capture your interoperability requirements in specifications and standards and maintain these

requirements in the future. In addition, since it is DoD policy to use non-government standards wherever possible, these same people can represent your interests and interoperability requirements on appropriate industry standards committees.

In an effort to ensure interoperability with our allies, DoD acquisition policy is being changed in DoD 5000.2-R to require the program manager to identify any international standardization agreements and their implementing documents that apply to the program. The Defense Standardization Program's network of experts can help program managers to identify international standards agreements for consideration. In addition, these agreements are rarely self-implementing. They usually require a supplemental specification or standard. If an implementing document already exists, the Defense Standardization Program can identify that document. If one does not exist, we can develop it or work with industry standards committees to have it developed.

Typically, most programs are concerned with just their program and trying to make sure they are on schedule, on budget, and meet the system requirements. But such focus can lead to stove piping across programs instead of seeing what solutions other programs may have already developed to meet a need or sharing technical solutions with other programs. One of the challenges for interoperability is to be able to cut across program stovepipes that may exist. The development of specifications and standards under the Defense Standardization Program is a consensus process that involves many individuals in DoD, other government agencies, and industry. This consensus process helps ensure that when we develop common technical solutions to common technical problems, the word gets out. In addition, Defense Standardization Program has widespread visibility for its documents. Two of the common resources that people in government and industry consult first are the DoD Index of Specifications and Standards (DoDISS) and the Acquisition Streamlining and Standardization Information System (ASSIST) database, which list tens of thousands of government and industry specifications and standards.

The ASSIST database has become one of the most popular databases on the web today, primarily because users can view and download specifications and standards online. The ASSIST database also provides other useful information, such as a point of contact in case there are questions about a document, whether the document requires the use of hazardous or environmentally unfriendly substances, it provides associated qualified products lists (if they exist), listings of tiered referenced documents, it identifies implementing documents for many international standardization agreements, and other information.

The Defense Standardization Program continues to search for and develop new tools intended to make life simpler for program offices and other in the acquisition community. For example, one tool currently under consideration is a database structured primarily around the Work Breakdown Structure, which would identify international standardization agreements and their implementing documents, as well as other specifications and standards required by statute or regulations. This tool would give program offices an upfront capability to identify specifications and standards considered essential for interoperability.

If you are interested in learning more about the Defense Standardization Program or getting in contact with a standardization office that can help you with your technical requirements, please contact the Departmental Standardization Office for your Service or Agency and they can help you. You can see a list of the Departmental Standardization Offices at www.dsp.dla.mil. Just click on “About the DSP” and then on “Points of Contact.”