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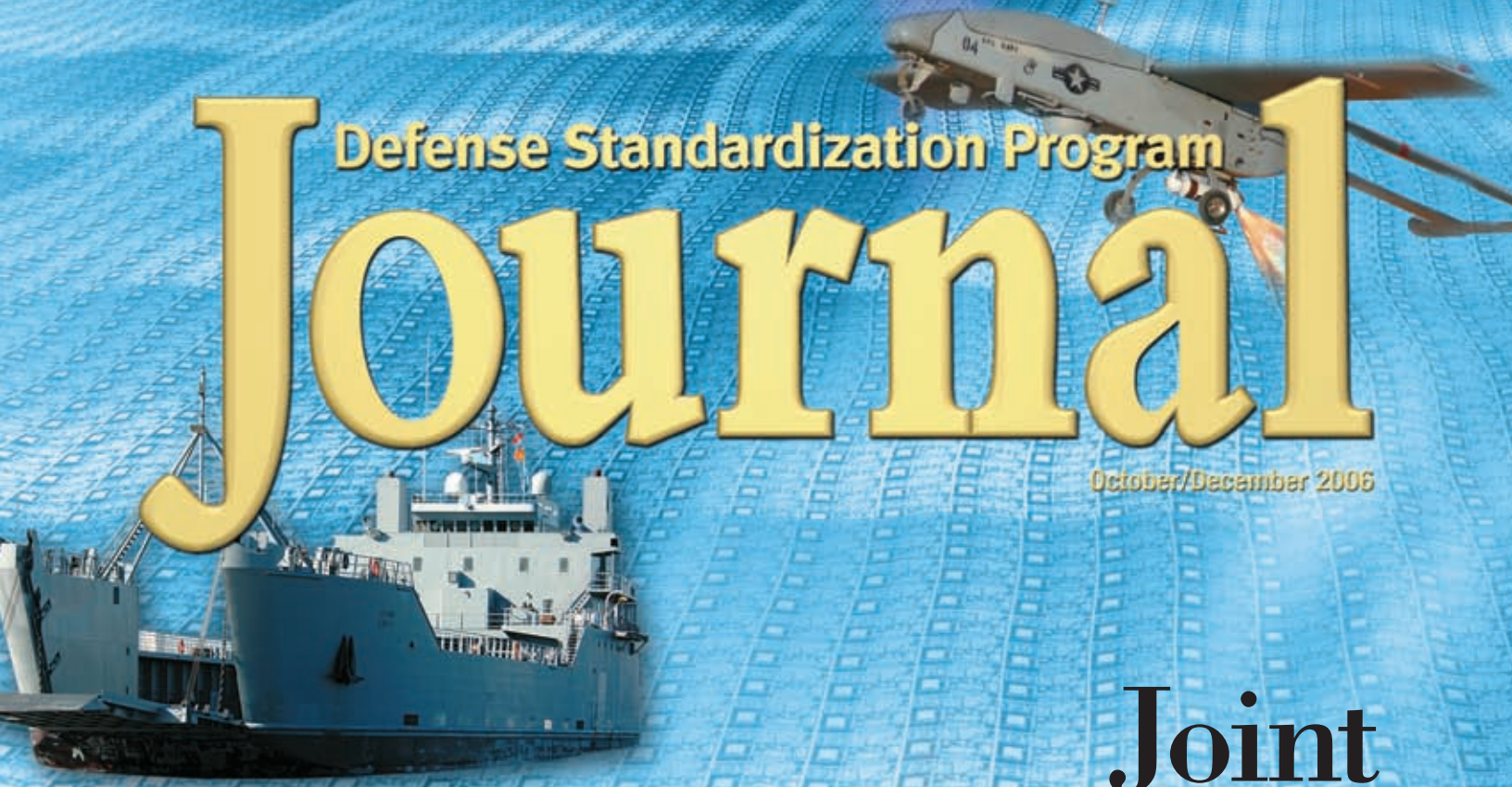

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Intermodal Equipment

Tactical Unmanned Aircraft Systems

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Defense Standardization Program
Journal

Contents *October/December 2006*

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Joint Standardization Boards

At our last Defense Standardization Program (DSP) conference in May 2006, we unveiled a new entity—Joint Standardization Boards (JSBs). Understandably, the audience had a number of questions about the purpose of the boards and how they would fit in with the existing DSP infrastructure.

The JSB concept came out of the strategic planning efforts, several years ago, of the DSP Infrastructure Integrated Product Team, which was led by the Air Force. One of the team's key findings was that many standardization efforts in DoD took place outside of the DSP and, all too often, there was a lack of connectivity between the DSP and the technical organizations engaged in standardization activities or interested in pursuing standardization.

These disconnects lessened the potential benefits that could be derived from an enterprise-wide approach to standardization. In some cases, parallel, independent standardization efforts were occurring in each of the services, which may have benefited the individual service, but could have resulted in a lack of standardization and interoperability across DoD. In other cases, standardization efforts were happening in only a single service when there was obvious need and opportunities throughout DoD. In yet other cases, the lack of a JSB-type structure stymied standardization opportunities because there was no official venue that sanctioned a "coalition of the willing" to come together. In all cases, visibility was lacking; standardization decisions were made and communicated among limited communities instead of the broader DoD-wide enterprise.

The new JSB structure can help address these issues. Although some Lead Standardization Activities (LSAs) under the DSP have taken the initiative to establish working groups to work on DoD-wide standardization opportunities, most LSAs have not. Also, standardization opportunities exist in newly emerging technologies—for example, unmanned aircraft systems—yet no LSA is addressing them. And standardization opportunities for some technologies cut across multiple LSAs. The new JSB structure allows for technical organizations and others outside of the traditional DSP framework to come together to work

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Director, Defense Standardization Program Office

on DoD-wide standardization issues under the DSP umbrella.

This arrangement offers several advantages. It provides ad hoc technical groups with an official DoD imprimatur in the form of a DSP charter, which can be useful in gaining participation, resources, and recognition for the standardization effort. Having the JSB structure provides a neutral forum in which separate service standardization efforts can come together for the greater good. Making the JSB standardization activities visible—through such vehicles as the DSP website, the *Journal*, the Standardization Awards Program, and the Standardization Directory—allows them greater recognition and support while increasing awareness of these activities in DoD, other federal agencies, and industry.

More important, formally acknowledging these ad hoc standardization efforts under the JSB structure makes our traditional DSP standardization offices aware of these efforts and provides them an opportunity to participate and help the JSBs with developing, processing, and managing any documents necessary to capture their standardization decisions. All too often in the past, standardization decisions by ad hoc group were not widely disseminated, were not readily available, or were lost in time. By establishing JSBs under the DSP, the resulting standardization documents can be included in the Acquisition Streamlining and Standardization Information System—ASSIST—database, which is one of the most widely used online standards library in the world.

As of today, the Defense Standardization Executive has chartered eight JSBs:

- Tactical Rigid-Wall, Soft-Wall, and Hybrid Shelters; Special-Purpose Covers and Accessories
- Medical Materiel/Equipment
- Mobile Electric Power Generating Sources
- Power Source Systems
- Intermodal Equipment
- Tactical Unmanned Aircraft Systems
- Microelectronics and Semiconductors
- Fuze/Initiation Systems.

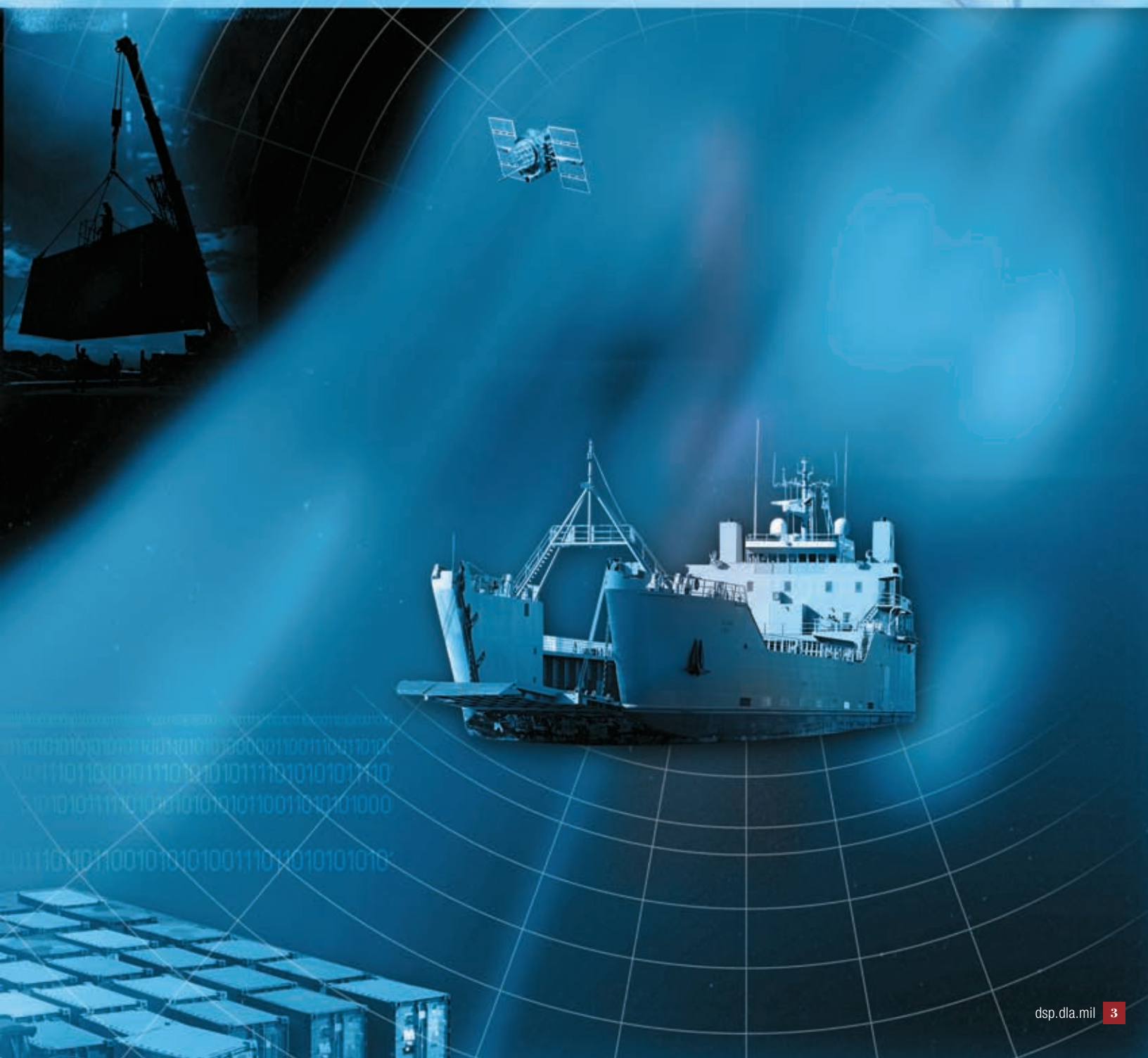
These JSBs will play key roles within the DSP by providing joint forums for high-level oversight and advocacy of strategic standardization initiatives and establishing priorities to help the standardization community wisely allocate resources. Each JSB differs greatly in its focus, complexity, and desired outcomes. Some JSBs will focus primarily on piece part standardization, while others will focus on common end-item standardization, on common testing protocols, or on system or cross-platform standardization. But the one characteristic that all JSBs share is that they provide a standardization-focused forum for dialogue among the services, agencies, and programs to identify, communicate, and capture key standardization opportunities within their area of interest.

This issue of the *Journal* introduces not only the JSB concept, but sets the stage for what are the initial standardization priorities for five of the boards. JSBs remain a work in progress. It likely will take several years before they are comfortable with the working of the DSP and vice versa. But given the wave of enthusiasm I have seen so far from the chartered JSBs and interest expressed by other organizations, I have no doubt that JSBs are a welcome addition to the DSP and that they will help us do a better job of supporting the warfighter. If you want to learn more about the currently chartered JSBs and keep apprised of future ones, we have created a JSB section on our website at www.dsp.dla.mil.

Intermodal Equipment

Standardizing to Promote Compatibility, Interoperability, Interchangeability, and Commonality

By Anna Wojciechowski



Interoperability within and among the military services and with our allies is critical to ensuring our readiness and capability to respond to world emergencies. Interoperability is impossible without standardization. Joint Standardization Boards (JSBs) are DoD's approach for establishing a comprehensive, integrated structure necessary to achieve interoperability, promote standardization, develop standards, and conserve resources in support of joint service and multinational operations. Through such boards, DoD expects to increase the level of visibility and manage program funding more effectively and reduce the overall logistics footprint.[1]

The Joint Standardization Board for Intermodal Equipment (JSBIE) will address intermodal equipment technology and standardization issues to improve the end-to-end intermodal distribution pipeline and to make related standardization decisions. JSB designation provides the ability to jointly set DoD standards through the Joint Intermodal Working Group (JIWG) and to influence non-government standards. With the authority to set standards for intermodal equipment, JIWG can look at all aspects of the intermodal pipeline, identify where improvements can be made through standardization, and determine the best course of action for making them.

Intermodal equipment includes all DoD-owned, -leased, or -controlled ISO-configured containers, non-ISO containers and system 463L equipment, container- and materials-handling equipment, other supporting equipment, and enablers—such as radio frequency identification tags, bar-code labels, satellite tracking devices, readers, and information systems and databases—that support DoD transportation and logistics operations. The key to optimizing interoperability among DoD, NATO, and industry is standardization, and the newly chartered JSBIE holds the key.[2]

Each time an individual piece of cargo is handled, the likelihood that it will be lost or damaged increases. As a result, one of the goals of container standardization is to reduce the number of times the shipped item is handled. In addition, handling takes time; duplicate orders are frequently placed in an attempt to replace an order that is still in transit. Effective tracking will reduce the likelihood that an order will be lost or misplaced, and reduced handling time will reduce the arrival time—increasing customer satisfaction and reducing the cost to the government.

DoD, through the U.S. Transportation Command, relies heavily on the commercial sector to increase its lift capacity and port/terminal services. Industry provides us access to its assets through a variety of programs. We routinely interface with the commercial sector to improve and refine our own operations and must continue partnering with industry to maximize our transportation capability in peace and in war. National and DoD policy directs use of the commercial sector when doing so

is militarily effective. National Security Directive 28, issued on October 5, 1989, states that the "U.S.-owned commercial ocean carrier industry, to the extent it is capable, will be relied upon to provide sealift in peace, crisis, and war." To encourage that reliance, Part VI of the Defense Transportation Regulation (DoD 4500.9R, issued in June 2002) specifies the American National Standards Institute/ISO standards for the 20- and 40-foot containers as the designated standards for DoD unit equipment and sustainment.

JIWG standardization goals are to engage air, surface, ocean, intermodal, retail, and other industry partners through a variety of conferences such as those held by the Intermodal Association of North America, American Society for Testing and Materials, ISO Technical Committee on freight containers (TC-104), and National Defense Transportation Association. Through TC-104, I submitted a shoring slot addition to ISO 1496. JWIG works through available DoD and other government forums such as the DoD Standards Conference and NATO meetings and exercises addressing multinational compatibility and interoperability.

Effective tracking will reduce the likelihood that an order will be lost or misplaced, and reduced handling time will reduce the arrival time—increasing customer satisfaction and reducing the cost to the government.

JSBIE established the Standards Committee (SC) to develop standards in accordance with DoD 4120.24-M ("Defense Standardization Program, Policies and Procedures") or with non-government standards. The SC's goal is to achieve, where possible, common standards for use by DoD, NATO, and industry. The JSBIE SC will act for the JSBIE to initiate, harmonize, and coordinate intermodal equipment standardization activities. The SC will draft standards for intermodal equipment that have reduced inventory and shorter logistics chains, improve readiness, establish liaisons with various standards bodies and industry, and enhance integration and interoperability.

The standardization priority set by the committee is compatibility, interoperability, interchangeability, and commonality. The standards will provide the interface for commercial/military integration to optimize the DoD distribution process and improve end-to-end distribution effectiveness and efficiency. The JSBIE SC plans to standardize intermodal equipment through

- implementation of Joint Modular Intermodal Container (JMIC) system standards;

- implementation of Joint Modular Intermodal Platform (JMIP) standards;
- evaluation of container asset tracking protocols and standards, with the goal of ensuring that they are part of the intermodal transportation system;
- evaluation of existing standards that address limitations for various intermodal platforms, with the goal of improving the end-to-end distribution process; and
- facilitation of multinational compatibility and interoperability of intermodal platforms and of transportation and handling assets through ISO TC-104, NATO, and others.

To bring all these efforts to fruition, JIWG set the Joint Modular Intermodal Distribution System (JMIDS) as an umbrella for intermodal transportation. JMIDS encompasses the development of JMIC, JMIP, and their interfaces with DoD asset tracking systems. JMIDS will permit efficient, seamless, and visible movement of supplies through the distribution system from U.S.-based depots and vendor locations to tactical end users, including movement through a sea base to support forward operating expeditionary and task force units.

Through a JMIDS joint capabilities technology demonstration project, JSBIE will demonstrate, analyze, and transition joint service, all-mode containers and platforms that are equipped with automated identification technology. The goal of the demonstration is to make significant contributions to the agility, flexibility, efficiency, effectiveness, responsiveness, and interoperability of the joint distribution system.

The ideal JMIC system meets ISO standards for interfaces and is transportable by land, rail, sea, and air in both commercial and military transportation assets. It is lightweight and made of durable materials, easy and inexpensive to repair and maintain, compatible with standard materials-handling equipment, truly intermodal without use of adapters, easily secured, compatible with upcoming emerging technologies, and, when needed, easily configured to specific cargoes. Moreover, it can be decontaminated if exposed to nuclear, biological, or chemical agents. The standard will cover multiple-sized containers that combine to effectively build and break down a 20- or 40-foot ISO container or 463L pallet into pallet or module-sized loads. The goal is to reduce the overall theater logistics footprint, including retrograde, while complementing automated loading, handling, and storage systems.

To prove the effectiveness of JMIDS, the Army and the Navy developed JMIC prototypes (made from aluminum or steel). The selected attributes were as follows:

- Maximum dimensions of 52 inches long by 44 inches wide by 42 inches high
- Internal footprint that fits a 48-inch by 40-inch pallet
- Maximum tare weight of 350 pounds, with a target weight of 250 pounds
- Maximum collapsed-to-assembled ratio of 4:1, with a target ratio of 2.5:1
- Accessible through two long sides and the top side
- Gross weight capacity of 3,000 pounds.

The best container type was manufactured for a combined military/industry unitization demonstration, scheduled to begin in March 2007.

Containers Built for Utilization Demonstration

Once the JMIC is proven in the field, the JMIC standard will be completed. The JSBIE SC is considering the following parameters for JMIC standardization:

- Container interfaces
- Lifting and tie-downs (MIL-STD 209 and NATO Standardization Agreement 4062)
- Stackability
- Locking interfaces
- Platform size
- Footprint and internal dimensions
- Compatibility with transportation modes
- Compatibility with common and joint handling equipment.

Composition of JSBIE Standards Committee

The JSBIE Standards Committee has members representing the following organizations:

- Defense Logistics Agency, Defense Standardization Program Office
- Defense Logistics Agency, Joint Operations
- Defense Logistics Agency, Operations
- U.S. Air Force Materiel Command, Logistics Support Office/Transportation
- U.S. Army Materiel Command, Logistics Support Activity
- U.S. Army, Armament Research, Development and Engineering Center
- U.S. Army, Research, Development and Engineering Command, Tank-Automotive Research, Development and Engineering Center
- U.S. Army, Surface Deployment and Distribution Command, Transportation Engineering Agency
- U.S. Marine Corps, Headquarters
- U.S. Navy, Naval Inventory Control Point
- U.S. Navy, Naval Surface Warfare Center, Indian Head Division
- U.S. Transportation Command, Strategy, Plans and Policy Directorate.

Committee advisors include the Office of the Assistant Deputy Under Secretary of Defense (Transportation Policy); U.S. Army Materiel Command, Surface Deployment and Distribution Command; U.S. Army Materiel Command, Joint Munitions Command, Defense Packaging Policy Group; Defense Standardization Program Office combatant commands; and other DoD, government, and industry representatives by invitation.

Additional optional standardization may address the following based on specific user requirements: compatibility with certain harsh environments, desired service life, desired accessibility to contents, need for specific collapsibility to minimize transport of empty containers, durability, and gross weight capacity.

Continuous improvement through research and development will be important to the JSBIE. One potential area for research and development is the ability to put two Container Roll-on/Roll-off Platforms (CROPs) into one 40-foot ISO container. In addition, the CROP will be investigated for additional interoperability opportunities. Currently, the only true interoperability is between the flatrack and the truck. Additional interoperability between the flatrack and the load through tie-downs and other standard container interfaces will greatly increase the utility of the CROP. Savi Technology, Inc., "tattle tags" also warrant additional research and development. An addition to the current Savi tag that could alert when measured parameters are out of bounds must be considered. Examples of parameters that the tattle tags will be able to report on are temperature, acceleration, Global Positioning System, door openings and at what time, and water intrusion.

In conclusion, standards will be based on operational needs and limitations and will promote compatibility, interoperability, interchangeability, and commonality to reduce cost and logistical footprint and optimize the DoD distribution process. Intermodal standards will leverage existing standards; new standards will be developed only when necessary. The DoD standards will be developed within the JIWG to promote the joint intermodal transportation of DoD equipment and logistics sustainment through the defense transportation system. In the near future, the SC will publish a draft JMIC standard. The draft standard for the Joint Modular Intermodal Platform is planned for FY07. All the currently developed standards should be implemented into DoD by FY09.

The author wishes to acknowledge the assistance of Gary Adams, David Krawchuk, Tom Kozlowski, and Joshua Peterson in writing this article.

[1]Letter of Authorization, Honorable Kenneth Krieg, Under Secretary of Defense for Acquisition, Technology and Logistics, February 3, 2006.

[2]Memorandum from James D. Hall, DoD Standardization Executive, Office of the Under Secretary of Defense, to Joint Intermodal Working Group, Subject: "Joint Standardization Board for Intermodal Equipment," June 8, 2006.

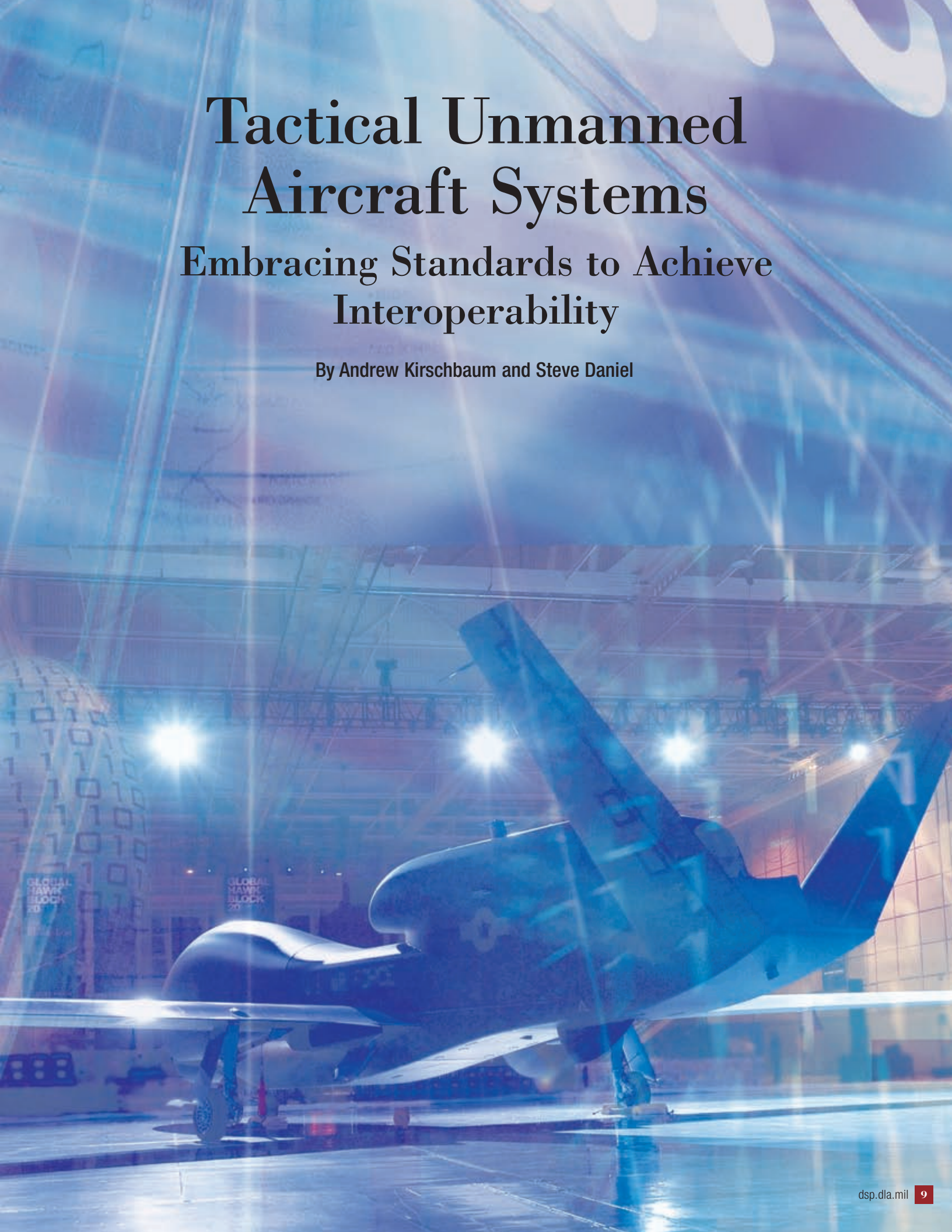
About the Author

Anna Wojciechowski chairs the JSBIE Standards Committee. Her other responsibilities include research and acquisition support for materials-handling equipment while working for the U.S. Army Research, Development and Engineering Command's Tank-Automotive Research, Development and Engineering Center. She is also the Army's point of contact for container issues as they may relate to ISO Technical Committee 104.

Tactical Unmanned Aircraft Systems

Embracing Standards to Achieve Interoperability

By Andrew Kirschbaum and Steve Daniel



Recent efforts have demonstrated the recognition, acceptance, and strong industry buy-in of the need to develop and leverage standards to achieve the interoperability of unmanned aircraft systems (UASs). These efforts include the following:

- Multiple workshops at the 2006 North American Conference of the Association for Unmanned Vehicle Systems International. The workshops addressed numerous aspects of standards relating to all types of unmanned systems (underwater, maritime, ground, and air).
- A MITRE study sponsored by the Joint UAS Material Review Board. This study investigated how to improve commonality of payloads and ground control stations (GCSs), as well as improve interoperability and data dissemination through further adoption of common standards and a common communication architecture.
- The implementation of NATO standardization agreement (STANAG) 4586 Edition 2 in the GCSs of the U.S. Army, U.S. Navy, U.S. Marine Corps, United Kingdom, and Germany.
- The work of the newly formed NATO Joint Capability Group for Unmanned Aerial Vehicles (UAV) and the STANAG 4586 Custodian Support Team to develop a conformance test plan for component, system, and interoperability testing. These two groups are also working on Edition 3 of STANAG 4586 to address the trends toward a network-centric concept of operations, increased system autonomy, and collaboration among systems.

All these efforts are focused on making UAS interoperability a reality in the not-too-distant future. Currently, the Navy/Marine Corps team, through the Program Office for Unmanned Air Systems, and the Army are the leaders in the military's drive to leverage commonality and interoperability throughout

their legacy UASs and their future family of UAS. Two examples of efforts to better leverage current and future standards are the Marine Corps's upgrades to the Pioneer and the Navy's changes to the Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV).

The Marine Corps's Pioneer sustainment solution relies on a great degree of commonality with the Army's Shadow 200 tactical UAS, manufactured by AAI Corporation. The Pioneer's new electro-optic/infrared plug-in optronic payload 300 offers greatly increased resolution and magnification, a reliable engine, and a launcher/trailer combination for radically improved mobility—all of which have been proven in combat by the Shadow 200. The upgraded Pioneer will also incorporate a Command and Control Tactical Common Data Link (rather than the current C-Band propriety link) and use a STANAG 4586 (Edition 2 Errata 2) Army "One System" GCS. These upgrades will continue to enable the venerable Pioneer system to successfully deploy in Operation Iraqi Freedom, as well as in other complex operational environments.

The VTUAV Model B upgrades include several features:

- Tactical Common Data Link for payload imagery

- Ethernet/Generic Framing Protocol format with Ethernet ports and Internet Protocol Version 6 capability (both part of the Naval Air Systems Command Common Data Link Interoperability Profile)
- Advanced weapons standards
- STANAG 4586 (Edition 2 Errata 1) software within the Navy's Tactical Control System (TCS).

Through its VTUAV program, the Navy is a strong advocate for the proper incorporation of standards upfront. Incorporating standards during the initial developmental phase of a program makes it easier and more cost-effective to incorporate advances to the system as it matures in the field. The two efforts that have received the most attention are the weapons standards and the TCS.

The VTUAV team is working with the Society of Automotive Engineers–Aerospace and the Weapons Interface Standards Organization to develop two UAS standards: Miniature Munitions Interface Standard and Micro Munitions Interface Standard. These standards address the electrical interface between aircraft-carried miniature/micro store carriage systems and miniature/micro stores. Specifically, the standards address the physical, electrical, and logical (functional) aspects of the interface to provide a common interfacing capability for the initialization and employment of smart miniature munitions. The VTUAV team is also working with NATO on plug-and-play weapons capability and is monitoring the Air Force's effort to develop a universal armament interface. Although the VTUAV is currently not required to carry weapons, the groundwork regarding standards is being carefully built into the VTUAV so that, when required, weapons can be successfully integrated into the system.

The TCS will be the basis for the VTUAV ground control system. A TCS tenet has always been to improve interoperability for the warfighter. The Navy is fully backing a STANAG 4586-compliant TCS as "The" Navy control system. The TCS's nonpropri-

etary, open architecture uses numerous internal standards—including the Global Positioning System and the Joint Mapping Tool Kit—and external standards such as the following:

- Moving Picture Experts Group-2 Digital Video
- American National Standards Institute/Society of Motion Picture and Television Engineers 170M Analog Video
- Variable Message Format/U.S. Message Text Format
- MIL-STD-2500A/B for image formats.

The Army and Navy are working closely together on the VTUAV Fire Scout program. Costs have been reduced and commonality between the two services' air vehicles stands at 92 percent. The Army's VTUAV Fire Scout and its next buy of the Shadow 200 tactical UAS and the Extended Range/Multi-Purpose Warrior UAS will use the "One System" GCS with STANAG 4586 Edition 2 software.

Standards, such as STANAG 4586, provide benefits from a cost and economic viewpoint as well as increased battlefield effectiveness through the use of available nonorganic support assets. Future examples of the latter would be the use of Army UAV assets to support Marine Corps counterinsurgency operations in Iraq or to support Canadian coalition maneuver elements in Afghanistan. STANAG 4586, via the command control interface, will also enhance information sharing by providing data to multiple users of Command, Control, Communications, Computers, and Intelligence systems.

STANAG 4586 also facilitates the introduction of new technologies in air vehicles and payloads because the effect on the GCS is minimal. For example, STANAG 4586 enables the integration of a vehicle-specific module with the GCS or the addition of new payload messages to the data link interface. Another important aspect of STANAG 4586 is the decoupling of the control station from the air vehicle. The military services will be able to acquire air vehicles independent of other elements of the UAV system (e.g., the control station). In other words, the control station can be sustained, upgraded, and produced in multiple configurations independent of other elements of the system.

People sometimes assume that mandating standards can stifle innovation and increase costs. Standards, by themselves, do not guarantee interoperability. Instead, the keys to achieving interoperability are common implementation, verification, and certification through proper testing. The benefits will be vast when the creativity of our warfighter is matched to this new capability of interoperable systems. One must look only toward the vibrant and dynamic information technology sector and the way it embraces and leverages standards to see that we are following the right path for unmanned aircraft systems.

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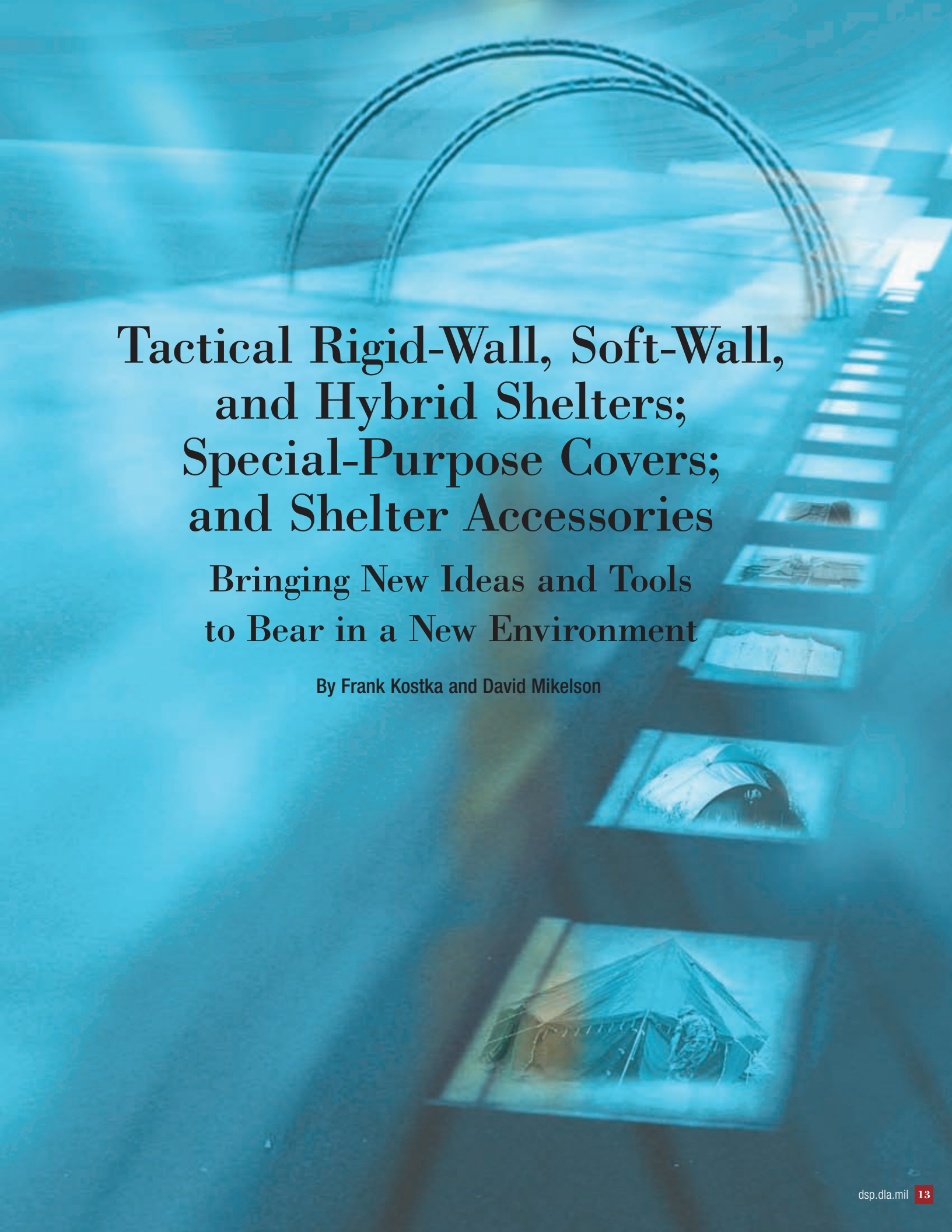
Andrew Kirschbaum works for D.P. Associates. He currently supports the Navy and Marine Corps Unmanned Air Systems Program Office as a senior analyst for unmanned aerial systems. In addition, Mr. Kirschbaum is the editor of STANAG 4586.

Steve Daniel supports the Navy and Marine Corps Unmanned Air Systems Program Office as the Integrated Product Team lead for concepts of operations. He is also the custodian for the STANAG 4586 document and chairs the STANAG 4586 Custodian Support Team.

Tactical Rigid-Wall, Soft-Wall, and Hybrid Shelters; Special-Purpose Covers; and Shelter Accessories

Bringing New Ideas and Tools to Bear in a New Environment

By Frank Kostka and David Mikelson



On June 8, 2006, the DoD Standardization Executive, James Hall, formally chartered the Joint Committee on Tactical Shelters (JOCOTAS) as the Joint Standardization Board (JSB) for Tactical Rigid-Wall, Soft-Wall, and Hybrid Shelters; Special-Purpose Covers; and Shelter Accessories. The JSB is empowered to

- create and enhance joint processes for improved development and acquisition of shelters offering common solutions and interoperability,
- manage and maintain specifications and standards, and
- establish a DoD-wide forum for interoperability coordination, planning, and decision making.

During its first year of operation, the JSB will develop a detailed organization plan for approval by senior JOCOTAS board members and the DoD Standardization Executive; hold two meetings, concurrent with JOCOTAS and ASTM International working group meetings, for DoD participation; and identify standardization projects focused on achieving JSB goals.

Challenges for the Shelter JSB

In addressing its standardization mission, the JSB faces three major challenges:

- Lack of new formalized service requirements
- Plethora of commercial off-the-shelf (COTS) products competing for the defense dollar
- Lack of formal science and technology programs to develop and deliver standardized shelters, special-purpose covers, and accessories to the warfighter.

Service requirements documents are necessary to initiate and fund developmental programs. The lack of such documents, plus the tendency to place a low priority on shelters, makes it difficult to establish a formal program to keep pace with the shelter needs of today's warfighters. The clearest indications of this phenomenon are the current buying practices of field commanders. In the 2006 Defense Logistics Agency (DLA) JOCOTAS production budget, approximately 45 percent of the next 5 years' projected procurement activity involves COTS shelters. When added to shelter buys made directly with the vendor, total dollars expended on COTS products over the next 5 years could easily exceed $500 million.

Two of the COTS shelters have been formally adopted by the services as Military Adaptation of Commercial Items. Other buys may fill gaps created by surges in demand that cannot be met by the traditional industrial base during wartime. The total impact on standardization cannot be fully defined because the DLA contracts are awarded on an indefinite-quantity basis; actual buys will depend on a variety of variables. What *can* be stated is that the funds expended on non-standard items

dwarf the costs associated with the formal development of a military shelter system. Life-cycle costs also are likely to increase due to a lack of competition during acquisition, non-competitively procured spare parts, interoperability and battlefield performance issues, and issues related to long-term durability.

In the absence of formal shelter and shelter-related science and technology programs, the services are using the Small Business Innovative Research program and industry interest, aided by congressional support, to pursue four areas:

- Barrier materials that mitigate environmental, detection, chemical/biological agent, and ballistic threats
- Structures that support barrier materials, reduce setup time and labor, and cut shipping weights and volumes
- Anchorage systems that secure shelters from extreme weather and blast waves
- Energy management technologies that reduce systems' logistical footprints.

In the 2006 Defense Logistics Agency (DLA) JOCOTAS production budget, approximately 45 percent of the next 5 years' projected procurement activity involves COTS shelters.

Ongoing Activities to Enhance the Standard Shelters

Three key initiatives, which are either underway or proposed, will advance the development and delivery of standardized cutting-edge shelter and shelter-related capabilities to the warfighter.

CONFIGURATION OF STANDARD ITEMS INTO SHELTER SYSTEMS

Natick Soldier Center (NSC), in Natick, MA, has been working on several innovative methods to bring improved products to the field while maintaining standardization. One example is the development of a modular command post that can range in size from 256 to 3,000 square feet. NSC integrated a variety of standard shelters with the Standard Integrated Command Post System (SICPS) furniture and lighting. NSC also added an electrical distribution system; heating, ventilation, and air conditioning units; and advanced solar covers. It then packaged the components into shipping containers specific to the mission.

Force Provider Light 150-Soldier Forward Base Camp

As a result of this endeavor, the shelters better meet the needs of commanders of organizations such as rear or support elements, which typically require more space than highly mobile units. Moreover, this endeavor eliminated the need for units to purchase non-standard shelters to obtain sufficient space. Finally, because the modular command post does not use interconnected 11- by 11-foot SICPS tents, leakage problems, due to the sloping roof, have been eliminated. (Highly mobile operations continue to use the SICPS tents, but leakage is an acceptable tradeoff for quick setup and teardown.)

TRANSITION OF NEW TECHNOLOGY INTO EXISTING SYSTEMS

Two features that are highly valued by shelter users are fast setup and minimal personnel requirements. NSC has worked over the past 15 years to develop inflatable composite technology to meet this need. "Airbeams"—tubular structures inflated by a compressor—replace metal frames, significantly reducing the shipping weight and volume and, most dramatic, reducing the number of hours required to erect a structure by 70 percent. Airbeams were first fielded in 2002 as part of NSC's Chemical and Biological Protective Shelter program.

Another program in which NSC demonstrated inflatable composite technology is Force Provider, DoD's premier 550-soldier Base Camp System. This program, under the Product Manager–Force Sustainment Systems, expanded to include a new forward 150-soldier system. High-speed setup with a minimal workforce was

JOCOTAS June 2006 Meeting Features Base Camp Setup

critical to the program's success. Teaming together, the organizations recently demonstrated a 150-soldier camp at Fort Lee, VA, based on inflatable composite technology. The entire camp—which included field feeding, water purification, laundries, showers, and billeting—was set up in less than 4 hours. Several high-ranking Army officers observed the demonstration and gave the program the green light to move forward.

DEVELOPMENT OF AN INTEGRATED STANDARDIZATION STRATEGY

The key proposed initiative is to develop a strategy for integrating standard military and COTS shelters, recognizing that COTS shelters will continue to be used to fill gaps resulting from unmet military requirements. The following are some standardization activities that should be pursued to ensure that the mix of shelter assets in the field can be used as building blocks to meet a hierarchy of needs:

- Streamline inter-service use of standard shelters accepted by a single service without a major "paper" exercise. Currently, a separate type classification is required.
- Broaden the Family of Standard Shelters to create a Standard Family of Integrated Shelter Systems that includes power distribution, lighting, environmental control, and command post and quality-of-life furniture. This activity builds on work in progress.
- Establish performance and safety requirements, validated with standard ASTM test procedures, for categories of tents, both DoD and commercial.

- Incorporate standard design features, fabrics, and interoperability requirements in the various tent categories.
- Integrate emerging technologies into standard shelters and the commercial marketplace as appropriate.

Next Steps

Over the past 30 years, JOCOTAS has brought the DoD shelter community together to foster the development of standard components and systems that meet the warfighter's needs economically. During that period, many changes have occurred in acquisition practices that present challenges and opportunities for future standardization.

Where does JOCOTAS, as the JSB for shelters, go from here? The JSB needs to take a pragmatic approach to advance the standardization of both rigid-wall and soft-wall shelters. The JSB proposed the following tasks for FY07:

- *Expand the standard shelter manufacturing base.* The JSB, working with DLA, must identify companies that can provide dual manufacturing capability (commercial and military) to support the procurement of shelters to meet surge requirements.
- *Prepare a building code for military shelters.* The code must be based on current military performance specifications, linked to recognized national building codes, and validated using ASTM test methods.
- *Develop a design package that identifies standard military interoperability features needed on commercial shelters.*

The advent of a Joint Standardization Board focused on shelters will facilitate the application of new ideas and tools to ensure that systems and equipment needed by the warfighter will be available, interoperable, and sustainable.

About the Authors

Frank Kostka is the executive secretary of JOCOTAS. At Natick Soldier Center, he leads the Collective Protection Directorate. The directorate develops shelter technology and provides engineering services to a DoD customer base. Mr. Kostka has been involved in all aspects of shelter development since joining the organization in 1982.

David Mikelson has served for the past 16 years as chairman of the JOCOTAS Technical Working Group. In addition, he has served for the past 25 years as vice-chairman of ASTM E06.53 Subcommittee for Materials and Processes for Durable Rigidwall Relocatable Structures and assumed the E06.53 chairman's duties in October 2006. Mr. Mikelson is a widely recognized expert on tactical rigid-wall shelter design, construction, testing, repair/refurbishment, and materials and processes. He also has extensive background in shelter ancillary equipment and shelter transport equipment.

Evolution of JOCOTAS

JOCOTAS was formed in 1975 under the direction of the Office of the Secretary of Defense. It was originally established under a Joint Service Regulation that was later augmented by a charter approved by the Office of the Under Secretary of Defense. The duties of JOCOTAS are as follows:

- Advance the state of the art in shelter design and shelter ancillary equipment
- Search for common solutions to identified user needs
- Reduce and eliminate duplication of shelter research, development, test, and evaluation (RDT&E)
- Create a standard shelter family and maximize its use within DoD
- Share information and expertise to solve shelter problems
- Work to promote evolutionary change in processes used for shelter development
- Assist the services with procuring shelters in the most streamlined and cost-effective way
- Ensure that shelters are compatible with commercial and military transportation equipment for worldwide deployment
- Provide a forum for interaction between JOCOTAS and industry (JOCOTAS sponsors a minimum of two Technical Working Group meetings every year and, every 2 years, sponsors a JOCOTAS/industry meeting and exhibition)
- Prepare, and update annually, a 5-year multi-service shelter RDT&E and production plan
- Publish, and update periodically, *Department of Defense Standard Family of Tactical Shelters*.

During the first 20 years of operation, JOCOTAS concentrated its efforts on rigid-wall tactical shelters that are deployed worldwide and readily transportable by air, land, and sea. Before JOCOTAS was formed, more than 200 types of rigid-wall tactical shelters existed among the four services, creating a huge logistics burden. JOCOTAS succeeded in reducing the standard family of rigid-wall tactical shelters to 20 items.

In 1995, JOCOTAS expanded its purview to include soft-wall and hybrid shelters, and added voting member representation from the Defense Logistics Agency, the primary DoD acquisition organization for soft-wall shelters. An excellent resource for military tent information is http://warfighter.dla.mil/special/basecamp/index.jsp.

JOCOTAS took the lead both in transitioning existing military shelter specifications to voluntary consensus standards and in developing new voluntary consensus standards under the auspices of the ASTM E06.53 Subcommittee on Materials and Processes for Durable Rigidwall Relocatable Structures. Thus far, 28 voluntary consensus materials, processes, and end-item shelter specifications have been established. (See http://www.astm.org/cgi-bin/SoftCart.exe/COMMIT/SUBCOMMIT/E0653.htm?L+mystore+weta5733+1156486652.)

JOCOTAS also developed the reinspection criteria and new repair procedures for the Army, Navy, and Marine Corps families of ISO shelters. The reinspection criteria are included in DoD MIL-HDBK-138, *Guide to Container Inspection for Commercial and Military Intermodal Containers*. The new repair procedures are being incorporated into the technical manuals for each shelter type. JOCOTAS also was instrumental in changing the Defense Ammunition Center and School course instruction to include the training of personnel in the inspection of ISO shelters and ISO shipping containers for conformance to the International Convention for Safe Containers.

JOCOTAS is chaired by Anthony Melita, Deputy Director, Defense Systems, Land Warfare and Munitions, within the Office of the Under Secretary of Defense (Acquisition, Technology and Logistics). For a list of the JOCOTAS officers and principal voting members, see page 45 of *Department of Defense Standard Family of Tactical Shelters* (available at http://nsc.natick.army.mil/media/print/JOCOTAS.pdf).

Power Source Systems

Improving Battery Selection and Management

By Adele Ratcliff, John Thompson, and Jim Gucinski

Warfighters should not have to make tradeoffs between carrying food, water, and ammunition or carrying additional batteries to power night vision devices, global positioning systems, target designators, radios, force multiplier devices, and other items. However, they sometimes must make such tradeoffs because power sources have not been designed to be interchangeable with different types of equipment. The use by each service of its own unique equipment and power sources further compounds this dilemma. The Defense Logistics Agency (DLA) manages more than 4,500 different power sources.

The lack of battery standardization contributes to the apparent endless proliferation and development of "boutique" batteries. Not only are the development costs high, but the logistics costs associated with managing and procuring all the various types of batteries are also significant. Moreover, some "hidden" logistics costs—for example, costs for storage (non-standard and redundant), maintenance costs for batteries with unique requirements, and disposal costs associated with environmentally harmful chemicals contained within the cells—are normally not thought of until after fielding. But the most important cost is incurred when military personnel don't have the right power source when they need it.

It is clear that power sources must be standardized. However, accommodating the power requirements of aging deployed systems within the standardization envelope is difficult, frustrating, and all too often expensive. One solution that has been attempted is to design an adaptor cable that would allow multiple uses for batteries currently in the inventory. However, this solution has its own problems (for example, adaptors are prone to being misplaced) and hasn't proven successful. Another approach is to review the legacy equipment and identify power sources that might be candidates for a standardization effort; this effort could prove worthwhile if the supported systems are expected to be in the inventory for an extended period. Nevertheless, standardizing those power systems for legacy equipment will be difficult.

While approaches to standardization are being considered, a key resource for the interchange of information and the optimization of battery designs is the web-centric tool—Power Specification Tool—developed by DLA and the Defense Standardization Program Office. The tool can be found at http://www.JSB-Power.us. The site has an interactive database that contains data for military (U.S. and foreign) and commercial power systems (batteries, fuel cells, and hybrids). Government users can link to specifications, weapons usage, and recent procurement information. The site also has an interactive area where in-

About the Joint Standardization Board for Power Source Systems

The mission of the JSB-PS^2, as delineated in its charter, is as follows:

- Provide senior-level—Under Secretary of Defense for Acquisition, Technology and Logistics—visibility for standardization and interoperability initiatives
- Establish DoD standards (in accordance with DoD 4120.24-M, "Defense Standardization Program, Policies and Procedures") or non-government standards as applicable
- Improve interoperability of joint and coalition forces
- Recommend joint doctrine, tactics, techniques, and procedures
- Establish standardization of parts and components that have lower cost, reduced inventories, shortened logistics chains, and improved readiness
- Develop joint solutions to issues that impact the power source systems domain
- Propose funding requirements for specific efforts and projects related to standardization and interoperability goals and objectives
- Provide the interface for commercial and military integration.

The JSB-PS^2 is composed of members from each service branch, the Missile Defense Agency, and DLA, as well as representatives from industry and academia. For further information, contact Adele Ratcliff (Adele.Ratcliff@osd.mil) or John Thompson (John.M.Thompson@dla.mil).

formation can be exchanged to get the very best design to meet the power needs of our warfighters.

We believe that the most practicable approach to standardizing power sources is to focus on power sources for new equipment. The U.S. Army Communications-Electronics Command (CECOM) has already been successful using that approach, limiting the proliferation and development of single-purpose power sources. In the mid-1980s, CECOM managed 440 unique batteries. As new equipment replaced older, obsolete systems, the Army was able to reduce the number of batteries managed to 12 standard types. By the late 1990s, the Army had established a policy focused on selecting batteries for new applications in a prioritized order beginning with commercial batteries, then 5 preferred types, then 12 standard types. A new battery could be developed only with authorization from senior Army command.

Considering CECOM's lessons learned, the key to standardizing power sources for new equipment is for DoD to establish a set of systematic procedures and processes for selecting power sources and an enterprise-wide technology management approach for viable power source candidates.

The Joint Standardization Board for Power Source Systems (JSB-PS^2) has proposed a three-pronged approach for improving the battery selection and management process DoD-wide. This approach, depicted in Figure 1, is predicated on the use of families of standardized batteries in the design of new systems. There may be some spillover effect with legacy systems and their power sources, but that is secondary to new system design.

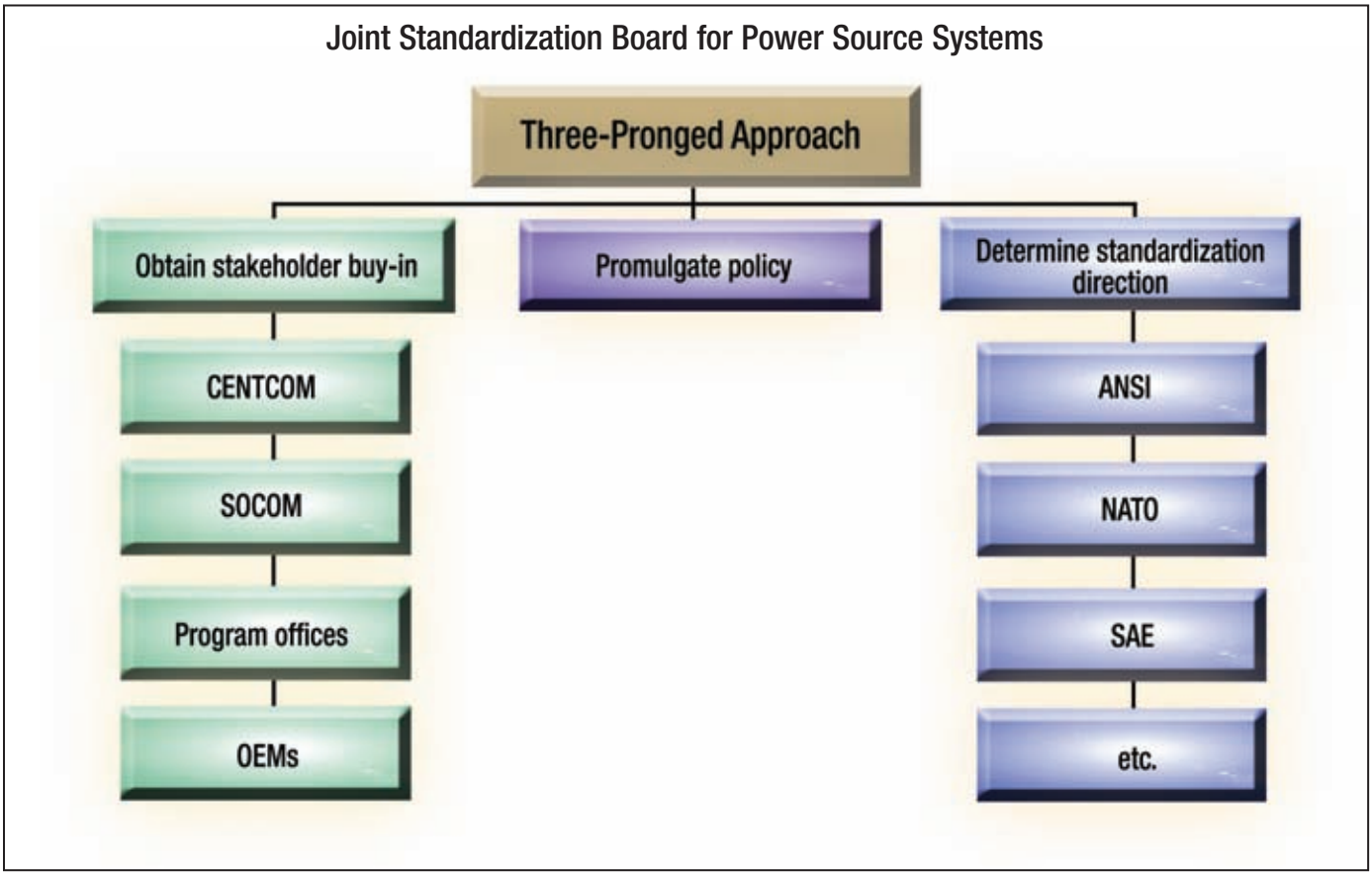
The approach proposed by JSB-PS^2 is as follows:

- *Obtain stakeholder buy-in.* Stakeholder buy-in is essential. The U.S. Central Command, U.S. Special Operations Command, program offices, and original equipment manufacturers all must recognize the need for standardizing power sources. They also must

recognize that, although the cost of an individual power source may increase, this additional cost is far outweighed by lower total ownership costs and the increased availability of equipment to the warfighter due to the interchangeability of power sources.

- *Promulgate policy*. DoD needs to establish policy that clearly defines the requirement for using standardized power sources. In addition, the policy needs to address the use of non-standard power sources. For example, DoD might determine that the use of a non-standard power source or non-standard interface should require a senior-level service manager to make a recommendation for approval by the Office of the Secretary of Defense (OSD) Standardization Manager. This is similar to the Army's guidance.
- *Determine the standardization direction*. DoD must determine how the power sources should or can be standardized, considering technological advances and trends in system development, to ensure maximum interchangeability—within each service, between services, and with our allies. This effort will require the input of power source experts from government (defense and civil) agencies, industry, and academia. Other

FIGURE 1. Three-Pronged Standardization Strategy



key sources of input are the national and international standards-developing organizations such as NATO, the American National Standards Institute (ANSI), and the Society of Automotive Engineers (SAE).

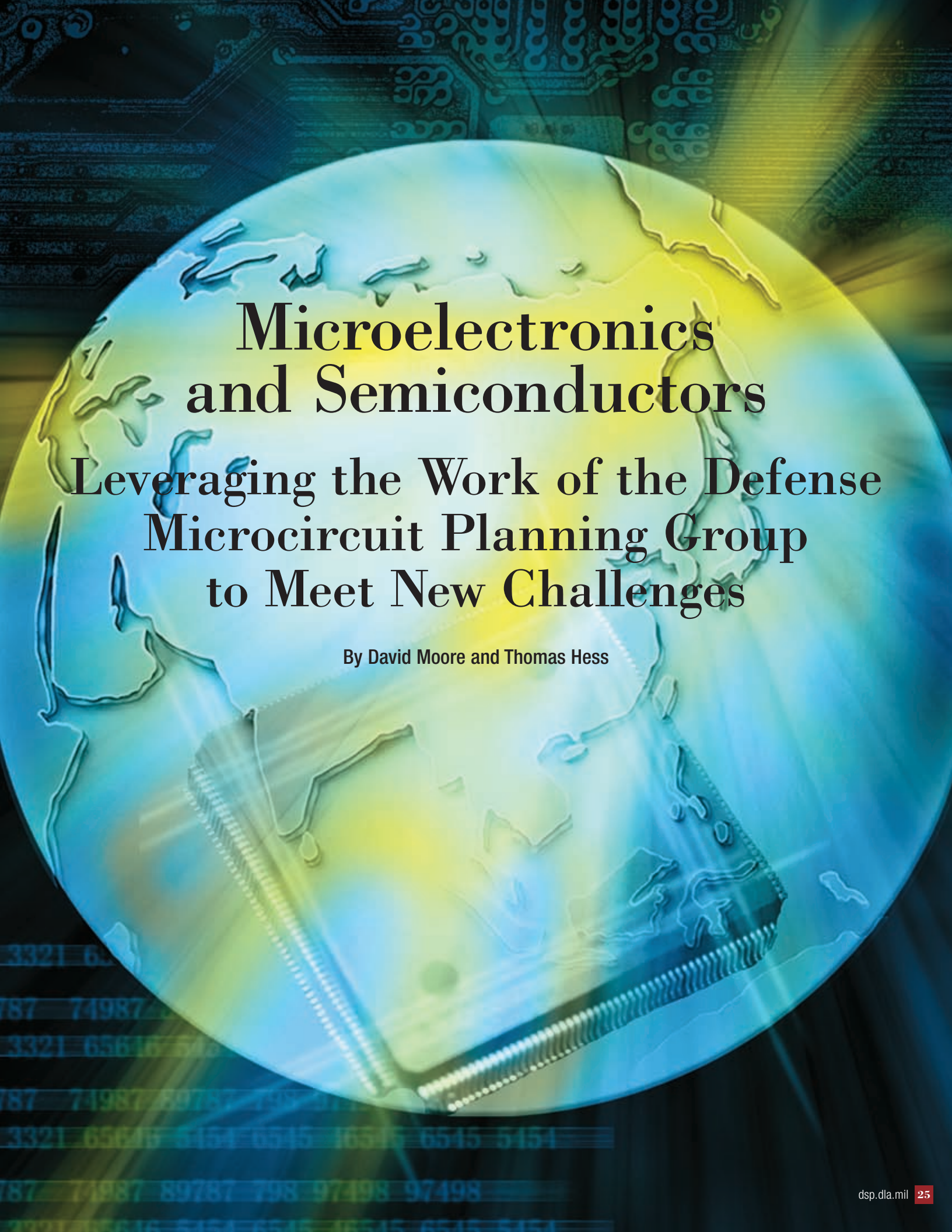
The JSB-PS^2 is a key forum for moving forward with the standardization of power sources. The JSB-PS^2 can recommend projects and serve as an advisory commission to the OSD Standardization Manager. In addition, members of the JSB-PS^2 can provide a presence in commercial organizations such as ANSI and SAE. They also can serve on NATO teams dealing with power system standardization, ensuring U.S. interoperability with NATO forces. Together, these organizations can ensure that future warfighters never have to make the tradeoffs between batteries and the other basics that today's warfighters must make.

About the Authors

Adele Ratcliff is the oversight executive of the Manufacturing Technology Program within the Office of Technology Transfer, Office of the Secretary of Defense. Previously, she headed the Defense Acquisition Challenge Program and was the deputy program manager of the OSD Foreign Comparative Test Program.

John Thompson is the program manager for power sources and special projects at the Defense Supply Center Richmond and manages the Next Generation Manufacturing Technology Initiative. He chairs the DoD Power Sources Technology Working Group and the Joint Standardization Board for Power Source Systems.

Jim Gucinski is a program manager at Tiburon Associates. Previously, he was the Power Systems Executive Agent for the Naval Surface Warfare Center, Crane Division. Mr. Gucinski has more than 35 years of experience in the power sources field and either chairs or is a member of multiple national and international committees working in this field.



Microelectronics and Semiconductors

Leveraging the Work of the Defense Microcircuit Planning Group to Meet New Challenges

By David Moore and Thomas Hess

The Defense Standardization Program Office (DSPO) has established Joint Standardization Boards (JSBs) to achieve common, mutually satisfactory solutions to shared requirements and problems in key commodity areas. The JSB on Microelectronics and Semiconductors is one of eight JSBs established at the DoD level and focuses standardization attention on the high-visibility and rapidly changing area of microelectronics and semiconductors. This JSB includes all the key players from the military services, Defense Supply Center Columbus (DSCC), Defense Logistics Agency, DSPO, other defense agencies, and civil agencies, as well as industry partners from the national standards bodies, equipment contractors, and device manufacturers.

Background

The JSB on Microelectronics and Semiconductors evolved from the very successful Defense Microcircuit Planning Group (DMPG). The DMPG was chartered more than 20 years ago by the Defense Standardization Program Office to provide a standardization forum for the interested military departments, the Defense Electronics Supply Center (now DSCC), NASA, microcircuit device manufacturers, and equipment contractors that design microcircuits into defense systems.

The DMPG, chaired by DSPO's Gregory Saunders, addressed many key issues that affected the standardi-

Participants in the Defense Microcircuit Planning Group

Air Force Space and Missile Systems Center

Army Communications-Electronics Command

Aviation and Missile Command

Defense Microelectronics Activity

Defense Standardization Program Office

Defense Supply Center Columbus (formerly, Defense Electronics Supply Center)

Electronic Industries Alliance, G-12 Committee

Electronic Industries Alliance, Joint Electron Device Engineering Council, JC-13 Committee

Government and Industry Data Exchange Program

National Aeronautics and Space Administration

Naval Surface Warfare Center

Space and Naval Warfare Systems Command

Wright-Patterson Air Force Base, 88 OSS/OSE

zation program for the rapidly changing microcircuits area. The following are some examples:

- *Standard Microcircuit Drawing (SMD) program.* The DMPG was integral to the genesis and implementation of the SMD program. The previous specification sheet program under the old MIL-M-38510 microcircuit specification was found to be too cumbersome and time consuming to react to the immediate needs of military users for the latest microcircuit-based devices. To standardize and characterize device types under the old program would take—in some cases—years. In contrast, the SMD program can react quickly to provide standard microcircuits in SMDs in a matter of a few weeks or months.
- *Transition of the qualified products list (QPL) to the qualified manufacturers list (QML).* Another key area was the transition from the QPL-based MIL-M-38510 program to the new QML-based program delineated in the new microcircuit specification program, MIL-I-38535. This transition enabled the qualification of the manufacturing processes used to make the devices rather than the tedious, costly, and time-consuming qualification testing of each device.
- *Offshore manufacturing.* The DMPG was a forum to discuss the ongoing movement of microcircuit manufacturing to offshore manufacturing facilities. As a result of those discussions, DoD can use offshore manufacturing facilities for defense microcircuits to take advantage of a microcircuit industry that has become global in its location of manufacturing capabilities.
- *Acquisition reform.* The DMPG became a forum to discuss how to address the tenets of the Acquisition Reform initiatives. The end result was the very successful transition to DoD performance specifications in the microcircuit programs as follows:
  - MIL-I-38535 became MIL-PRF-38535 (monolithic microcircuits)
  - MIL-H-38534 became MIL-PRF-38534 (hybrid microcircuits).

The Evolution to a Joint Standardization Board

On September 20, 2005, a DMPG meeting was held in conjunction with the Electronic Industries Alliance—including the G-12 Committee and the Joint Electron Device Engineering Council (JEDEC) JC-13 Committee—in Columbus, OH. This became the kickoff meeting to discuss with the affected agencies and industry the concept of replacing the DMPG with a JSB to maximize interoperability, promote standardization, and conserve resources. At this meeting, participants discussed a draft charter, potential DoD charter members, chairmanship, and industry participation.

There was a high level of interest from the affected players in moving from a DMPG to the JSB concept. The original DMPG players indicated interest in becoming charter members of a superseding JSB. As was the case in the DMPG, it was deemed essential to have continued participation from our affected industry partners. The chairman of the G-12 Committee (representing equipment contractors) and the chairman of the JEDEC JC-13 Committee (representing manufacturers of microcircuits and semiconductors) were added as liaison members. In addition, new organizations such as the Defense Missile Agency and the National Reconnaissance Office have joined the effort. After further discussion, it was also decided to broaden the scope of the JSB to cover discrete semiconductors since the areas share many common challenges and issues.

The JSB charter was approved on June 8, 2006, by James Hall, the DoD Standardization Executive.

On June 27, 2006, the first formal meeting of the JSB on Microelectronics and Semiconductors occurred at DSCC, with Gregory Saunders of DSPO serving as chair.

Final agreement was reached on the concept and the charter. It was agreed that the JSB would

- be a forum to discuss technical issues that have a major impact on the defense microelectronic and semiconductor standardization programs;
- be a forum to discuss the goals and future program direction with the services, DSCC, NASA, and industry;
- be a forum to discuss standardization documents and their impact on standardization and interoperability;
- facilitate funding for specific projects related to standardization and interoperability;
- provide an interface for integrating commercial and military components; and
- promote standardization of microelectronics and semiconductors.

Specific Areas of Focus

The following are some of the areas that the JSB will be addressing:

- Parts management program
- Fabless foundries and outsourcing
- Introduction of new technologies
- Lead-free solders (LFSs)
- Diminishing manufacturing sources and materials shortages
- Fraud
- Micro-electro-mechanical systems.

PARTS MANAGEMENT PROGRAM

Three of the eight critical recommendations of the parts management reengineering program were to develop better tools for program managers to help them select parts and achieve standardization, mandate the inclusion of a parts management program in contracts, and make parts management a part of systems engineering integration. The JSB will continue to focus on how to assist with the parts management reengineering effort and how best to provide the latest information on standard microelectronics and semiconductors that is available from the Defense Standardization Program.

FABLESS FOUNDRIES AND OUTSOURCING

Due to the high cost of equipment and labor, more and more device manufacturers are outsourcing fabrication rather than continuing to have in-house capabilities. The JSB will address the advantages and disadvantages of this trend and consider how best to meet the technical needs of the DoD user in this context.

INTRODUCTION OF NEW TECHNOLOGIES

As new technologies emerge in the microelectronic programs, there are concerns about the ability of current testing and tools to adequately verify the quality and reliability of these new devices. DoD and industry are working on new methods to provide assurance as to the long-term reliability of these emerging technologies. The JSB, through the affected MIL-PRF-38535 and MIL-PRF-38534 programs, and with the assistance of the G-12 and JEDEC JC-13 committees, will address how best to delineate the engineering and technical requirements needed in this key area.

LEAD-FREE SOLDERS

The efforts in the European Union and other foreign countries to move to LFSs has raised significant technical issues for DoD, which is increasingly reliant on

commercial supply chains for some critical parts. The JSB will focus on two key areas:

- The need to prevent the use of high-tin-content lead finishes on critical DoD and space applications because of the well-documented tin whisker reliability problem. This effort will focus on the necessary prohibitions in the defense specifications programs to allow tin finishes only if they contain a minimum of 3 percent lead.
- The best approach to introducing LFSs, when the DoD user community is ready, into the defense specification programs. This effort will include a discussion of which LFSs would be acceptable, the need to use part numbers to differentiate the LFSs in the specifications, and the testing (for example, solderability and resistance to soldering heat) needed to characterize the LFSs.

DIMINISHING MANUFACTURING SOURCES AND MATERIALS SHORTAGES

The life expectancy of microelectronics and semiconductors pales in comparison to the life of the average weapons system. Advancements and production capabilities in the industry force manufacturers to supply only the latest and greatest, leaving older parts and technologies to aftermarket suppliers. As the demand for these older devices increases, the number of counterfeit parts rises as users scour the globe looking for parts. The JSB will continue to consider this a key focus area.

FRAUD

A growing concern among the DoD and space users is the continuing problems that are occurring with the use of counterfeit parts. It is becoming increas-

ingly difficult to easily discern the difference between bona fide standard or manufacturer's parts by simple visual examination. The JSB is discussing this particular issue and how best to mitigate the risk of counterfeit parts. More and more, the solution seems to be carefully controlling the sources of supply to the actual manufacturer, to the approved distributors, or to distributors that can provide an unbroken chain of traceability to the original manufacturer.

MICRO-ELECTRO-MECHANICAL SYSTEMS

Another key area of interest is the emerging technology of micro-electro-mechanical systems. This emerging technology would seem to be ideal for DoD applications. The JSB has agreed to evaluate this area, including how to standardize the technical templates and tests and how best to construct a new defense standardization program with the necessary quality, reliability, and qualification requirements to meet the needs of the DoD and space user for micro-electro-mechanical devices.

Future Activities

The JSB on Microelectronics and Semiconductors expects to meet at least two times each year. The next meeting of the JSB is planned for January 2007 and will be held in conjunction with the G-12/JEDEC J-13 meeting in Savannah, GA. The second meeting in FY07 is anticipated in Columbus, OH, in June 2007.

Summary

The JSB on Microelectronics and Semiconductors is a natural evolution of the DMPG. The JSB has the broad support of DSPO, DSCC, the affected military departments, NASA, and industry players such as the equipment contractors and device manufacturers.

The rapidly changing microelectronic and semiconductor fields present considerable standardization and engineering challenges for DoD users. The ability of the DSP and its programs—such as the SMD program, the MIL-PRF-38535 and MIL-PRF-38534 microcircuit specification programs, the MIL-PRF-19500 semiconductor programs, and their associated QML systems—to respond to these changes is even more of a challenge. The goal is to cost-effectively provide a pipeline of proven standard parts to DoD users, and eventually to the warfighter, with the requisite high quality and high reliability and with a small logistics footprint. The JSB provides a valuable forum for joint efforts by the military, civil agencies such as NASA, and industry to meet and plan long-term strategies for addressing the challenges.

About the Authors

David Moore is a supervisory electronics engineer and the chief of the Document Standardization Unit at DSCC. That unit is the preparing activity for all DSCC-managed specifications and standards programs. Mr. Moore has more than 30 years of experience with standardization issues in electronics.

Thomas Hess is a supervisory electronics engineer and the chief of the Active Devices Team at DSCC. That team is the preparing activity for MIL-PRF-38535, MIL-PRF-19500, and MIL-STD-750. Mr. Hess has 20 years of experience in the standardization of microelectronics, semiconductors, and radiation-hardened devices.

November 13–16, 2006, Tucson, AZ

Joint PMRIPT/PSMC Meeting

The Parts Management Reengineering Implementation Process Team (PMRIPT) and the Parts Standardization and Management Committee (PSMC) will hold a joint meeting in Tucson, AZ.

The PSMC recently voted to be chartered by the Defense Standardization Program Office (DSPO). The new charter will be discussed, along with the PSMC's role in supporting the PMRIPT's efforts to reengineer the DoD Parts Management Program.

Presentation topics include the following:

- Future Vision of Parts Management (Greg Saunders, DSPO)
- Missile Defense Agency Parts Management (Glenn Benninger, Naval Surface Warfare Center, Crane Division)
- Product Standards as Digital Data (Al Sanders, Boeing)
- Diminishing Manufacturing Sources/Material Shortages (John Becker, DSPO).

For more information, please contact donna.mcmurry@dla.mil, 703-767-6874, or ronald.a.froman@boeing.com, 314-777-7181.

March 13–15, 2007, Arlington, VA

Defense Standardization Program Outstanding Achievement Awards Ceremony and Conference

The Defense Standardization Program Outstanding Achievement Awards Ceremony and Conference will be held March 13–15, 2007, at the Westin Arlington Gateway Hotel in Arlington, VA. The Westin Gateway Hotel is accessible by metro and is close to National Airport, the Pentagon, and Washington, DC. Rooms will be offered at the government per diem rate.

This year's event will be administered by the Society of Automotive Engineers and promises to be top notch in every respect. Although details are still being worked out, there will be a Standardization Executive Panel, discussion of new initiatives regarding parts management, and presentations on NATO and international interoperability. Tutorials will be presented on the Berry Amendment, ITARS/EARS, RFID, updates to the DoD 4120.24-M, and much more. For more information, go to http://sae.org/events or http://www.dsp.dla.mil/ or call 703-767-6870.

July 9–13, 2007, Chantilly, VA

Standardization within NATO (U.S.-Based Track)

The International Cooperation Office, Defense Standardization Program Office, and North Atlantic Treaty Organization Standardization Agency (NSA) will host the first Standardization within NATO course in the United States in July 2007, in Chantilly, VA. This course is designed to present an overview of domestic and international standardization practices within the United States as it relates to interoperability with allies and partners. Thus, the course is intended for military, DoD civilian, and federal government personnel who have little knowledge of international standardization or knowledge in distinct areas but have never taken the Standardization within NATO course. Non-DoD federal government employees and defense contractors who are involved in NATO standardization and interoperability activities are also eligible for this course, depending on space availability. For more information, contact Latasha Beckman at 703-767-6872 or latasha.beckman@dla.mil.

Farewell

Craig Hammond retired on August 31, 2006, after 25 years of federal service, including 11 years in the U.S. Navy. Since 1995, Mr. Hammond has been chief of the Standardization Program Branch, supervising the Defense Standardization Program at Defense Supply Center Richmond (DSCR). He was responsible for managing the Lead Standardization Activity, the Specification Preparing Activity, and the Qualification Activity at DSCR. He helped transition the transfers of about 3,000 specifications to DSCR from other DoD activities during the military specification reform years.

Promotions

On August 6, 2006, **Kendall Cottongim** was promoted to chief of the Standardization Unit in the Operations Support Directorate at the Defense Supply Center Columbus. He leads teams that cover Parts Management, Item Reduction, Lead Standardization Activities, Defense Logistics Agency Hazardous Material Minimization, Packaging, Diminishing Manufacturing Source and Materiel Shortage, and General Emulation of Microcircuits. Most recently, Mr. Cottongim was the chief for the Land Customer Operations Support Unit, serving as the Land Lead for Customer Relationship Management initiatives as well as overall administrative support to the Land Customer Operations Directorate. Before that, he was the team chief for the Electronics Component Team as part of the Document Standardization Unit.

On September 1, 2006, **Greg Pobiak** was promoted to chief of the Standardization Program Branch at DSCR, replacing Craig Hammond. Previously, he worked 6 years in the Standardization Program Branch at DSCR and was responsible for several hundred specifications and standards associated with aircraft instrumentation and engine components as well as with the qualification of those components.

Upcoming Issues—
Call for Contributors

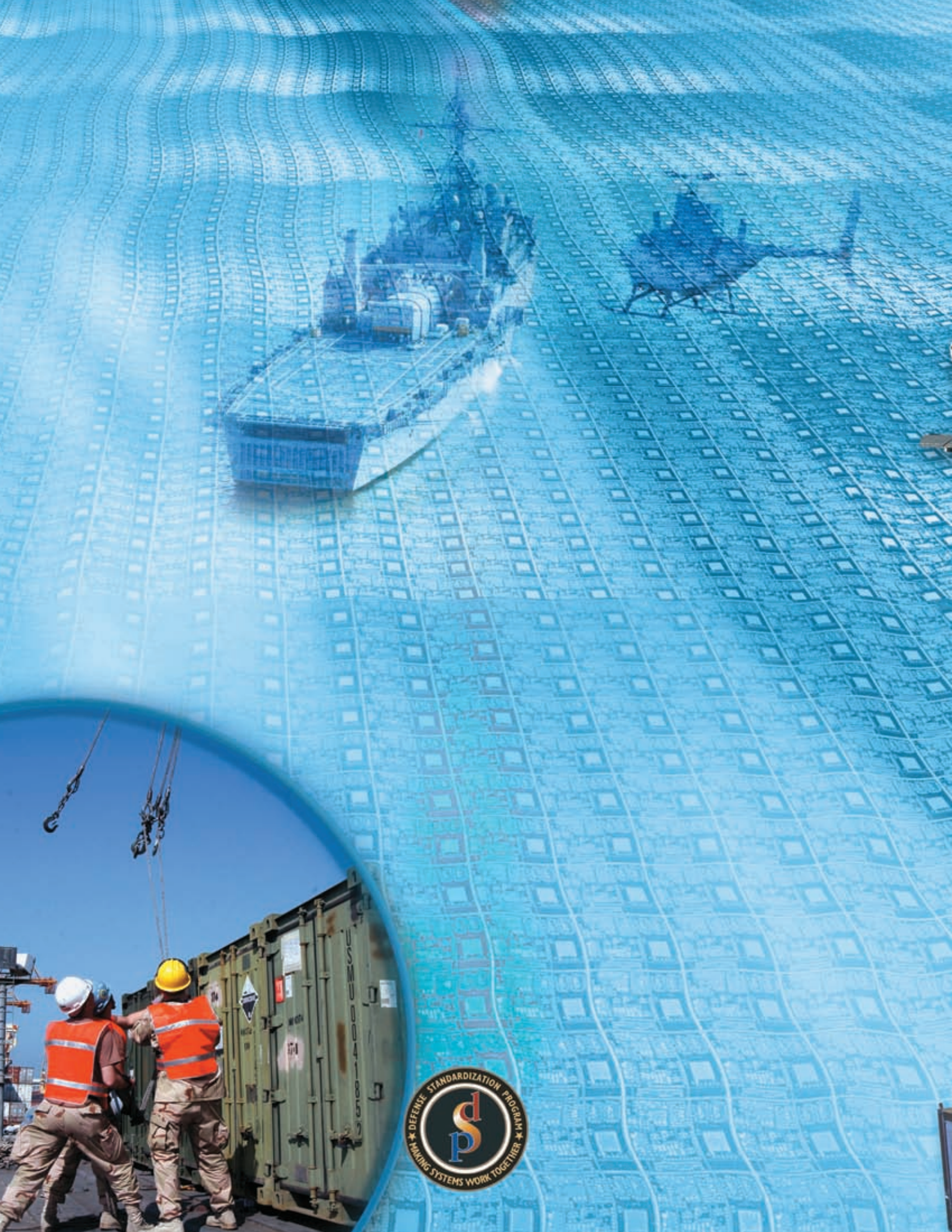
We are always seeking articles that relate to our themes or other standardization topics. We invite anyone involved in standardization—government employees, military personnel, industry leaders, members of academia, and others—to submit proposed articles for use in the *DSP Journal*. Please let us know if you would like to contribute.

Following are our themes for upcoming issues:

Issue	Theme
January–March 2007	IT Standardization
April–June 2007	IT Standardization
July–September 2007	Parts Management

If you have ideas for articles or want more information, contact Tim Koczanski, Editor, *DSP Journal*, J-307, Defense Standardization Program Office, 8725 John J. Kingman Road, Stop 6233, Fort Belvoir, VA 22060-6221 or e-mail DSP-Editor@dla.mil.

Our office reserves the right to modify or reject any submission as deemed appropriate. We will be glad to send out our editorial guidelines and work with any author to get his or her material shaped into an article.


DEFENSE STANDARDIZATION PROGRAM
MAKING SYSTEMS WORK TOGETHER