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Your Dollars, Spent Responsibly

Defense AT&L interviews

Alan "Keith" Bentley

USTRANSCOM Director, Program Analysis and Financial Management

ALSO

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716 Navy Tailors

Best Commercial Practices for Military Use

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The Black and White of Fraud, Waste, and Abuse

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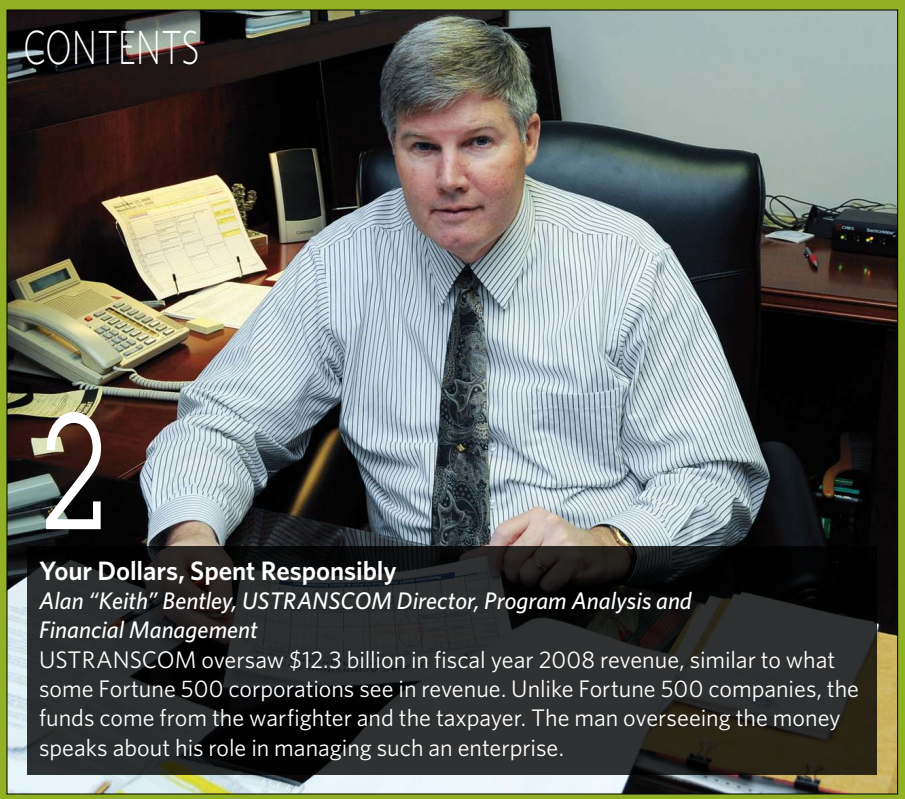

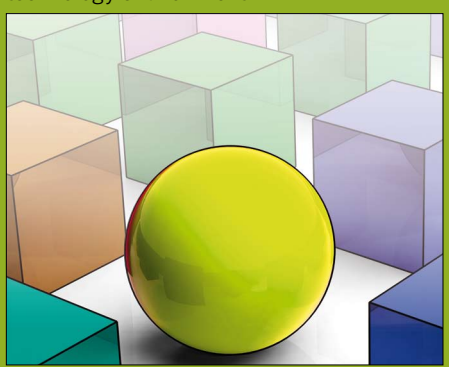

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Your Dollars, Spent Responsibly

Establishing Stronger Financial Accountability

Alan "Keith" Bentley, USTRANSCOM Director, Program Analysis and Financial Management

The U.S. Transportation Command oversaw $12.3 billion in fiscal year 2008 revenue. If USTRANSCOM was ranked on the Fortune 500 list of America's largest corporations, that amount would place it as number 216 on the list. During an average week, the command conducts more than 1,900 air missions, with 25 ships under way and 10,000 ground shipments operating in 75 percent of the world's countries. USTRANSCOM represents enormous military assets, valued in excess of $52 billion, that include 87 ships, 1,269 aircraft, 2,150 railcars and assorted equipment, and $1.4 billion in infrastructure, as well as access through commercial partners to more than 1,000 aircraft and 360 vessels in the Civil Reserve Air Fleet and Voluntary Intermodal Sealift Agreement. Financial accountability for all its missions is extremely important, as the funds for which USTRANSCOM has responsibility come from the warfighter and the taxpayer. In December 2008, *Defense AT&L* spoke with Alan "Keith" Bentley, USTRANSCOM director of program analysis and financial management, about his role in managing such an enterprise and ensuring prudent oversight, growth, and cutting-edge responsiveness.

Photos by Bob Fehringer, USTRANSCOM

Q

Can you describe how your role as director for program analysis and financial management fits into the USTRANSCOM structure?

A

USTRANSCOM is operating at a very high operations tempo, supporting all the geographic combatant commands in the Global War on Terrorism with their everyday exercises and sustainment. While the Department of Defense distribution bus is rolling along at 65 miles an hour, the command is improving distribution and sustainment practices, tools, and techniques—changing the tire on the bus while it is under way. My primary role is to ensure USTRANSCOM is adequately funded to operate our forces in a timely and effective manner. We provide the financial policy and tools via the Transportation Working Capital Fund to give the commander financial flexibility to lean forward and respond rapidly to contingencies and humanitarian crises. The TWCF gives us the tools to do this in a fiscally sound, efficient, and auditable manner.

USTRANSCOM has made distribution improvements under its authority as the DoD distribution process owner. The DPO neither owns nor funds the assets of the Services; however, to influence Service practices and achieve desired effects, we still require funding. We manage several colors of money to administer the DPO processes, which keeps my folks very busy. Speaking of Service assets, my staff also plays heavily in the various programming and planning events sponsored by the Joint Staff/Office of the Secretary of Defense to ensure the Services support our high-priority mobility infrastructure and operational capability needs. We tie all this financial management activity together with periodic TWCF performance reviews and financial status briefings to the USTRANSCOM commander, the DoD comptroller, and the Office of Management and Budget.

I also co-chair an internal board with our Command, Control, Communications, and Computer Systems Directorate, which manages priorities within our information technology portfolio. This has been a highly effective process through which we have not only achieved streamlined and integrated joint IT solutions but also cut duplication and waste across DoD.

Q

USTRANSCOM controls a fleet of about 1,300 aircraft, 2,200 railcars, 90 ships, and $1.4 billion in infrastructure, valued in excess of $52 billion. As the man directly responsible for the development and integration of budget formulation and the execution and programming of resources for the Defense Transportation System, can you describe your primary objectives for your organization?

A

In simple English, I ensure funds are available to support the warfighter! We get the warfighter to the fight, we sustain the warfighter during the fight, and we bring the warfighter home.

My primary objectives are to maintain the financial solvency of the TWCF and ensure resources are available for USTRANSCOM to successfully carry out its mission. The TWCF is a multibillion dollar program. The $12.3 billion in fiscal year 2008 revenue would place USTRANSCOM 216 on the Fortune 500 list of America's largest corporations. I have direct control of the TWCF budget and work directly with the DoD comptroller on budget formulation and execution. As with any business, I have to maintain adequate cash to pay bills. Working Capital Fund policy is to maintain 7 to 10 days of cash, or $400 million to $600 million, for TWCF. Maintaining this level of cash has been very difficult to manage for the past several years because of volatile fuel prices and past congressional budget marks. Fortunately, the Air Force has helped by raising the cash management level to the Air Force WCF level—TWCF is a subset of the Air Force WCF. Maintaining cash is the key enabler to giving the USTRANSCOM commander the flexibility to respond to a crisis at a moment's notice, even before supplemental funds become available.

We also receive funding for missions that are USTRANSCOM responsibilities but fall outside of the scope of TWCF funding. These funds include about $60 million for DPO respon-

Alan "Keith" Bentley

Director, Program Analysis and Financial Management, U.S. Transportation Command

Alan "Keith" Bentley is director of program analysis and financial management, U.S. Transportation Command, Scott Air Force Base, Ill. In that position, he is responsible for developing and integrating budget formulation, execution, and programming of resources for the Defense Transportation System. After a tour in the Navy, he obtained a bachelor's degree in accounting and a master's degree from Central Michigan University. He is a certified public accountant, a certified defense financial manager, a graduate of the Education-with-Industry Program, is Level III certified in financial management, and is a graduate of the Professional Military Comptroller School, Maxwell Air Force Base, Ala.

Bentley entered civil service in 1981 as a staff auditor for the Air Force Audit Agency, rising to the position of audit manager. His audit responsibilities included foreign military sales, contract depot maintenance, and certified Financial Officer Act compliance audits. In 1989, Bentley joined the budget office at Aeronautical Systems Center, Air Force Systems Command, where he supported several system program offices. In 1992, he became chief of budget policy, Office of Financial Management and Comptroller, Headquarters, Air Force Materiel Command. In that position, Bentley was responsible for the command's propriety of fund determinations for all appropriated fund types and working capital funds. While at the Air Force Materiel Command, he served as the technical adviser to the chief for budget and comptroller plans, the chief of the systems branch within the Financial Services and Systems Division, and as the chief of the Financial Services and Systems Division.

He became the chief of the Air Force Financial Systems Management Office, Air Force Materiel Command, in 2001, and in that position, he oversaw the development, deployment, training, and maintenance of Air Force comptroller systems. In 2002, he became the senior financial adviser, Directorate of Financial Management and Comptroller, Air Force Materiel Command. In that position, he served as the principal adviser and leading technical authority for financial and cost analysis in support of the command mission. In December 2004, Bentley was appointed to the U.S. Air Force Senior Executive Service and was assigned to his present position.

sibilities, $30 million for research and development, and $14 million for work as lead proponent for radio frequency identification. These funds enable USTRANSCOM to fix capability gaps such as end-to-end in-transit visibility, a long-standing material weakness in DoD. The DPO funds also support USTRANSCOM as the distribution portfolio manager, including more than 200 distribution and distribution-related systems across DoD. One distribution portfolio manager initiative will save DoD $35 million by leveraging capabilities in the Air Force's Cargo Movement Operations System to meet theater distribution and traffic management requirements originally planned in the Army's Transportation Coordinator's Automated Information Management System II.

Ensuring adequate resources for programs I don't directly control is difficult and requires a lot of collaboration with the Services and defense agencies. For example, USTRANSCOM does not receive funding to buy transportation assets or for military construction. Instead, we advocate funding for these requirements primarily through the combatant commanders' integrated priority list and by nominating issues through the DoD program and budget review. I'm glad to say that this year, we were very successful with the funding of $251 million for USTRANSCOM's high-priority issues.

Q *There is a current focus in DoD on financial accountability. What is USTRANSCOM doing to ensure the wise use of taxpayer money? Are there new initiatives in place to ensure good stewardship? How is USTRANSCOM working to balance the books?*

A We are working to improve the distribution system to save taxpayer money and to help balance the books. On Sept. 16, 2003, the secretary of defense designated the commander of USTRANSCOM as the DoD DPO. Working with the DoD, regional combatant commands, joint agencies, and the Services, USTRANSCOM leads the collaborative effort to make joint logistics a reality by leveraging experience and using information technology to consolidate logistics requirements in real time, compress the decision cycle, and empower smarter decisions. USTRANSCOM synchronizes the deployment, distribution, and sustainment of forces to achieve maximum efficiency and interoperability by eliminating duplication and nonstandard practices. As the DPO, USTRANSCOM directs and supervises the execution of the distribution system and has improved financial procedures to enhance efficiency and effectiveness through process improvements. From fiscal year 2004 through 2008, USTRANSCOM has avoided or saved $2.2 billion in cost. The largest share of DPO cost avoidance to date has resulted from improvements to transportation and the stockage process, which allows us to shift cargo from one mode of transport to a less expensive mode (e.g., from air to surface, or from truck to rail) while still getting the warfighters what they need when they need it.

Because we operate a WCF, our customers scrutinize our rates and often ask how much overhead is in TWCF rates. At the direction of the USTRANSCOM commander, we performed a review that resulted in greatly improved visibility of overhead cost as well as our ability to explain and control rates. What we found is that our overhead applied to rates is about 10 percent, which compares favorably with other WCFs. Still, we remain constantly vigilant to control and reduce our overhead. For example, we are engaged in a truly transformational base realignment and closure transition that will save DoD $1.2 billion by reducing overhead in USTRANSCOM and its components.

One way we ensure the wise use of taxpayer money is through proper application of management internal controls programs. The MIC is a way to help identify fraud, waste, and abuse. We developed a checklist to help identify various checkpoints to ensure we are abiding by the laws and to help prevent fraud, waste, and abuse. Every quarter, USTRANSCOM directorates review, annotate any comments, suggest changes, and then sign that checklist. Each directorate also produces an annual statement of assurance to identify any material weaknesses and improvements and to provide assurances of how well the directorate is doing. Directorates provide the status of their material weaknesses, what is being done to get them corrected, and a "get well" date. Using that process, this year, we corrected a weakness in the use of commercial sealift that will help ensure more efficient use of activated government vessels, chartered service, and commercial liner service

Q

Can you describe what business and industry approaches you are applying to the business of USTRANSCOM?

A

We get most of our transportation funding by selling transportation services to DoD customers rather than by direct appropriation. Our conduit for selling our services is the TWCF. The WCF incorporates business practices that are similar, in many ways, to a free-market approach used by commercial industry. Basically, just like commercial industry, we recover our operational costs through a rate structure.

The TWCF provides great benefit to the department because it motivates DoD Services and agencies to consider cost when determining the mode of transportation—efficiency becomes part of their decision matrix along with effectiveness. Our faster premium service is more expensive to the department, and those higher costs are passed on to customers through higher rates.

The WCF motivates our customers to make the best decisions. Do they *really* need their cargo right away, and which is more expensive to them? Or can they wait a bit longer and pay less? Choice of transportation mode can have huge operational and financial ramifications. For example, let's assume you want to move 125 containers of tank tracks. If you airlift the tracks to U.S. Central Command's area of operations, you'll probably get them in a few days, but it will cost you $17.5 million. Shipping by sea takes weeks rather than days, but will cost only $364,000. Obviously, proper planning and communication are essential to prudent management.

In addition to the overarching benefits derived from the WCF model, USTRANSCOM works many initiatives to provide better service and achieve financial efficiencies. One of these areas is land transportation within the continental United States. The Defense Transportation Coordination Initiative is transforming the way DoD domestic freight is managed and moved. That initiative leverages current commercial capabilities and proven best practices. The DTCI will increase operational effectiveness through load optimization and consolidation, provide better customer support through a centrally managed distribution process, reduce costs, and achieve efficiencies. We expect DTCI-driven savings to be in the range of $40 million to $60 million each year.

Q

A major success of your office has been the introduction of the Defense Enterprise Accounting and Management System, or DEAMS, which is a financial management initiative expected to transform business and financial management processes and systems to provide accurate, reliable, and timely business information to support effective business decision making for USTRANSCOM, the Defense Finance and Accounting Service (DFAS), and the U.S. Air Force. Can you describe this system?

A

Any description of DEAMS is better understood in the context of the problem it was designed to solve. The complicated state of today's government financial management systems is the natural result of stovepiped planning and evolution spanning more than five decades. Government accounting procedures and processes that evolved through the Cold War era were narrowly focused. Leaders identified specific programmatic requirements, and experts designed unique processes or systems to meet those objectives. Interaction between systems was facilitated with even more unique and inefficient systems, or simply hand-massaged. Today's financial managers struggle daily to make processes and systems, born in the era of green eye shades and mechanical adding machines, perform to 21st century standards. Unfortunately, heroic efforts and innovation can only carry outdated systems so far.

In 2002, experts from USTRANSCOM, the Air Force, and the Defense Finance and Accounting Service agreed to jointly sponsor an enterprise resource planning solution. DoD approved the formation of DEAMS in August 2003 to address these concerns and give all of the nation's warfighters more timely, accurate, and reliable financial information

to facilitate better decision making—and we've been very busy ever since.

The DEAMS is re-engineering financial management activities across the board with a unified enterprise architecture. It rests on the three pillars of proven commercial off-the-shelf Oracle® software, standardized business rules and processes, and a common language—the first implementation of the new DoD Standard Financial Information Structure, which establishes a common financial language. Altogether, this makes DEAMS the first truly joint accounting system initiative within DoD.

DEAMS replaces outdated, unreliable legacy systems and processes with state-of-the-art, proven software to manage financial transactions and produce fully auditable financial reports. That sounds simple, but it has proven to be a daunting task involving detailed examination of hundreds of different existing processes to ensure that DEAMS can replace or coordinate with them. It is designed as an enterprise-wide solution that will replace or bridge across disparate programs and requirements—one stop-shopping for financial managers and their customers.

The DEAMS Program Management Office at Wright-Patterson Air Force Base and our functional management office here at Scott Air Force Base spent the first year defining the requirements—no easy task! The program really got rolling with the selection of the Oracle software in 2005 and Accenture's designation as the systems integrator in March 2006. We are implementing DEAMS in two increments with five spirals. Spiral 1 is a technology demonstration of DEAMS commitment accounting capability applied to USTRANSCOM; Headquarters, Air Mobility Command; and Air Force active duty, Air National Guard, and Air Force Reserve tenant organizations on or associated with Scott AFB. With our partners with the Air Force and at DFAS, that successful deployment in July 2007 was a major step forward for the command. We completed Spiral 1 deployment to all affected organizations in June 2008, but we continue to test and refine the program while we develop Spiral 2. Spiral 2 will provide the full Oracle accounting capability to those same organizations. Once implemented and proven at Scott AFB, DEAMS will move on to Spiral 3, extending the full Oracle capability to the remaining Air Mobility Command bases and USTRANSCOM components. Spirals 4 and 5 cover the rest of the Air Force.

When fully fielded, DEAMS will transform financial management and set a new standard for effective and efficient stewardship of our nation's defense resources.

Q

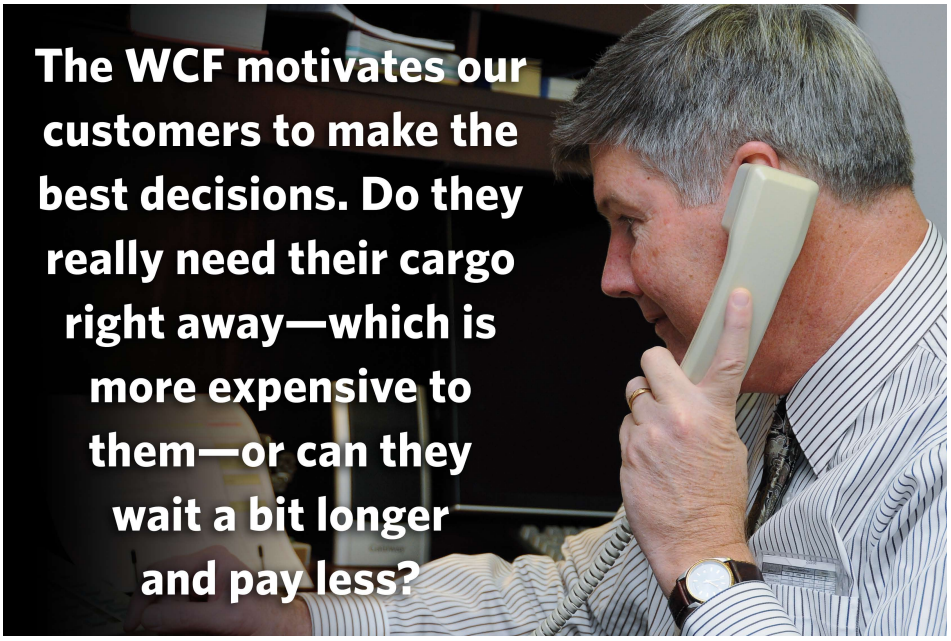
The DEAMS Increment 1, Spiral 1, was delivered on time and on cost. What collaboration enabled this success? What will subsequent spirals in DEAMS Increment 1 and Increment 2 provide?

A

In a nutshell, two-way communication and respect for each other enabled our successful deployment of Spiral 1. We did deliver DEAMS when we said we would, but the road has not always been direct or easy. Success began with effective leadership and decision making. As the lead agent, the USTRANSCOM commander provided the vision while a strong senior executive service governance team ensured clear and decisive decisions were made as needed. Program managers from both government and industry have worked hard to create a sense of teamwork and mission. Accenture, as the lead systems integrator, provided a wealth of experience in system implementation and business process reengineering. Government acquisition experts from the Air Force Materiel Command combined with a strong functional team assembled from USTRANSCOM, Air Force, and DFAS to form the basis of a successful implementation effort. The glue that has brought all of these various interests together is communication. We have taken the time to embrace a wide range of opinions and learned how important it is to be receptive to both positive and negative messages. The success DEAMS has had to date attests to a lot of hard work by many very talented people.

DEAMS was born and is inspired by a very real desire by everyone involved to solve the long-standing shortcomings in our accounting systems. Simply put, we want to be better stewards of our nation's resources and give better support to those who defend America. That shared inspiration counts for a lot in the quest for success. From the very beginning, DEAMS has been a collaborative effort among not only the three main partners—USTRANSCOM, the Air Force, and DFAS—but at the working level, a great working relationship for many different agencies such as the Business Transformation Agency, the Joint Interoperability Test Command, and the Office of the Secretary of Defense–Operational Test and Evaluation. Our team believes in this program and is committed to making sure it succeeds.

Spiral 2 will deploy in late 2009, taking the full Oracle I-procurement functionality to the same units at or supported by Scott AFB that participated in Spiral 1. This means that DEAMS will provide not only commitment accounting, but the full range of timely, accurate financial management tools: general accounting, accounts receivable and payable, billing, as well as time keeping. Increment 2 extends those same capabilities to the remaining Air Mobility Command bases; the Surface Deployment and Distribution Command and the Military Sealift Command in Spiral 3; and then to all remaining Air Force major commands in two additional spirals over a period of three years. The final spiral, Spiral 5, will apply to the Air Force WCF. The result will be a fully integrated system that provides real-time, high-quality information to decision makers at all levels, giving customers access to detailed billing information, and which complies with all applicable federal laws. In addition, the DEAMS Component Billing System consolidates the billing functions of both Air



Mobility Command and the Surface Deployment and Distribution Command, creating a single point of contact for customer service.

Q

You commented in an article you wrote for the Federal Times *that the existing financial management programs in DoD lack the ability to interact and a lack common financial language. How will DEAMS remedy this problem? Are there any other initiatives for the future that will remedy this problem?*

A

One of the unique features of DEAMS is that it will be the first application of DoD's new Standard Financial Information Structure.

For your readers who may not be familiar with SFIS, it is a comprehensive, common business language that supports information and data requirements for budgeting, financial accounting, cost/performance management, and external reporting across the DoD enterprise. The SFIS standardizes financial reporting across DoD, reducing the cost of auditability. It allows revenues and expenses to be reported by programs that align with major goals versus by appropriation categories. It enables decision makers to efficiently compare programs and their associated activities and costs across DoD. And it provides a basis for common valuation of DoD programs, assets, and liabilities. DEAMS is the point of the spear and test bed for launching this new language, and will show the way for others as SFIS becomes the standard across the department.

On the subject of interaction, another important point not yet mentioned is how DEAMS is coordinating with another vital Air Force initiative: the Expeditionary Combat Support System. The ECSS and DEAMS are similar in many ways and, when taken as a whole, are natural partners. Both are ERP projects intended to replace disparate processes and data of many legacy systems with a single integrated solution; both use the same commercial off-the-shelf Oracle software; and both are working to transform business processes, personnel roles, and organizational structures across the spectrum of the Air Force community. When they converge into one end-to-end system spanning logistics, supply, and financial management in 2015, it will be a major step toward DoD's objective of an integrated balance sheet, total asset visibility, and a clean audit.

Q

USTRANSCOM has three commands under its domain: the Air Force's Air Mobility Command, the Navy's Military Sealift Command, and the Army's Surface Deployment and Distribution Command. How is your office working to re-engineer business processes and demonstrate fiscal fitness for all those commands? How is financial information shared between commands?

A

The relationship between these commands was at the very heart of the problem that led to the creation of DEAMS five years ago. As the commander of USTRANSCOM at the time, Gen. John Handy was also commander of Air Mobility Command, and he could see both sides of the problem—first as a customer, then as a provider of transportation services. A joint perspective gives senior leaders a unique view of the problems created when the need for timely and accurate financial information cannot be met.

As forerunners of the DEAMS program, both the Military Sealift Command and Army's Surface Deployment and Distribution Command previously implemented Oracle-based financial systems. Those successful implementations provided the basis for the DEAMS program, and in Spiral 3, the capabilities will be combined into a single financial system achieving for the first time an integrated financial planning capability that supports real-time decision making for the DoD transportation customer. The delivery of this capability will be a vision, first conceived and now realized under USTRANSCOM leadership. The benefits derived from that capability cannot be overstated.

In addition, we publish and distribute to our components, national partners, stakeholders, and other interested agencies and institutions a Fortune 500-like annual report containing

to DoD's ability to prosecute missions abroad. As an incentive for committing aircraft to the program and to ensure adequate airlift reserves, Air Mobility Command makes peacetime airlift business available to CRAF participants. The USTRANSCOM commander can request to activate three incremental stages of CRAF, which can be further tailored to accommodate the situation. In the highest stage of CRAF activation, commercial partners will carry almost 40 percent of cargo and more than 90 percent of the passengers to forward staging bases.

fiscal year-end operational and financial results. A portion of the report presents operational results focusing on the outcomes of the commander's strategic plan and accompanying guidance. The annual report summarizes the state of the Joint Deployment and Distribution Enterprise, describes the status of on-going JDDE initiatives, and presents year-end air mission results. The financial results focus on the performance and operating results of our components' various business areas. Those business areas are aligned with the components' operational mission and include passenger/cargo movement, traffic management, port operations, and prepositioning of military equipment and supplies. The report also contains the consolidated statements of financial condition and revenue and expense.

Q

USTRANSCOM relies on its commercial partners to meet 88 percent of continental U.S. land transport, 50 percent of global air movement, and 64 percent of global sealift. How does your organization foster these important relationships with your commercial partners?

A

From a financial perspective, we foster those relationships by ensuring we provide our commercial partners adequate business and ensure timely payment. An important aspect of fostering relationships with our commercial partners is reflected in USTRANSCOM's Civil Reserve Air Fleet (CRAF) and Voluntary Intermodal Sealift Agreement (VISA) programs.

The CRAF is a voluntary contractual partnership between DoD and U.S. commercial air carriers. It is intended to provide both commercial aircraft and crews to augment military airlift during times of crisis and high-operations tempo. This additional strategic mobility capability is absolutely critical

VISA represents a success achieved between USTRANSCOM and commercial industry to cooperatively meet our nation's sealift contingency requirements. It provides DoD with time-phased access to U.S.-flagged commercial dry cargo vessels, intermodal systems, and infrastructure that are useful to the military in return for peacetime business preference. When needed, the program is activated in three stages of increasing levels of commitment, depending upon the severity of the contingency. All major U.S.-flagged carriers participate in VISA, and more than 90 percent of their dry cargo vessels are enrolled, including roll-on/roll-off and container ships, break-bulk ships, and seagoing tugs and barges.

Timely payment of vendor invoices is an important aspect of our relationship with our customers and a high-focus item for both USTRANSCOM and DFAS. DFAS tracks aged/late invoices, averaging 1.5 percent of the total unpaid invoices at any given point in time, exceeding the DFAS goal of 2 percent. As an example of DFAS's timeliness, our CRAF commercial airlift partners are paid within a seven-day period, for a total of approximately $3.7 billion annually.

Q

Recently, USTRANSCOM earned a first place award in the DoD Check It Campaign. The Check it Campaign is an effort to heighten awareness on the importance of effective internal management controls. Can you describe this campaign further, and explain how it has impacted USTRANSCOM?

A

First, let me say that I'm very proud of my staff and the USTRANSCOM staff for winning this award. Winning the Check It Campaign has brought visibility and heightened awareness of the MIC program within the command. This has generated interest, unrivaled enthusiasm, and increased understanding of the importance of the MIC program.

On July 28, 2006, DoD launched the Check It Campaign to heighten awareness on the importance of effective internal management controls. The program's slogan is "Check it. What gets checked gets done." The Check It Campaign enhances our MIC program by aiding in the recognition of MIC issues and improvements made throughout the year to be included in our annual statement of assurance to the Office of the Secretary of Defense.

During Phase One of the Check It Campaign, DoD concentrated on communicating awareness each month for various functional areas. Phase Two focused on process improvements. DoD developed a biannual (February and August) contest starting in February 2008 to recognize components that can provide the best evidence of improvements to a process as a result of checking it.

The designation of USTRANSCOM as the DPO in September 2003 by then-Secretary of Defense Donald Rumsfeld was the principal event leading to groundbreaking advancements in developing improved distribution solutions.

USTRANSCOM provided input for the August 2008 Check It Campaign and tied for first place out of 26 applications received by the DoD Comptroller. To merit this esteemed recognition, we focused on USTRANSCOM'S continued efforts and innovations as the DPO and our national partners in the JDDE.

Specifically, our Check It Campaign submission included the following:

- Summarized the DoD distribution problem (from the Joint Logistics [Distribution] Joint Integrating Concept)
- Identified the Distribution Transformation Task Force and its members as the actors involved in solving the problem
- Described the Joint Deployment Distribution Operations Center and Joint Task Force-Port Opening as examples of world-class solutions
- Exhibited the USTRANSCOM strategic plan as the roadmap of ongoing improvement actions
- Documented DPO cost savings as a quantitative measure of improvement.

Q

During an average week, USTRANSCOM conducts more than 1,900 air missions, with 25 ships under way and 10,000 ground shipments operating in 75 percent of the world's countries. How do you enable your organization to maintain the increased current operational tempo while also keeping focused on long-term issues?

A

USTRANSCOM is always focused on its operational readiness to perform its core missions, and in particular, to globally project strategic national security capabilities. The TWCF is a very important tool in maintaining this readiness, as it helps us to perform our wartime mission every day. The TWCF allows USTRANSCOM the flexibility to surge when necessary. The key is maintaining the minimum cash balance.

Further, whether the nation is at peace or at war, the buyer-seller relationship established between USTRANSCOM and our customers is good for our customers and the American taxpayer. It allows USTRANSCOM to focus on developing a wartime transportation system with peacetime utility seamlessly built in—using the same tax dollar to train for war and provide a peacetime by-product. It also allows customers to more accurately plan and budget for transportation requirements, as rates generally remain stable throughout the fiscal year.

Over the long term, as our heavy footprint in U.S. Central Command is reduced, the TWCF will face the same conundrum it faced in the pre-Global War on Terrorism days. Workload in the Defense Transportation System—the demand side of the TWCF—will undoubtedly drop significantly. If TWCF was a no-kidding business, we would respond by reducing our transportation capacity—the supply side of the equation—in concert with the demand drop. However, unlike a primarily demand-driven commercial business, we are driven by supply. No matter how much the workload in DTS goes down, we are limited in our ability to reduce transportation capacity because of our responsibility to maintain a wartime surge capability. Military aircrews must be seasoned, and commercial air and surface carriers must receive enough peacetime business to remain committed to us in wartime. From a DoD big-picture perspective, it is most cost-effective for the Services and agencies to take advantage of this capacity by keeping workload in the DTS, rather than abandoning it. We are working aggressively to minimize the supply-demand gap. We've made smart (but safe) reductions to our flying hour requirements (supply), and are reaching out to new customers—such as foreign military sales. But ultimately we must keep our meat-and-potato customers in the DTS.

Q

Are there any other areas that you would like to discuss with our readers?

A

We don't try to measure our value to the warfighter by our proximity to the battle—we are physically far removed. However, we do measure our value by how well we enable warfighters to succeed at their mission—and we are very proud of our soldiers, sailors, airmen, and Marines engaged worldwide, not only those fighting in the Global War on Terrorism but also the men and women posted where our national interests require us to stand.

Q

Mr. Bentley, thank you for your insights and for your time.

Information Technology Acquisition

A Common-Sense Approach

Alfred Grasso

Federal information technology programs operate in an environment of rapid technology evolution in which some system components become obsolete while the program is still in development. This pace of technology change requires agile decision making and challenges program teams to keep their technical skill base current to inform these

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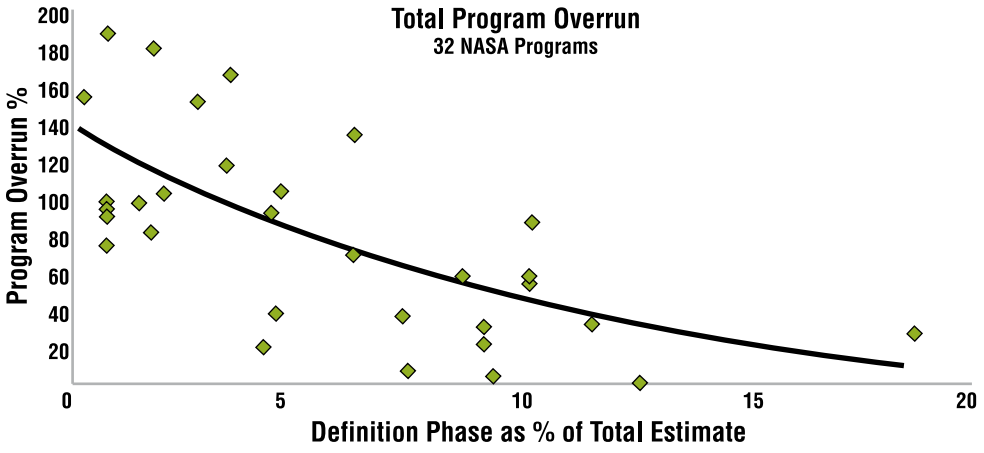
Figure 1: **The Value of Initial Requirements and Concept Definition**



decision-making processes. IT systems and business processes are increasingly interconnected within and across agencies, making it hard to achieve consensus on vision, operational concept, and requirements. The federal government's stretched fiscal and human resources further complicate the situation. The net effect is the widespread failure of many programs to deliver on time and on budget. In 2008, the Government Accountability Office, in Publication No. GAO-08-1051T, reported that "OMB [the Office of Management and Budget] and federal agencies have identified approximately 413 IT projects—totaling at least $25.2 billion in expenditures for fiscal year 2008—as being poorly planned, poorly performing, or both."

In this article, I'd like to reflect on three critical challenges facing IT acquisition: governance, requirements management, and program management practices. I will also outline four steps for improvement: focus oversight on best practices, take a portfolio approach to IT program management, attract and retain critical government professionals, and strengthen program management offices.

Challenge #1: Improve Governance

Effective governance is essential to success. Governance relates to decisions that define expectations, grant power, assign accountability, or verify performance. Effective governance comprises consistent management, cohesive policies and processes, and decision rights for a given area of responsibility. Governance becomes increasingly complicated as programs and processes cross organizational boundaries and intersect multiple governing bodies. Authorities and responsibilities become ambiguous, and program managers are disenfranchised. It is often said that the debate begins in government once the decision is made.

Successful programs must have unambiguous governance. Decision-making authority and accountability that address the implications of intersecting organizations must be clearly defined at the onset. Those authorities must encompass the areas of budget and finance, investment portfolio management, business processes, and program and project management. The Clinger-Cohen Act of 1996 and Title 40 provide the chief information officer with the responsibility and accountability necessary for effective governance. However, it is often the case that CIOs are not fully resourced to perform accordingly, and in other cases, CIOs are not fully empowered across boundaries and choose to avoid organizational conflict. The successful collaborative efforts of the DoD CIO and intelligence community CIO on security certification and net-centricity have illustrated that community-wide enterprise governance can increase timeliness, save money, and improve mission capability.

Challenge #2: Actively Manage Requirements

An equally important consideration is active management of requirements. Lack of realism and stability of requirements is often recognized as the root cause of program re-baselining, which, in itself, is not a dirty word but a necessary part of delivering capabilities that meet the user's needs in a dynamic and complex environment. The initial requirements definition and tradeoff phase is rarely performed with sufficient rigor. In many agencies, responsibility for requirements definition, resource allocation, and acquisition are spread across multiple organizations without a process for making explicit tradeoffs among cost, schedule, and performance. The importance of spending sufficient time and resources in this initial phase cannot be overemphasized. Figure 1 (from the 1992 *Lessons Learned, Cost/Schedule Assessment Guide*, National Aeronautics and Space Administration, by W. Gruhl) shows acquisition program cost performance as a function of the amount spent on initial requirements and concept definition. Performance improves dramatically when a significant proportion (up to 15 percent) of the total program cost is for requirements and concept definition.

Requirements are too often determined in the absence of cost, schedule, and technology risk considerations; and once determined, they are very difficult to change. The biggest difference between successful commercial IT developments and troubled government IT acquisitions is how requirements are managed. Successful commercial IT developers handle requirements with great caution. If a certain requirement adversely drives cost, performance, or schedule, it is quickly modified or eliminated. This does not necessarily happen in a typical government IT acquisition. Time-to-market is a competitive driver in the commercial marketplace, and I would submit it is as important, if not more so, in a world in which adversary capabilities change as quickly as the technology cycle. System requirements must be considered "liv-

ing" but managed, with a controlled process using regular tradeoff analyses to determine the value of change.

One concept, put forth by a key executive at a U.S. leading IT firm, drives this point home. He suggests that if one were to have a competition between a program conducted the traditional way (tight control over requirements process) and a program with the same objectives but where the developer has full control over requirements and is provided only one-tenth of the funding, the non-traditional program would produce a better product in a shorter time frame. The many prototypes and "proof of concept" developments that transition directly to operation ahead of programs of record, as well as the experience of many commercial developments, seem to substantiate this theory.

Another key element to rapid fielding of capability is the notion of a pipeline that consists of concurrent processes for capability planning, incremental development, integration and test, and architecture and standards. Throughout this process, there is close interaction among users, developers, the test community, and decision makers. This is analogous to the successful approach taken by the Missile Defense Agency in the rapid development and deployment of the Ground-based Missile Defense capability. A notable GMD process that informed, and continues to inform, evolving capability planning and system development is the annual large-scale simulation exercise held at the Missile Defense Integration and Operations Center in Colorado Springs. The week-long exercise involves the real users of the system, ranging from operators at fire control consoles to the National Command Authority. The purpose is to develop and refine operational concepts and rules of engagement using representations of the "current" system capabilities, as well as to determine what changes to system design could make sense to improve overall capabilities.

Challenge #3: Build and Sustain a Strong Program Management Office

Successful programs have a strong government program management office capable of a peer relationship with the contractor(s) on systems engineering and program management issues. With a strong and capable PMO, the government can make informed tradeoffs of requirements, cost, and schedule and manage the risk in acquisition programs. A key function within a strong PMO is well described by the metaphor of an architect's relationship with the user and the builder of a building. The architect is the user's agent and is independent of the builder.

The architect works to understand the user's operational needs and translate them into the technical requirements that guide development. The architect evaluates development feasibility and performs independent conceptual designs and cost estimates. Those architect functions enable the user to make informed cost and capability tradeoffs and prioritize requirements. The architect is accountable to the user to ensure that the delivered capability meets the user's highest-priority needs within the constraints imposed by available technology, funding, and time.

The architect also supports other critical decision-making processes. For example, one of the most important decisions a PMO makes is selection of a prime contractor. Many studies have concluded that the contractor's past performance should be a prominent factor in the source selection decision. An effective architect is instrumental in helping the PMO structure the source selection to effectively incorporate past performance into the decision process.

There are many successful programs that exhibit the characteristics I just described. One is the Distributed Common Ground Station–Army. With its version 3 release, DCGS-A leveraged the successful Joint Information Operations Center–Iraq proof-of-concept effort, bringing operational intelligence information and alerts to field units and individual soldiers today in Iraq. By retaining the architect function within the government PMO, the program was able to establish a technical framework that enabled the integration of products from multiple contractors. It also worked interactively with the user community and industry partners to determine what would be the most valuable capabilities that could be delivered within the program's tight cost and schedule constraints.

As a result, they were able to field a system that, for the first time, allowed seamless information flow with Army Battle

Command systems, and provided a collaboration framework that allowed users to work with and visualize data from multiple intelligence sources in a single, unified application, all within a robust security architecture leveraging commercial off-the-shelf-/government off-the-shelf-based tools.

While many studies have revealed similar issues and far-reaching recommendations have been offered, we can make progress now within the constraints of current policy and regulations. Based on MITRE's experience with these issues, I propose four critical strategies to move forward.

Strategy #1: Focus Oversight on Success

We must first change the tone and tenor of oversight to focus equally on programs that have gone from bad to good or good to great to reveal best practices, which then can be applied more broadly. No program is without risk. We should all be more interested in the programs that have managed risk well and harvest those results for the betterment of a larger set of programs. In our experience, we have seen the impact that oversight has on decision making through program and enterprise governance and program operations.

Specific recommendations include, but are not limited to:

- Convene OMB-chaired, facilitated workshops on a variety of program-delivery topics, attended by a cross-section of program leaders and government technical professionals, highlighting program cases as examples, and held in low-key, private venues that encourage discussion of issues and successes.
- Assemble a cross-government "PMO council," following the concept of the chief financial officer and CIO councils, constituted as a forum for program leaders to work together to establish government standards, to help advance the state of the practice in government IT acquisition, and to leverage successes across the government.

Strategy #2: Take a Portfolio Approach

DoD has recently begun to manage portfolios of programs grouped by capability, enabling the capability portfolio managers to allocate resources across programs and to synchronize program deliveries. The elements of these portfolios are of a granularity that is good for making adjustments in resources, but not for managing the programs themselves.

To navigate the dynamics and uncertainty of today's environment, the IT programs themselves need to be structured as a portfolio, with internal planning and management flexibility. Oversight should focus on the long-term funding envelope and the overall capabilities to be delivered, which allows flexibility at the program level to make informed tradeoff decisions and to concentrate on manageably sized increments that deliver capabilities in shorter time frames. This approach makes it easier for programs to demonstrate success or to fail early, which is valuable if the program has put in place and funded contingencies. It also puts capabilities in the hands of the users more quickly. This incremental approach is the norm in commercial practice.

Strategy #3: Attract and Retain Talent

According to the 2006 *Defense Acquisition Performance Assessment Report* (<www.acq.osd.mil/dapaproject/documents/dapa-report-web.pdf>), the department needs to retain and immediately increase the number of employees focused on "critical skill areas, such as program management, system engineering and contracting." The report highlights the concerted effort since 1990 to reduce the government acquisition workforce as well as delays in filling both political and senior executive service appointments. It also underscores the lack of systems engineering experience: "System engineering capability within the Department is not sufficient to develop joint architectures and interfaces, to clearly define the interdependencies of program activities, and to manage large scale integration efforts." Exacerbating this situation is an aging science and engineering workforce and a decrease in supply of qualified engineering graduates combined with an increase in engineering talent in other developed nations.

In order to support programs with qualified staff and execute informed tradeoffs within the portfolio management system, several successful federal programs should continue to be supported, refined, and broadened. Examples of such programs are the DoD's Highly Qualified Experts Program and the Internal Revenue Service's Critical Pay Authority, which help attract and retain critical government professionals. Additionally, the IRS' pay-for-performance program has helped motivate performance aligned to outcomes. These are valuable tools that address the capacity, capabilities, and incentives needed to manage effective programs.

The government should also consider strengthening the role of government laboratories, both as a means for performing relevant research and development and as a source of systems engineers and program managers. Government laboratories can also be funded to sponsor university research to create a new generation of engineers and scientists to feed both industry and government.

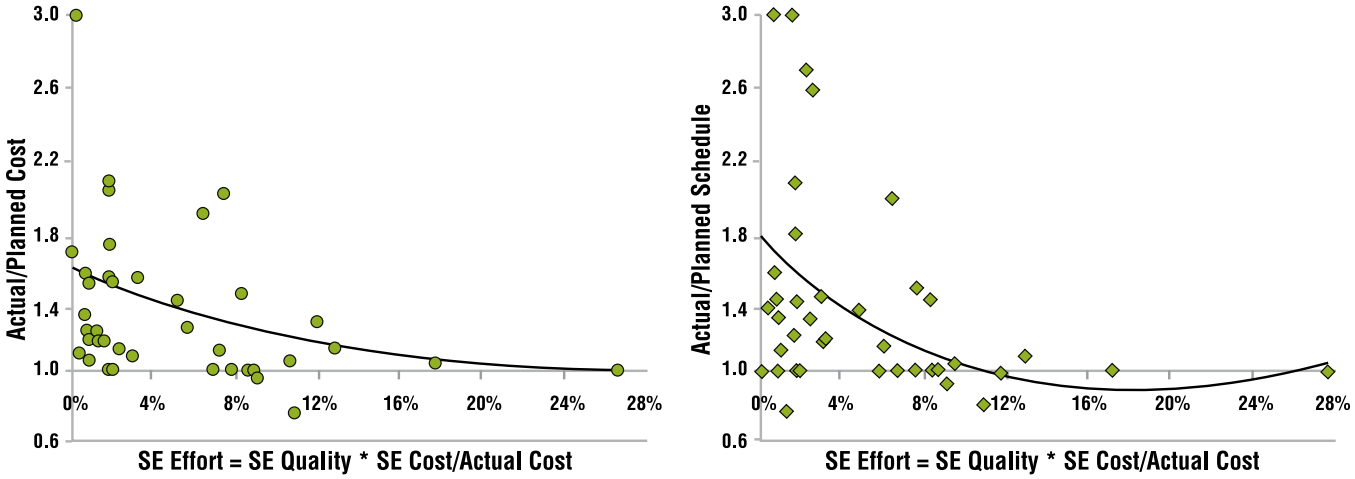
Strategy #4: Strengthen the Program Management Office

As I pointed out earlier, a technically strong PMO can improve the probability of program success by executing the disciplined systems engineering and program management processes necessary to manage risk effectively. To manage acquisition program execution successfully, the PMO must have strong technical and management capabilities. The PMO must also ensure that acquisitions are structured to deliver capabilities within budget and that program execution is managed to minimize risk while adapting to changing requirements and priorities. Acquisition processes must ensure that qualified suppliers are selected and that agreements are negotiated with terms

that, if fulfilled, ensure that the cost, schedule, and performance expectations will be met.

The PMO's systems architecture and engineering processes must ensure that systems are engineered to provide the desired capabilities within the constraints imposed by technology, available resources, schedule, external interfaces, operating environment, and regulatory requirements. Experience has shown that up-front systems engineering directly affects affordability and timeliness. As evidence, Figure 2 (from a presentation given by E.C. Honour at the 2004 INCOSE International Symposium) shows acquisition program cost and schedule performance as a function of the percent of actual program cost spent on systems engineering weighted by expert assessment of the quality of the systems engineering effort. Performance improves dramatically when a

Figure 2: **The Cost and Schedule Impact of Systems Engineering**



significant fraction (up to 12 percent) of the program cost is for effective systems engineering. Today's government IT acquisition programs rarely devote this percentage of program resources to systems engineering.

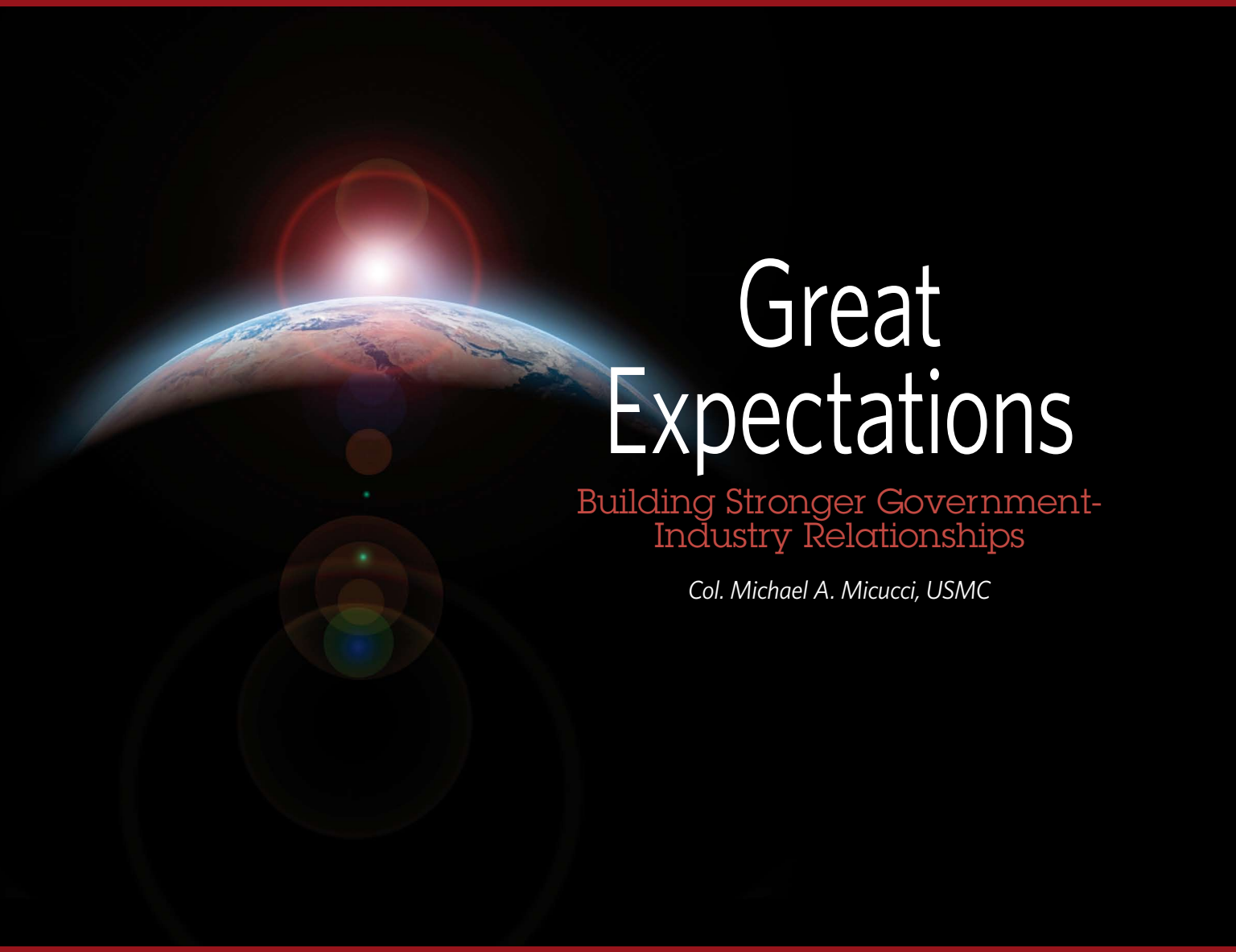
Again using the metaphor of an architect's relationships with the user and the builder of a building, the architect works with the user to understand operational capability needs and performs cost/schedule/capability tradeoffs to establish system requirements that define the system sufficiently to enable one or more "builders" to develop the capability. The architect also will perform analyses supporting PMO decisions throughout the program life cycle, including cost and performance estimates, cost/schedule/performance tradeoffs, and evaluations of competing architectural and technical approaches. Investing in people and establishing clear measures of success at the macro (program) level in addition to the micro (project) level have had positive effects in every case where we have seen this occur. For example, the IRS was able to streamline the return processing for millions of taxpayers through modernization of the Customer Account Data Engine. It did so by choosing a third party as architect, who then worked closely in a peer relationship with the contractor to conduct weekly assessment meetings that produced the first-ever on-time Customer Account Data Engine software upgrade.

Righting the Ship

Today's government IT acquisition programs are executed in a complex, uncertain environment. Rapidly evolving roles and missions create requirements volatility, and growing operational interdependence of organizations increases the number of program stakeholders and dependencies. An aging workforce, difficulty in attracting new talent, and an explicit strategy to reduce the size (and expense) of PMOs are the root causes of the erosion of the government's organic ability to perform the functions of a strong PMO, and will be difficult to reverse. In many failed programs, the government PMO's inability to manage this uncertainty and risk resulted in a failure to meet cost, schedule, and performance expectations. As articulated above, success in this challenging environment requires oversight focused on success, a portfolio approach that enables truly agile acquisition, methods of attracting and retaining the best talent, and a strengthened program management office. A technically strong PMO provides an "architect" function that enables the government to make informed decisions and manage the increased risks in today's environment of uncertainty, improving the likelihood of success in complex IT acquisitions.

Major IT programs are increasingly complex and volatile, and require intensive endeavors; and no matter how well organized, challenges will arise. The key is how one "rights the ship" when problems develop. Experienced and empowered leadership and oversight focused on best practices and problem solving rather than placing blame are essential for success. In the end, this is hard work.

The author welcomes comments and questions and can be contacted at **ag@mitre.org**.



Great Expectations

Building Stronger Government-Industry Relationships

Col. Michael A. Micucci, USMC

As we enter our eighth year in the war on terrorism and our sixth year in Iraq, our defense industry has proven it is up to the challenge of providing the best and most capable equipment the world has to offer. Where past acquisition programs have taken 10 to 15 years to produce,

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we have seen warfighting capabilities placed in the hands of military servicemembers in a matter of one to two years, or even less. We have also seen major, unprecedented advancements in armoring strategies, electronic countermeasures, and night-vision devices. Given these accomplishments, there is no question that industry is working to meet government expectations, but to what extent? Do your industry partners truly understand your expectations? Have you, as the program manager, discussed your intent with them?

I was recently asked by industry to speak about government expectations. As I began putting my brief together, my outline centered on expectations in meeting the terms of the contract: cost, schedule, and performance. But as I thought about it, I realized there was much more to the contract. Cost, schedule, and performance requirements are definitely important, and meeting them is key to program success; but they really represent the lowest common denominator in the professional partnership of defense acquisition professionals and industry members. The expectations for such a partnership—one formed for an exceptionally vital purpose—will never be fully identified by a contract vehicle that is, by necessity, an antiseptic document. In fact, doing so would be akin to working toward a minimum standard, which is directly opposed to how each of us must approach our work. With this in mind, I would like to explore establishing expectations for industry as a full partner in every success.

PM LAV Expectations

Before I explain my expectations for industry, I'd like to tell you what I expect from my own workforce. This will give you some insight into what I believe is important for my team. My expectations fit into the mode of what military leaders refer to as a command philosophy. I took over as the program manager for Marine Corps Light Armored Vehicles two and a half years ago and, at that time, explained in detail what I expected from my workforce. In the case of PM LAV, my expectations are reflected in the mnemonic acronym MARINES.

- **M**arines—I stress to my workforce that our Marines are our number one focus, and everything we do must improve their warfighting capability.
- **A**ccountability—We are all professionals and, as such, must be accountable for what we do and fail to do. We must achieve required levels of acquisition certification and professional development, and we must conduct ourselves with the highest sense of purpose.
- Always do the **R**ight thing—When faced with adversity and challenges, ask yourself one simple question: What is the right thing to do? You must recognize that the correct, best course of action could likely be the most difficult.
- **I**ntegrity—I tell my workforce they either have it or they don't, and I doubt if any of them got to where they are today without it. Honesty and truthfulness are critical in everything we do.
- Avoid the "**N**o, because" response—There are two types of people: Those who answer questions with "no, because," and those who answer with "yes, but." I believe it is more productive to be a "yes, but" person, and I instill that in my workforce. At the same time, I caution them that when we say "yes, but," we must ensure the analysis identifies all the resources required to accomplish the mission. The example I most often use is if we were asked to buy 1,000 light armored vehicles within the next six months, could we? The answer, of course, is yes, but we would likely need additional funding and a larger workforce, the equipment manufacturer may have to open an additional production line or two, etc.
- **E**mpowerment—I empower my product managers and directors to do their job, and I expect them to make decisions reflective of their full potential.
- **S**ynergy—The tempo and importance of our work demands a synergy grown from active communications and genuine teamwork within the organization.

Industry Expectations

I put together a list of eight general themes that focus on my expectations for industry. They go beyond the basics of meeting cost, schedule, and performance criteria. Instead, they speak to the relationship established between the

government and industry, which when most effective is a true partnership that ensures both the program's success and, more important, the delivery of needed capability to our armed forces. I would encourage all program managers to discuss with their industry partners their own expectations.

Integrity

Integrity is the foundation of an effective partnership. It is imperative that industry members maintain their integrity in an above-reproach manner because their reputation depends on it. The Marine Corps teaches every new Marine the 14 leadership traits: bearing, courage, decisiveness, dependability, endurance, enthusiasm, initiative, integrity, judgment, justice, knowledge, tact, unselfishness, and loyalty. Many Marines might argue, as I would, that courage and judgment could be the most important traits, but when it comes to procurement of defense technologies, I would say it is integrity.

Integrity is the righteousness of character and having the soundness of moral principles. It includes the qualities of truthfulness and honesty. It covers keeping promises, openly identifying problems areas, and admitting when you just cannot accomplish a task. It is integrity that allows for transparency in the areas of the government and industry partnership that must be crystal clear. I've seen industry partners clearly go into a contract with little chance for success and, although these incidents are few, they do occur. We have all read case studies in which programs went sour and the crux of the problem always came back to someone who knew what was going on but did nothing. I call that a failure of integrity. As I say to my own workforce, your integrity is one of the few things that only you can give away. No one can take it from you.

New Innovations and the Exploration of New Technologies

I expect industry to lead the way in new innovations and technologies, and to push the envelope on the art of the possible. Industry has proven itself well in developing new ideas and capabilities, and industry's reputation within the Department of Defense is outstanding. DoD buys performance outcomes that support the needs of the warfighter, and it is imperative industry remain the leader in exploring new technologies that are cheaper, lighter, and more capable.

Meet Deadlines and Commitments

It is critical that industry meet established deadlines and commitments. Trying to get a rough order of magnitude, a request for proposal, or an engineering change proposal through the industrial process can often take 60 days or more. A competitive environment produces a timely response, but we need the same emphasis when the contracts have been awarded and the environment is now a sole source. Approval of rough orders of magnitude with some industry partners are not typically delegated down to the director level and, therefore, have to go to corporate headquarters for approval. That can add a prohibitive amount of time to the process when, in many cases, the program manager is simply exploring a variety of courses of actions to determine where additional funding for his program is best applied.

Understand the Basics of the Contract: Cost, Schedule, and Performance

Never forget the basics. Industry partners sign a contract that says they will perform within cost and on schedule, and they will meet performance. We all need to read and understand the contract, as well as stick to it.

Costs can be the most difficult part of program planning. We use certified cost analysts to estimate the price we believe industry will write in the request for proposal. The amount of funding a program manager receives from Congress is a finite number and, as costs grow, it is very difficult to come up with the difference. In a cost-type contract, if industry cannot meet the program requirements, program costs increase. The government, by law, either adds funding to the program or descopes the overall requirement.

It should be noted that the government should not be forced to always adjust cost and schedule when slippage is clearly a result of industry's mismanagement of the program work effort. As to performance, we expect industry to meet the threshold requirements and the supplied product to have the inherent reliability. Reliability is always the most difficult criterion to meet. Finally, the contract should be amended only through proper procedures. If something requires changing, then the contract should be modified accordingly through the government contracting officer.

The Capability Must Support the Warfighter

First and foremost, we all serve our warfighters—soldier, sailor, airman, or Marine—and the procurement of equip-

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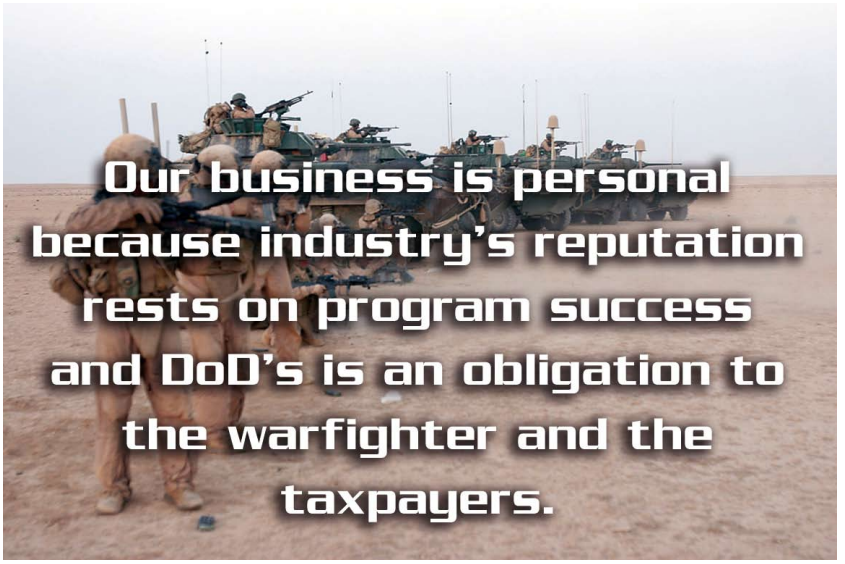

ment and technologies must support them. If the capability is no longer needed for enhancing their warfighting skills, then we need to stop, rethink our acquisition strategy, and move forward accordingly. If that means turning money back in, then turn it back in.

Think Ahead and Anticipate Problems; Let the Government Be a Part of the Solution

It is imperative that industry think ahead and anticipates problems. If industry members identify potential issues, then they need to propose courses of actions and let the government determine which one to use. I've seen contractors isolate themselves and then execute what they believe is the best solution, only to find out the government is less than thrilled with the results.

Internal Research and Development

We all know that industry has internal research and development funds. When was the last time an industry representative asked you, as the program manager, what kind of investments should be made to impact the government's future? For example, if the vendor is a combat vehicle manufacture, it needs to know the future lies in lightweight materials, and smaller and more efficient power packs. All combat vehicles should be on a weight-control program and they need to be more energy-efficient to reduce DoD's logistical footprint.

You and I, Together

I tell industry that "you and I" are a team where "you" represents the industry partner and "I" represents the program manager. I stress to them we are a partnership with the same ultimate goal. I also remind them remind them that our business is personal because their reputation rests on program success and ours is an obligation to the warfighter and the taxpayers. We must both put forth the maximum effort toward providing the best capability. In our partnership, I expect we'll share mutual trust and respect and for an open exchange of ideas and concerns. My best industry partners are those with whom I can discuss issues and challenges passionately but without rancor. We must recognize that we are only successful together, which requires a high level of trust and active communications.

Additionally, I stress and encourage open, candid, and responsive dialogue at the lowest level of our organizations. That is essential in problem identification and resolution, but it is impossible if either of our organizations is stovepiped. We expect our teams and theirs to talk and help each other solve problems. They must be honest, open, sincere, and straightforward with their diagnosis. If I ask for additional expertise, I hope they will take me seriously. For example, I once asked a director for additional engineering support. I believed the program did not have the resources it needed to be successful. He told me he would add the additional personnel, but never did; and as a result, the program had technical problems, deliveries got behind, and a cure notice [*a notification that there is a condition is endangering performance of the contract*] followed shortly thereafter.

A New Acronym

I have recapped my expectations in another mnemonic acronym: INDUSTRY.

- **I**ntegrity
- **N**ew innovations and technologies
- Meet **D**eadlines and commitments
- **U**nderstand the basics of the contract: cost, schedule, and performance
- The capability must **S**upport the warfighter
- **T**hink ahead and anticipate problems; let the government be a part of the solution
- Internal **R**esearch and development
- **Y**ou and I, together.

In my program management office, my success and responsibility rests on providing the best warfighting capability to the MARINES. That, together with expectations of INDUSTRY, provides a foundation for mutual success. It is a two-way street, and industry members should also have great expectations of me.

The president and the commandant of the Marine Corps have both said the war on terrorism will be a long one. I believe the last seven years since the Sept. 11, 2001, terrorist attacks have proven that. As we move down this road together, it is imperative that the expectations of program managers and our industry partners are met beyond the basics.

The author welcomes comments and questions and can be contacted at **michael.micucci@us.army.mil**.

Navy Tailors Best Commercial Practices for Military Use

The C-40A Clipper Aircraft

Christine Blinn ■ William Broadus ■ Duane Mallicoat ■ Mike McGhee ■ Cmdr. John Pasch, USN ■ John Randolph ■ Tim Simpson ■ Capt. James Wallace, USN

Within the Department of Defense, in order to take advantage of an industry commercial best practice, the program office must be clear on the rules that permit or forbid the use of best practices, such as statutory or regulatory restrictions; Service or DoD policies; or, one of which we have all heard in this business, industry proprietary. All of these aspects can greatly impact the success of any commercial best practice implementation within a government program acquisition strategy.

Because most commercial best practice candidates come to light as part of the programs' interface with industry, it would appear that the real ability of both sides to reach the full potential available of a particular best practice is dependant upon collaboration. In fact, the success is ultimately determined by the ability of the government program office and its industry partner(s) to jointly

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and objectively characterize and evaluate these practices against the specific areas in which a potential return on investment may be realized.

For the practices that show merit, the government must be prepared to develop a plan for implementation.

We'd like to highlight an example of a program office that has successfully leveraged commercial best practices into its acquisition strategy: the Navy's C-40A Clipper, overseen by a program office located at the Naval Air Systems Command. Although the examples provided in this article are Navy-specific, all services and agencies can benefit from the lessons learned.

C-40A Clipper Overview

Before we get into the actual accomplishments, let's briefly look at the background of the program. The C-40A Clipper replaces the older C-9B/DC-9 aircraft, which were aging and were difficult to repair. The older aircraft also didn't meet Federal Aviation Administration requirements for noise, and the outdated aircraft avionics meant the C-9B/DC-9 aircraft would eventually no longer be able to operate from civilian airfields.

When looking to replace the C-9B/DC-9, the Navy realized there was a great potential for leveraging and adapting the commercial best practices currently in use by Boeing and the Federal Aviation Administration. The alternative was to squeeze the industry and FAA commercial best practices into the existing Navy framework for conducting operations, supply, and maintenance. The Navy wisely chose to develop a strategy and plan to target and capitalize on the applicable commercial best practice, and the C-40A Clipper was developed.

The C-40A Clipper provides Navy-unique intra-theater medium-lift capability for passengers and cargo located worldwide. The aircraft is made up of 98 percent Boeing 737 parts and 2 percent Navy-unique parts. The basic C-40A Clipper consists of a common Boeing 737-700C airframe that has modified landing gear (to accommodate any increased loads) as well as an added side cargo door and an aft passenger door and air stairs. The C-40A Clipper can operate in an all-passenger configuration; an all-cargo configuration; or a combination configuration that accommodates both cargo and passengers, with a portable wall that separates cargo from passengers.

Significant Hurdles to Overcome

The C-40A Clipper program had a number of significant hurdles to overcome in order to navigate the gauntlet of rule changes and policy updates (from both the commercial sector and DoD) that were required if DoD was to realize the true potential of the aircraft. We will address five specific commercial best practice opportunities in which the C-40A Clipper program was able to use a joint team management approach between the government, the original equipment manufacturer (OEM), and FAA to obtain the full possible measure of effectiveness and efficiency offered by the aircraft.

Aircraft Certification

A naval aircraft would normally be given a flight clearance from the Naval Air Systems Command, which would allow the aircraft to operate in its intended operational environment. The FAA, on the other hand, awards a type certificate (flight clearance) to a class of aircraft (in this case, the Boeing 737). The C-40A Clipper has a Navy aircraft flight clearance; however, the clearance is based entirely on the FAA type certificate, similar to the one used by commercial airlines. In order to maintain the FAA type certificate, the Navy must operate and maintain the C-40A Clipper within the parameters for the aircraft type/model/series, or more simply stated, just like aircraft being acquired by United, Delta, American, Southwest Airlines, and other commercial airlines. Obviously, that is not the normal process for a military aircraft. In this case, the government obtained available flight and performance data from the OEM (Boeing) and the FAA, which the Navy flight clearance team and the program office used as the basis to justify the Navy flight clearance. This saved the Navy a significant amount of time and money, as the flight clearance team was not required to perform extensive flight testing to obtain flight and performance data.

FAA Maintenance Planning

The OEM developed and defended the proposed aircraft maintenance plan to the FAA oversight group. Both commercial and Navy aircraft usage data, reported by to the OEM, drove the reliability-centered maintenance aspect of the maintenance plan. The plan, which was developed from a similar commercial airline variant (i.e., Delta) plan, capitalized on the use of Navy maintenance personnel with their associated qualification levels for use on the C-40A Clipper. The commercial best practices include enabling the Navy team to use any Boeing 737 depot worldwide as a possible candidate for Navy aircraft depot requirements. With a small number of Navy 737 aircraft mechanics, it is a tremendous benefit for the Navy to gain access to Boeing 737 mechanics worldwide. Not only did the use of commercial best practices allow the government to achieve improvements in manpower efficiency, it also enabled them to reduce aircraft maintenance requirements for depot and organizational maintenance requirements, which enabled the government to use a maintenance plan that was based on maintenance at the time of need and mirrored the approach used by commercial airlines. Thus, in this situation, the government gained potential additional aircraft utilization by adopting the benefits offered by the FAA maintenance plan—a first for Navy aviation.

Commercial Parts Pool Sharing

The C-40A logistics support structure uses Navy technicians to perform organizational-level maintenance. The

Naval Air Systems Command Program Office contracted for supply support to provide an onsite representative, 24-hour delivery of parts for the continental United States and 72-hours worldwide, as well as commercial parts pool sharing. Therefore, the Navy did not need to invest $80 million in Boeing 737 common spare parts. There were, however, challenges to this approach. The government had to keep the operational aircraft in the same FAA configuration as their airline counterparts. This process was different from the normal organic parts purchase and management program in which the government allocates spare part dollars and a repair structure to repair spare parts. In the case of commercial parts pool sharing, the government had to ensure all applicable FAA safety and airworthiness directives and bulletins were incorporated in order to meet their obligation to participate in the parts pool sharing. This was a small price to pay to avoid an estimated $80 million spare parts expense. The approach, while an accepted practice for commercial airlines, was new to the Navy team. There were challenges in implementing this best commercial practice, such as the generation and approval of the FAA Operational Service Improvement Program funding line so money would be available to incorporate the safety and airworthiness directives. However, even the annually incurred fee to participate in parts pool sharing made it a bargain compared with the Navy's purchasing $80 million dollars of its own spare parts.

Current NAMP Policy Constraints

Navy aviation has a governing policy document that provides policy and guidance to support the maintenance, supportability, and operations of more than 4,000 aircraft. This policy document is the COMNAVAIRFORINST 4790.2A, *The Naval Aviation Maintenance Program (NAMP)*, and it is managed by the commander, Naval Air Systems Command; the commander, Naval Air Force, has final disposition authority. Because the C-40A team desired to use the FAA-approved maintenance intervals as the core of their maintenance support plan, problems with the NAMP policy immediately came to light. Based on current policy, the operational squadrons would have had to request a waiver to use the commercial maintenance intervals on the C-40A. The program office realized that the C-40A would not be the last military aircraft to face this dilemma, and thus, took the approach of investigating a NAMP policy change that would allow other commercial type aircraft to enjoy the benefits of this commercial best practice.

The program office teamed with the NAMP policy team and developed a completely new NAMP policy chapter: Chapter 11—Contractor Maintenance, Commercial Derivative Aircraft Maintenance Programs, and Aspects of Aeronautical Weapons System Acquisition. The change was approved and implemented as NAMP policy. The easier approach would have been to request a waiver for this particular program, but the right approach was to capitalize on the current commercial best practices by making changes to the existing policy. If the government had decided to request a waiver, it would not have allowed the Navy team to capitalize on the maintenance advantages made possible by the commercial best practices. Also, adoption of the waiver process would not have addressed the actual problem in that the current policy, which did not take into consideration the possibility that a government program office would attempt to merge commercial best practices into its normal policy practices.

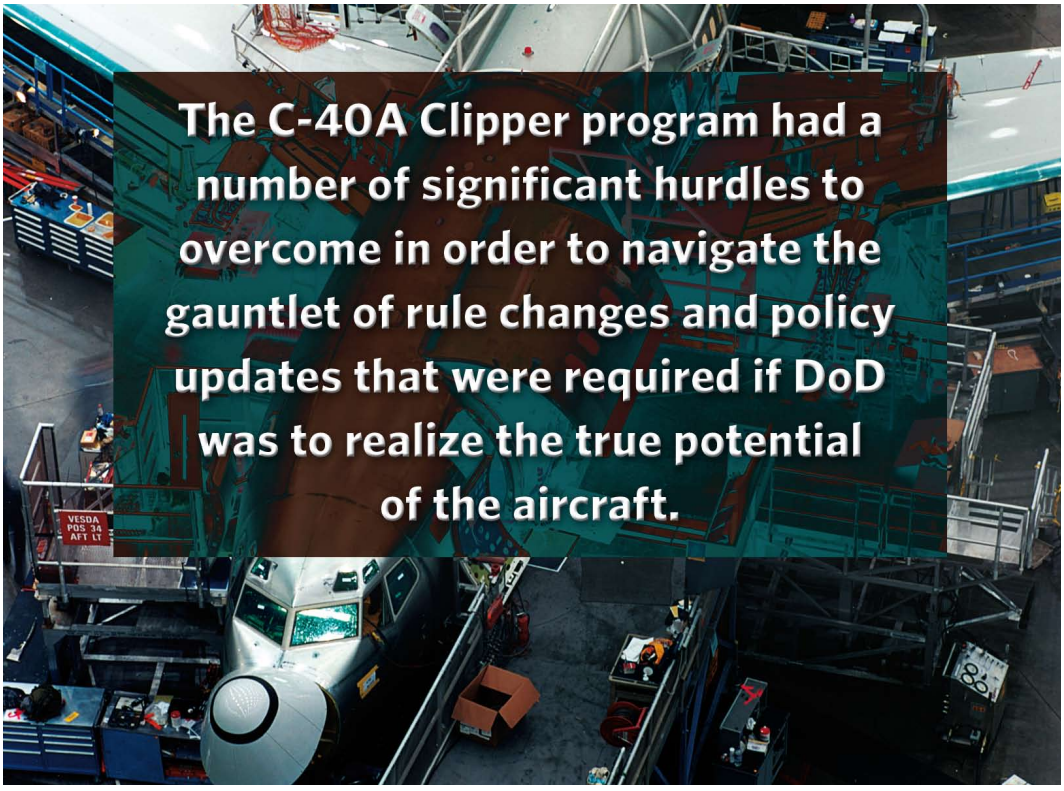
Online Digital Publications

The C-40A Clipper relies on Boeing, the OEM, for engineering and logistics support. When evaluating the possibilities for management of the myriad of publications and maintenance inspections required to support a commercial derivative aircraft, the program office saw another commercial best practice opportunity. Why not take advantage of the Boeing publication system known as MyBoeingFleet.com? But would there be any challenges to having interactive online publications to support the warfighter? Of course there would be challenges. The program office had to ensure that there was access to the publications regardless of operational environment, to include all contingencies dealing with accessibility, Internet availability, and password management. Not only were all of these challenges resolved, but by capitalizing on this commercial best practice, the Navy avoided the cost incurred with the manpower required to the update of paper publications.

The C-40A publications are not maintained by the government program office. While this is not a first for the government, the real difference in this particular situation was that the publications were not maintained by an outside source. Instead, the government program office and user purchased access to the master publication database at Boeing. Contractually, Boeing retains oversight and management, and provides all updates, printing, and distribution. The affected operational squadrons and other authorized personnel have access to the publications via a secured Web portal at MyBoeingFleet.com. Although training was needed by maintenance technicians in the online digital publications process, the cost savings and efficiencies offered by online digital publications more than made up for the expense.

Customer Response

As we have shown, there can be great efficiencies gained by effectively capitalizing on commercial best practices, but achieving those objectives requires a complete understanding of the stakeholders, processes, policies, and the inevitable obstacles. But what of the customer? In this case, there are several customers: the commander, Naval Air Forces; the commander, Naval Air Reserve Force; the operational wing; and the three C-40A squadrons, VR-57, VR-58, and VR-59. Did adoption and implementation of these commercial best practices really enable them to achieve or exceed the desired mission requirements? In the case of the C-40A program, the answer is yes, absolutely. Let's look at some of the accomplishments of the C-40A Clipper.



Like the legacy C-9B/DC-9, the C-40A's designated mission is to be the Navy-unique intra-theater medium-lift capability for passengers and cargo worldwide. However, the C-40A has significantly increased cargo-hauling capabilities as well as its operational range. This was very obvious during the C-40A's support for Hurricane Katrina recovery operations. Following the devastation that Hurricane Katrina caused to the city of New Orleans, La., and the surrounding area, C-40A aircraft were employed to support the evacuation. More than 117 missions were flown, with 498 sorties accumulating more than 817 flight hours. More than 3,003 evacuees and 6,239 total passengers were transported. Also during this timeframe, an astounding 2,305,214 pounds of cargo were transported.

Recently, the C-40As were called upon to support the U.S. Navy efforts in Europe by providing daily humanitarian missions to aid the Georgian government. The C-9B/DC-9 aircraft would have required significantly more flights than the C-40A and thus a higher cost to the Services and taxpayer.

When interviewed, Rear Adm. Patrick E. McGrath, vice commander, Naval Air Forces; commander, Naval Air Forces Reserve; and deputy commander, Navy Region Southwest said: "The fielding of the C-40A has enabled naval aviation to not only meet its chartered mission, which is to provide Navy-unique intra-theater medium lift capability for passengers and cargo worldwide, but has also enabled us to expand the mission and operational capabilities of the warfighter."

We ventured into the fleet to ask a C-40A mechanic her thoughts on the aircraft. Aviation Structural Mechanic 1st Class Melissa Countryman of VR-59 is assigned to the aircraft maintenance department and is a member of the air crew. When we asked her how she liked working and flying on the C-40A, she responded, "I think the best thing about working on the C-40A is the flexibility to do just about anything; we can change missions at the drop of a hat. Any base, any branch of Service, anywhere, anytime! For instance, I got to fly on the mission transporting the disarmament committee into North Korea. We also stopped in Russia, and then China, where we had a guide who showed us restaurants, the China Wall, and Tiananmen Square. We then flew to the Philippines to deliver three pallets of humanitarian aid in support of the tsunami relief. As far as being a maintainer, I love turning wrenches knowing that we worked on it together. We have a great group of maintainers here at VR-59, and I know that whenever I fly, I'm safe. I think the most rewarding thing about flying the C-40A are those special missions bringing home the troops from the desert and seeing their faces [as they are coming home] after a long deployment."

It is our hopes that all of those within the DoD acquisition workforce who are faced with a potential commercial-derived solution for their acquisition program, will take a different look at how commercial best practices may lead to a more effective product for your customer. Will the process be easy? Probably not. Will it take some planning and management? Absolutely. Can you achieve greater success with a focused plan in this area? Most definitely.

As with the C-40A, obtaining the maximum benefits didn't happen by accident, but by planning and effective implementation.

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Systems Engineering In Paradise

Maj. Dan Ward, USAF

Members of the Air Force Studies Board recently wrote a book with the catchy title *Pre-Milestone A and Early-Phase Systems Engineering: A Retrospective Review and Benefits for Future Air Force Acquisition*. It's actually more interesting and readable than the title suggests, and you can download the PDF version for free at <**http://books.nap.edu/catalog.php?record_id=12065**>.

I read the book while sitting on a remote tropical island, sipping a frozen adult beverage of my choice, and enjoying the kind of cheeseburger Jimmy Buffet sings about. As the warm sun turned my skin the color of the tomato on my burger, one line jumped out at me. On page 88, I read, "At least one major prime contractor known to the committee has decided to eliminate the term 'systems engineering' altogether after finding that many of the accumulated documented processes in government, academia, and industry are useless."

Ward, *currently a student at the Air Force Institute of Technology studying systems engineering, holds degrees in electrical engineering and engineering management. He is Level III certified in SPRDE and Level I in PM, T&E, and IT.*

Illustration by Jim Elmore

Because I am about to complete a master's degree in systems engineering, this rejection hit a little close to home. Plus, I wasn't really on a tropical island. I was in Ohio, and I wasn't eating a cheeseburger.

Anyway, the authors go on to talk about "the adverse effects of obsolete and non-relevant process requirements" and the importance of "allowing systems engineering and program management the leeway to tailor compliance with required processes to suit the needs of each specific program." Ah, leeway to tailor compliance—now they're singing my song.

But all this discussion about obsolete and irrelevant processes made me suspect that systems engineering was getting a bum rap in some circles. See, I'm not sure systems engineering is really all about establishing strict, formal processes, despite the best efforts of some to make it so. In fact, while systems engineers certainly need to understand process work and often use a process-driven approach, systems engineering is actually a more organic activity than some people make it sound. With all due respect to my friends at INCOSE (the International Council on Systems Engineering), systems engineering has got to be more than "a structured development process" if it's going to be of much use.

So, in keeping with my preference for principles over rules (see "Socrates in DC," *Defense AT&L*, July-August 2008) and people over process (see everything I've ever written), I pulled together the following collection of systems engineering principles. This grossly incomplete grouping contains a few of the insights the discipline of systems engineering contributes to technology development efforts and perhaps sheds some light on the contributions a systems engineer can make. It may not completely redeem the term systems engineering, but I do hope it helps.

Principle #1: You can't do just one thing

Systems engineering is concerned with the development of complex systems. Accordingly, systems engineers must address the interactions of a variety of entities within their systems, including components, subsystems, and stakeholders. Changes to any one aspect of the system (from funding to function to form) ripple through and affect many, if not most, other aspects of the system.

For example, changing a particular system interface (either internal or external) not only impacts the physical components associated with that interface, but could also have an effect on cost and schedule. It might take time and money to implement the new interface, or the new implementation might save time and money. A new interface might also change the system's performance, maintainability, or reliability. The good news is, it is possible to improve all these things by implementing a dependable, standardized, maintainable interface. The bad news is, it is also possible a new interface will have a negative impact on these factors. The key thing to keep in mind is that we never simply redesign an interface.

Thus, systems engineers can never do just one thing to a system. Every change has more than one implication, and systems engineers must be aware of as many of these implications as possible. A systems engineer's holistic approach involves an awareness of the system's interconnected, interrelated, complex nature.

Principle #2: Complexity and functionality are not always directly proportional

Systems engineers build systems that do things. Whether it is an aircraft, a satellite constellation, or an enterprise information infrastructure, systems engineering projects are designed to accomplish certain functions. The project is deemed a success largely based on whether (or to what degree) the system performs the required functions upon delivery.

However, if we simplistically equate functionality with success, it is easy to fall into the "more is better" trap, and assess the value of a system solely in terms of the sheer number of functions it performs. This approach can lead to over-engineered, excessively complicated systems in which complexity overwhelms functionality.

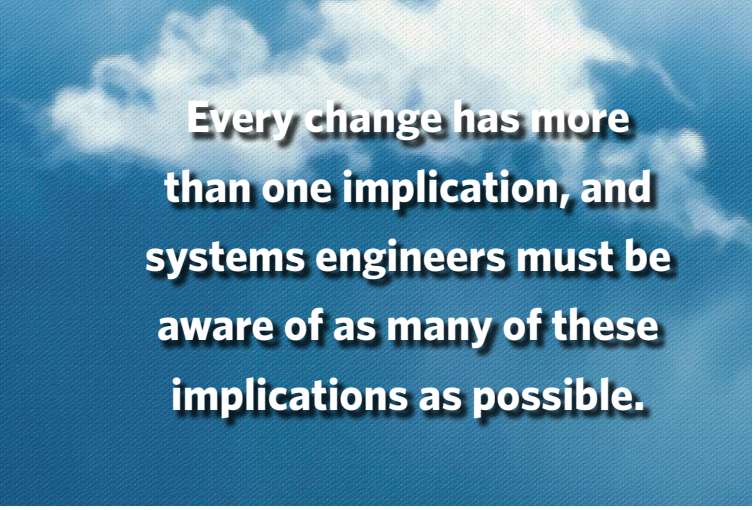
The engineering process might begin with a blank sheet of paper or a collection of legacy systems. In either case, the systems engineer typically begins by adding functions to ensure the system meets the user's requirements. This process of generating new functions is appropriate and necessary ... to a point. Adding too many functions decreases the system's overall value, making it worse, not better.

There are two ways this error can be manifest. First, the system can become too large and unwieldy, making testing, analysis, operations, and maintenance difficult, time-intensive, and expensive. In short, the complexity makes the system difficult to use. Alternately, the conflicting demands of multiple functions might require performance tradeoffs and compromises, which degrade the system's overall utility. In this case, complexity dulls the system's edge.

The end result of this error is either a large, complicated system that makes it difficult to do things well or an overly generic system that does not do anything particularly well. These two outcomes are actually quite similar in that they both result in degraded operational performance, albeit for different reasons. The worst possible outcome is a combination of both—a system that is excessively complicated and not particularly good at any one thing. So, while the systems engineering discipline is concerned with producing complex systems, one of the main objectives is to constrain that complexity and make sure it is not excessive.

Principle #3: Foster common understanding

And the users exclaimed with a laugh and a taunt:
"It's just what we asked for but not what we want."
Anonymous



When we say systems engineering is "multi-disciplinary," that doesn't mean it involves spankings and detentions. Sure, some systems engineers feel the need to act like the vice principal of discipline at an elementary school, reining in the unruly and the truant, but that's not why they're there. The multi-disciplinary nature of systems engineering is actually about providing translations between the various communities and tribes involved in developing a large, complex project, fostering communication and building shared understanding.

Any given systems engineering project inevitably involves a large group of stakeholders, including the people who pay for, design, use, maintain, or dispose of the system. Regularly getting these people together in a timely and meaningful manner and helping them understand each other is one of the key functions of systems engineering.

The various stakeholders each have their own sets of priorities, values, interests, requirements, and talents. These do not necessarily align with those of the other stakeholders—they might even be mutually exclusive—nor are they all defined to equal levels of coherence. Systems engineers need to avoid simply focusing on the loudest, biggest, or most clearly documented requirements and instead consider the full range of inputs. Thus, systems engineering involves a lot of active listening, careful documentation, and extensive networking to establish a shared understanding of what the system needs to do and in what kind of environments (physical, political, and financial) it needs to operate.

Stakeholders even have their own languages, and an apparently clear statement of a requirement might be misleading, misunderstood, or even mistaken. For example, I recall attending a meeting in which a special operations commander stood up, pounded the table, and insisted "We need more training on these systems!" It turns out what he actually needed was a simpler system that required less training, not more. So along with active listening and thoughtful translation, a systems engineer needs to inject insightful and creative alternatives into the discussion, helping to shepherd the stakeholders toward a project that meets their actual needs and not simply their perceived needs.

Principle #4: Iterate, iterate, iterate (aka The SAWABI Principle)

It's not at all important to get it right the first time.
It's vitally important to get it right the last time.
Andrew Hunt and David Thomas

The complexities involved in systems engineering, both technical and political, virtually assure that the first draft and the final product will be different to a certain degree. Fred Brooks, author of *The Mythical Man-Month*, suggests that programmers should "Plan to throw one away. You will anyhow." Other writers have suggested that if we plan to throw one away, we'll end up throwing away two. In any case, the need to throw one (or more) away should not come as a surprise.

The point is that design is an iterative process. This is particularly true for systems engineering design, given the inherent complexities and the large numbers of stakeholders, compounded by the difficulties inherent in communicating complexities across large groups, as discussed in the first three principles.

Good systems engineers avoid becoming overly attached to the initial products, since refusing to discard a failed approach is unwise. Therefore, one of the key tasks for a systems engineer is to plan and coordinate the various iterations of each product (requirements, architectures, budgets, organizations, etc.), to include mechanisms for gracefully discarding initial versions.

In an article for the July-August 2004 issue of *Defense AT&L*, I coined the term SAWABI to describe just such a mechanism. SAWABI stands for Start Again With A Better Idea (not to be confused with Sawabi, Pakistan). The SAWABI principle involves recognizing the need to replace the current version of something with a better version. Depending on the scale and impact of the change, SAWABI might require a large quantity of humility, creativity, honesty, and courage. It might be easy to SAWABI a single requirement, while SAWABIing an entire architecture is probably much harder—but perhaps just as necessary. Good networking and communication skills (see Principle #3) make SAWABI much easier, but we must keep Principle #1 in mind as well and be aware of the potentially widespread implications of any change.

Principle #5: Speed is a virtue

Instability, in all its forms, is one of the biggest challenges faced by systems engineers. Budgets, schedules, and requirements can all change over time, often in inconvenient combinations (i.e., concurrent budget cuts and increased performance requirements) or with unintended consequences (see Principle #1). Stakeholders, team members, critics, and supporters come and go, and their replacements may have different priorities, perspectives, and skillsets. One way to help stabilize the systems engineer-

ing environment, and thus improve the outcome, is to work on a short timeline.

Generally speaking (and perhaps counter-intuitively), speed is a systems engineer's friend. While working on a short timeline injects potentially uncomfortable pressure to deliver, it also reduces the risk of budget cuts or requirements creep, which can be even more uncomfortable. On a short schedule, there simply isn't enough time for anyone to inject significant changes to budgets or requirements. Additionally, a near-term delivery deadline provides a strong justification for systems engineers to resist the introduction of counterproductive change. A short timeline also increases the likelihood of personnel stability, as the project can be completed before too many people move on to bigger and better things. As noted in Principle #1, changes to one element tend to ripple throughout the rest of the system, so stability increases the likelihood the system will be ready when needed and effective when used.

Speed also decreases the risk of delivering obsolete systems because the faster the project moves, the less the technology environment will change. Further, speedy projects tend to incorporate mature technology rather than spend time developing (or waiting for) new, as-yet-undiscovered components. So, speed helps systems engineers avoid the dual risks of bringing obsolete technology forward or expecting to incorporate potentially unavailable technology.

On the other hand, speed introduces a temptation to cut corners, oversimplify, or prematurely optimize a design. These are serious dangers that degrade the system's performance and should be avoided. However, they are no more serious than the risk of requirements creep, personnel turnover, or funding instability inherent in slow, long-term projects. More importantly, project leaders and systems engineers have direct influence over speed-induced risks, while a slow project's risks are largely external and beyond the systems engineer's control. In my opinion, the risks and problems introduced by being fast are preferable to those introduced by being slow.

Principle #6: Talent trumps process

The field of systems engineering has produced a number of methods, processes, tools, and techniques for use in developing complex systems. Those each have varying degrees of utility, and their establishment represents a real step forward in our ability to manage and create big, complex projects. However, the best process or tool in the world is useless in the wrong hands, and a talented systems engineer can deliver a meaningful product despite a bad process or suboptimal tools. Thus, this principle states "talent trumps process."

Systems engineering talent includes, but is not limited to, the abilities to see connections within a system (see Principle #1), to appreciate the value of complexity and distinguish between simplisticness and simplicity (see Principle #2), to communicate and persuade (see Principle #3), and to recognize when to start over (see Principle #4). Talent also includes the ability to work fast and help a team meet a deadline (see Principle #5). And as CalTech's Dr. Joel Sercel pointed out, "Systems engineering without domain knowledge is a net negative." So this entire discussion rests on the assumption that the system engineer knows something about the area in which he or she is working.

While the INCOSE fellows talk about systems engineering as primarily focused on "creating and executing an interdisciplinary process," I think it really comes down to thinking—systems thinking, to be precise—and at this point in history, thinking (systems or otherwise) is a human-only activity. While our tools and processes are useful in accomplishing tasks, tool or process cannot think for us. Thinking skills are, therefore, the ultimate elements of systems engineering talent.

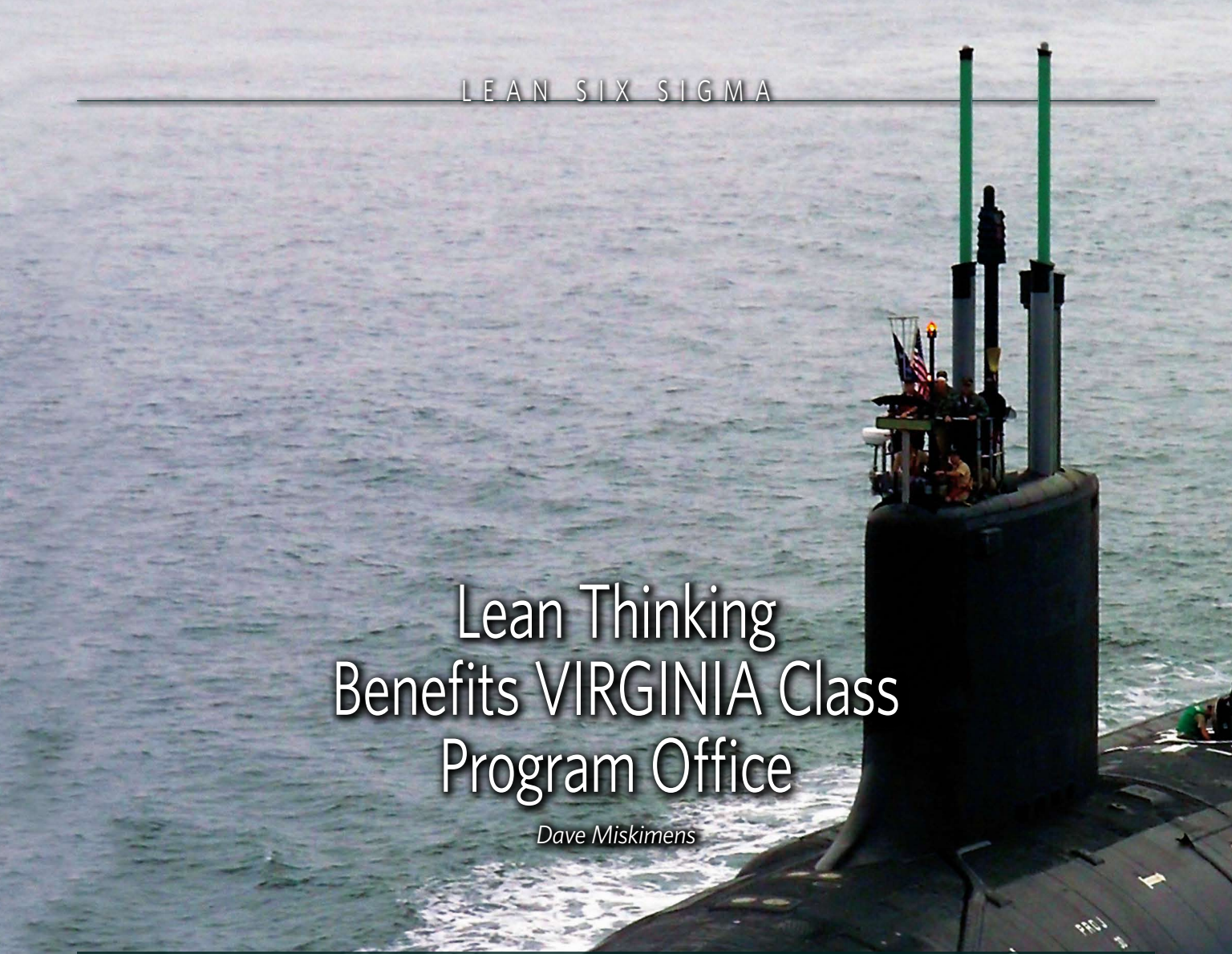
Because talent trumps process, a good systems engineer knows how to unleash talent—both his or her own as well as the talent of others. And ironically, the best way to unleash talent is to not have too much of it. Smaller teams are inherently more streamlined and agile, making it easier for team members to apply their talents. In fact, small teams of talented people generally outperform large committees of similarly talented people because in a big group, it is harder to communicate, harder to see the big picture, harder to inject new ideas, harder to change direction, and harder to be fast. An oversupply of talent is paradoxically counterproductive, so systems engineers would do well to foster and mentor a small cadre of talented people rather than a large stable of mediocre people who basically function as interchangeable parts.

But wait, there's more…

If systems engineering is treated as a formal, inflexible, complexly structured, requirement-heavy development process, more and more enterprises will follow the example of the unnamed "major prime contractor" and eliminate the term altogether. They would not be wrong to do so. But the systems engineering discipline, properly understood, does have some powerfully useful insights and principles for technology development project leaders. It would be a shame to reject the entire concept just because it has been defined too narrowly, misapplied, and generally abused.

The six principles outlined here are only a few of the contributions systems engineering provides. No doubt there are many, many more that could be written, but I'm already over my word limit for this article. Plus, there's a cheeseburger in paradise calling my name …

The author welcomes comments and questions and can be contacted at **daniel.ward@afit.edu**.



Lean Thinking Benefits VIRGINIA Class Program Office

Dave Miskimens

The VIRGINIA Class Program Office, which oversees the design, construction, and delivery of the VIRGINIA class of submarines—the United States' newest class of attack submarines—has been "Leaning" forward in its thinking to reduce the costs of building a nuclear-powered submarine for the past two years. The Program Office, which began integrating Lean Six Sigma strategies into every aspect of the construction process, is reaping the benefits as it sees the costs go down.

"Lean [Six Sigma] is a tool that provides a way to organize an attack and go after cost reduction," said Rear Adm. Dave Johnson, former program manager of the VIRGINIA Class Program Office. "With Lean strategies in place, we are seeing real cost savings today within the program. Some $15 million per ship can be attributed to lean savings in government furnished equipment."

Miskimens, *a member of the Senior Executive Service, serves as the Technical Director for Team Submarine. He is the former deputy program manager for the VIRGINIA Class Submarine Program Office.*

Embracing the Methodology

Lean methodology is about speed, efficiency, and quality. Six Sigma emphasizes the need to recognize opportunities and eliminate defects through data-driven decisions, and it incorporates a comprehensive set of quality tools under a powerful framework for effective problem solving. Lean Six Sigma combines these strategies, eliminating non-value-added activities, improving cycle times, controlling variation of redesigned processes, and maintaining high repeatability. The key tenet of Six Sigma is its problem-solving framework called DMAIC, which stands for **D**efine, **M**easure, **A**nalyze, **I**mprove, and **C**ontrol.

While improvement processes, tools, and techniques have been around since the 1980s, Lean Six Sigma is a relatively new methodology being embraced by the Department of Defense and the Navy. Formally introduced within Naval Sea Systems Command in 2004, the methodology of Lean Six Sigma was adopted by the VIRGINIA Class Program Office two years later.

"To be successful, you have to make Lean a core part of your business practices," said Johnson. "You need to have a goal and be able to invest in the right people and time to ensure that your Lean journey keeps rolling for the future."

The catalyst for integrating Lean Six Sigma strategies as a means of reducing overall submarine construction costs was the goal established by the then-Chief of Naval Operations Adm. Michael Mullen in the spring of 2006 to build two submarines for $4 billion in fiscal year 2005 dollars by 2012.

Lean Training

Since adopting Lean initiatives as a core business practice in the program office, 75 percent of

the VIRGINIA Class Program Office staff have some level of Lean training. Many have obtained yellow, green, and black belts that demonstrate their skills and knowledge in Lean Six Sigma. Training in Lean Six Sigma can be a one-day or a six-week course, depending on the level the person is attaining. For the most part, Lean training consists of both textbook knowledge of the subject matter (methodologies, tools, principles, and related topics such as leadership and change management) as well as real-world, successful application of Lean methodology and tools by actively participating in a number of Lean Six Sigma projects. The training also includes hands-on exercises that may be translated into real-world applications.

"It was the best training I've received in my 26 years of government service," said Steve Lose, the Command, Control, Communications, and Intelligence design manager responsible for combat systems and overall systems integration of the non-propulsion electronic systems (NPES) on VIRGINIA Class submarines. "It was exercise-based and gave you a set of principles to follow. The class was an eye-opener, as I learned how to do things more efficiently." Lose added that he learned to develop a process structure for business practices, and identified methods of improvement for the structure.

Lose was one of the program office's first staff members to take the Lean champions training at the Norfolk Naval Base in Norfolk, Va., nearly two years ago. Since then, he has been incorporating Lean strategies to the NPES.

Lean Planning

For the VIRGINIA Class Program Office, the journey toward integrating Lean initiatives began when the first executive planning session was held in October 2006.

"Our first EPS focused on addressing cost reduction and the construction span, which allowed us to focus on the areas where both the government and the shipbuilders' responsibilities intersected," said George Drakeley, the Lean Six Sigma point person and special assistant for acquisition for the program office. "There was a lot of good effort put into this session and [it] got some great results. It was this first event that started the whole drumbeat for Lean [in the VIRGINA Class Program Office]."

The first EPS meeting included senior executives from the two VIRGINIA Class shipbuilders, General Dynamics' Electric Boat and Northrop Grumman Newport News; the supervisors of shipbuilding, conversion, and repair from Groton, Conn., and Newport News, Va.; key program managers from the VIRGINIA Class Program Office; and other naval officials. Together, group members identified areas for improvement, such as technical authority and sonar, where costs savings could be realized either by reducing program requirements or the construction span. The areas identified then became a value stream, which involves all the actions (both value-added and non-value-added) currently required to build a nuclear submarine from design to launch from both a Navy perspective and the shipbuilder perspective.

As part of the two-day session, the group mapped a high-level current state-of-the-construction process and discussed what the future state should be. That allowed the EPS group to visually understand the flow of materials and processes throughout the build cycle to recognize wastes, focusing mainly on the areas in which the Navy's and the shipbuilders' responsibilities intersect. Lean Six Sigma process maps are low-tech, created on a wall with butcher paper, Post-it® notes, and markers.

"The results from the 2006 EPS have guided our efforts," said Johnson. "Had we not done this, we would not be where we are today, within our $2 billion goal."

Lean Application

By the end of the EPS, the group selected 14 value streams, ranging from integration touch points to engineering reports to electronic support measures to the NPES integration strategy. While the majority of the identified value streams focused on the government-furnished equipment, the shipbuilders were challenged to develop their own Lean initiatives for shipbuilding and technical integration work.

"We tried working a dovetailed approach in which we identified items where the shipbuilder could look for cost reduction and where the government should look in reducing costs," said Johnson. "In certain situations where there was a cross boundary for the shipbuilder and the government, it then became a joint process for improvement."

Two months after the EPS ended, in December 2006, Lose held his own value stream analysis to identify areas for process improvement in the NPES. The Lean event included representatives from other team submarine program offices and Navy departments as well as representatives from the shipbuilders, Electric Boat and Northrop Grumman.

"We got all of the stakeholders together and mapped the value stream for the system delivery, installation, test and integration, and certification process," said Lose. "We had just completed our off-hull testing ... and the on-hull testing with [the *USS*] *HAWAII*, so everything was fresh in our minds. We came out of this event with a clearer set of actions of what we needed to do to improve our process and lower costs."

During the event, Lose and the other participants mapped the NPES current state process, identified areas for improvement, and then mapped two potential future states. The event resulted in improvement initiatives ranging from subsystem procurements to ship module construction. One of the areas identified as "non-value-added" was phased delivery of software. That was occurring in multiple subsystem

areas where the initial software delivered by a subsystem required one or, in some cases, multiple updates through the course of the off-hull and on-hull (dockside) test periods. The magnitude, disruption, and cost impact caused by these phased deliveries was not concisely quantified until the value stream with all of the pertinent stakeholders was mapped. An improvement event was defined to work with all the system providers to develop specific delivery entrance criteria defining the elements of system maturity so that all stakeholders clearly understood what was required prior to system delivery.

"Just mapping that value stream and going through the Lean process helped identify what was value-added and non-value-added. All of the waste that had been built into the process over the years was amazing to me," continued Lose.

Further Lean Initiatives

Lose held another Lean review with the participating acquisition resource managers and vendors to develop entry criteria for delivering subsystems—the secondary systems that are provided to the shipyards by vendors and integrated into the overall submarine system.

"What we found to be the root problem was that many of the subsystems [that] were being delivered were either incomplete or immature," said Lose. "So, we came up with a specific list of criteria that the subsystems needed to meet and started working with the individual vendors who develop and produce these subsystems to get them to reduce costs and be more complete upon delivery. That reduced rework, risk, and delay, and provided much more mature systems to the shipyards."

Another NPES value stream that was "Leaned" was the common submarine radio room. A value stream analysis was conducted to identify process improvement opportunities in the development, installation, and test processes for the shipboard radio room. The common submarine radio room backfitted modernization has been aligned with the VIRGINIA Block III contract new construction delivery schedule, allowing a reduction in VIRGINIA Class-unique non-recurring costs. Savings were achieved in software development, system engineering, system integration/testing/certification, and technical documentation and logistics products. Those improvements will help to reduce rework, risk, and delays, and provide a cost avoidance of more than $20 million over multiple ships.

"The NPES value stream is a perfect example between what is being done today and what the future state should be," said Johnson. "It is almost the most obvious area where I see cost reduction and progress because it is the government's part and is directly managed as part of the VIRGINIA Class process. The shipbuilder piece is a little less obvious."

As the drumbeat of Lean is being heard on the Navy side, it can also be heard throughout the shipyards as the shipbuilders are conducting their own Lean events which are contributing to the reduction of costs and construction span. For the past five years, Electric Boat has been applying Lean Six Sigma tools to the entire submarine design, test, and repair process. In 2006, Electric Boat completed 131 Lean Six Sigma projects that produced a net savings of some $16.2 million and has some 200 projects still in process.

To show off its Lean initiatives and strategies, Northrop Grumman Newport News invited Johnson, Lose, Drakeley, and other Navy officials along with Electric Boat representatives to their facilities. One of the Lean strategies that Northrop Grumman demonstrated was their ability to improve production in the installation of a high-efficiency inlet door. Originally, the number of times that the door was uninstalled throughout the build cycle would usually reach nearly 20. By using a value stream analysis to show where there was wasted time and effort, Northrop Grumman was able to cut the installation and re-installation of that high-efficiency inlet door down to two times, resulting in an 80-percent reduction in manhours.

"Lean is often common sense," said Johnson. "People can look at what you are doing and decide what is a value-added step, and if [it is] not, remove it. The high-efficiency inlet door installation process improvement proves that."

Continual Lean Application

Recently, one of the more important Lean events held by the VIRGINIA Class Program Office was the value stream analy-

Doing the Same, Expecting Better

Consider the development of weapon systems for the U.S. military: Chuck Spinney made the cover of *Time* magazine back in 1983—that's 25 years ago—for documenting to Congress that the acquisition system was getting worse at an increasing rate.

Reality has not escaped the people who work in the system. What we have, in other words, is a stupid system composed of bright people, lots of bright, well-educated, and often experienced folks working diligently to try to solve the wrong problems. This fact isn't lost on the project development community, which, from time to time, produces some brilliant insights on itself.

Dan Ward, Gabe Mounce, and the other members of the group that call themselves "rogue project leaders," for example, have been writing about the absurdity of the system for years. Dan's latest article, "Call Me Sisyphus," is well worth a read. Although Dan didn't point it out, it took the F-22 22 years to go from the initial studies to initial operating capability. The next fighter in the pipeline, by the way, is the F-35.

What's the solution? Dan is right that more control mechanisms (mandated reports, plans, procedures, reviews, etc.), more "reform," more tinkering is just going to produce longer delays, higher costs, and even greater mismatches with the world situation when its products finally appear in the field. As he points out, though, we used to be pretty good at developing weapons, and some organizations can still imagine and create products that meet the needs of their customers. Toyota, as he notes, is not only good at this, they're getting better. Going in the opposite direction from DoD, as it were.

It's also worth pointing out that Toyota operates in a highly competitive work environment. It may take a while, as GM and Chrysler are now demonstrating, but let competition work and the result is inevitable. Of course, competition is exactly what we don't have in DoD program development. After source selection, which for the F-22 was in 1991, the program became a monopoly, which leads to an observation that I made years ago in *Neither Shall the Sword* (p. 68): "If you can't afford two sources for a system, you certainly can't afford one."

Chet Richards
Author, *Certain to Win*

Political Reasoning Perspective

This is in response to Maj. Dan Ward's article, "Call Me Sisyphus," published in the March-April 2009 edition of *Defense AT&L* magazine. I have my students read extracts from Deborah Stone's seminal book, *Policy Paradox: The Art of Political Decision Making*. She provides a wonderful comparison between what she terms the "rationality project" and the world associated with the "polity" (in short, she compares economic rationality with political reasoning).

As a result, I reframe the issue of acquisition reform... not arguing that we lack rationality, but acknowledging that many of these "calls for reform" are really framing the situation (incorrectly) as a problem of economic rationality. That is, we cringe because of the "inefficiencies" of the system—our criteria are rationalized around economic decision-making.

From a political reasoning perspective, the rise and fall and rise and so on of acquisitions tend to make better sense. A political reasoning perspective may also provide explanation as to why we seem to continue to muddle through rather than be as efficient as we were in the 50s. My small understanding of history aside, I think one explanation might be that the idea of creating ballistic missiles was near apolitical in that first decade of the Cold War. The less debate in the political arena

Never Too Busy to Learn

I liked Lon Roberts' article, "Too Busy to Think," in the September-October 2008 issue of *Defense AT&L* magazine. It gave us readers a good perspective about the pitfalls of using the all-too-common technique of multitasking in today's environment. I liked the author's point about the multi-tasker thinking—that he/she is doing an effective job of multi-tasking when the opinion that really matters is the one of the person who the multitasker interacts with. The author also made a good point about multi-tasking involving rote tasks versus more complex cognitive tasks. The eight points Mr. Roberts made in his article were all very valuable.

Bravo to Wayne Turk for his article "An Uncommon Attribute," in the November-December issue of *Defense AT&L*. I would add one recommendation to that excellent list: Read *Defense AT&L* magazine! Actually, that is

(the less ambiguous and more certain the answers are), the more likely we can resort to economic criteria for decision-making. Systems engineering could prevail over multiple, political interpretations.

With a high VUCA (volatility, uncertainty, complexity, and ambiguity) environment, the more arguments take on a political form, with more interpretations of "the problem" and "the solution" possible. Hence, political reasoning is essentially an "unstructurable" decision-making process fraught with "organized anarchy," as some have described it.

So, I would reframe the situation—around trying NOT to use economic rationality (or philosophically structural functionalism) as the paradigm to judge how we acquire defense systems. The more VUCA, the more that political reasoning (with divergent causal stories, solutions-looking-for-problems, and guile) provides more explanatory power. Perhaps our larger scale acquisition program managers should study political reasoning. I'd say reading Machiavelli (and Deborah Stone) might serve us better than reading John Locke (or the PPBE process as intended).

Dr. Christopher Parapone
U.S. Army Training and Doctrine Command

really a subset of look at lessons learned. I save all my back issues of the magazine, but they are all out there on defense acquisition Web sites as well just waiting for people to read them.

I am reading a book called *CrazyBusy: Overstretched, Overbooked, and About to Snap! Strategies for Coping in a World Gone ADD* by Edward M. Hallowell. It makes the point that too many people are on overload to the point where they don't have time to read and learn. Another point in the book is that people mistake speed for knowledge/wisdom. Taking the time to research, study, and learn should be regarded with patience and respect, not disdain for being slow. It's easy to do the first thing that comes into one's mind.

Al Kaniss
Naval Air Systems Command

sis of its contracting acquisition process for the third block procurement of submarines. In October 2007, Drakeley initiated a three-day Lean event held to improve performance and identify, analyze, and eliminate redundancy and waste as the program office moves toward another eight-ship multi-year procurement contract in fiscal year 2009.

"We looked from end-to-end at the entire contracting process," said Johnson. "We looked at the processes for the procurement request, the request for proposal, and the bid and the negotiations process. We looked at lessons learned from the last procurement process and what was useful and what was not. In the end, a more detailed and specific contract was created. I now wonder how we ever did a contract without holding such an event."

The contract for the third block of submarines was expected to be awarded by the end of fiscal year 2008.

"We're not waiting for the Block III contract to make process improvement changes," said Johnson. "As we go through and learn how to do things better, we are implementing them where it makes sense. And we are seeing real savings in the price of the ships, and I expect that to continue in the future."

Since that first event held some 24 months ago, Lean has become ingrained as part of the process within the VIRGINIA Class Program Office. Some 35 Lean events involving the program office have been held. Weekly teleconferences on Lean initiatives are held, and as improvements to the processes are made, they are implemented. *USS NORTH CAROLINA* and *USS NEW HAMPSHIRE* have already benefited from some of those process improvements.

Last December, the VIRGINIA Class Program Office held its second EPS. During the session, some 41 new Lean initiatives were identified and prioritized. In each case, the opportunity costs, objective status, and responsible office were recognized to establish a baseline metric.

"Lean creates a better sense of expectation and communication between everyone who is involved," said Johnson. "It is a vehicle or tool that lays everything out using a common language and methodology that allows you to see what is being done, who is doing it and what is being done to whom."

NOTE: The Navy signed the VIRGINIA Class Block III contract—a five-year, $14 billion multi-year procurement contract for eight VIRGINIA Class submarines—on Dec. 22, 2008. The contract also meets the VIRGINIA Class Program's mandate to reduce acquisition costs by approximately 20 percent for the fiscal year 2012 ships.

To learn more about Lean Six Sigma and its methodology, contact the Team Submarine Lean Office at 202-781-1737.

The Black and White of Fraud, Waste, and Abuse

Bruce Burton ■ *Lauren McLean*

Defense budgets and procurement activity have risen dramatically over the years, increasing from $304 billion in fiscal year 2000 to almost $700 billion in fiscal year 2008.

Contracting for goods and services also saw substantial increases, with more than $315 billion awarded on contracts in 2007. The volume alone created a strain on DoD procurement resources, but when it is considered that resource levels remained flat during this time, the environment was ripe for increased opportunities for fraud. Throw in increased urgency in DoD's support for the warfighter and you create the perfect storm for fraud, waste, and abuse; and that is exactly what we see in the news headlines on almost a daily basis.

Burton *is the deputy assistant inspector general for the acquisition and contract management directorate in the DoD Office of the Inspector General.* **McLean**, *currently in the Audit Policy and Oversight branch in the DoD Office of the Inspector General, has numerous years of experience as an auditor, both in DoD and industry.*

Some examples of eye-catching headlines:

"Feds Charge 22-year-old Pentagon Contractor with Procurement Fraud"—This case involved a defense contractor who defrauded the government by delivering faulty, decades-old munitions to Afghan security forces. The 22-year-old company president and three colleagues were indicted on 71 counts related to the sale of $298 million of Chinese ammunition through a DoD contract. (As reported in *Government Executive*, June 23, 2008.)

"Army Officer Pleads Guilty to Conspiracy, Bribery and Money Laundering Scheme Involving DoD Contracts at U.S. Army Base in Kuwait"—While deployed in Kuwait, an Army officer admitted to participating in a bribery and money laundering scheme. The officer was responsible for awarding contracts for services worth millions of dollars to be delivered to troops in Iraq. In return for awarding the contracts, he admitted to receiving or being promised more than $9 million in bribes. (As reported in *Earthtimes*, June 24, 2008.)

"Former DoD Contractor Pleads Guilty in Scheme to Steal $39.6 Million Worth of Fuel from U.S. Army In Iraq"—A DoD contractor and his co-conspirators used fraudulently obtained documents to enter Camp Liberty in Iraq. The conspirators presented false fuel authorization forms to steal aviation and diesel fuel for subsequent resale on the black market. The fraud resulted in the theft of 10 million gallons of fuel worth approximately $39.6 million. One of the conspirators received at least $450,000 in personal profits from the illegal sale. (As reported in *Marketwatch*, Oct. 7, 2008.)

Fraud, Waste, and Abuse Definitions

Although most people have a general understanding of the term fraud, one of the most widely quoted definitions is found in Black's Law Dictionary:

> *A false representation of a material fact, whether by words or by conduct, by false or misleading allegations, or by concealment of that which should have been disclosed, which deceives another so that he acts, or fails to act, to his detriment.*

The Government Accountability Office's definitions for waste and abuse are:

> *Waste involves the taxpayers not receiving reasonable value for money in connection with any government funded activities due to an inappropriate act or omission by players with control over or access to government resources (e.g. executive, judicial or legislative branch employees, grantees or other recipients). Most waste does not involve a violation of law. Rather, waste relates primarily to mismanagement, inappropriate actions and inadequate oversight.*
>
> *Abuse involves behavior that is deficient or improper when compared with behavior that a prudent person would consider reasonable and necessary business practice given the facts and circumstances. Abuse also includes misuse of authority or position for personal financial interests or those of an immediate or close family member or business associate. Abuse does not necessarily involve fraud, violation of laws, regulations or provisions of a contract or grant agreement. ... Payment of incentive and award fees in circumstances where the contractor's performance in terms of cost, schedule and quality outcomes does not justify the fees is an example of contracting waste. In comparison, an example of contracting abuse would include making procurement or vendor selections that are contrary to existing policies or unnecessarily extravagant or expensive. It is important for contracting professionals to be alert to the presence of fraud, waste, and abuse when conducting their work.*

Why Do People Commit Fraud?

In the 1950's, famed criminologist Donald R. Cressey developed a hypothesis to explain why people commit fraud. Over the years, his hypothesis has become known as the fraud triangle. The triangle is usually pictured with three common fraud elements: opportunity, motivation, and rationalization. The opportunity to commit fraud occurs when employees have access to organizational assets or information that allows them to commit and conceal fraudulent activity. In general, the opportunities to commit fraud increase when an organization has a poorly designed system of internal controls, or there are persons in positions of authority who are able to override existing controls.

Motivation is also referred to as incentive or pressure. People are motivated to commit fraud for a variety of reasons, and the quest for power is often a common motivator. Pressure to commit fraud can be caused by either internal physical stresses or stresses from outside parties such as collection agencies. Rationalization occurs when the fraudsters convince themselves that their behavior is okay for a variety of reasons. Common rationalizations a person may have include: "I am just borrowing the money and will pay it back when my situation changes"; "The organization does not really need all the money it makes"; or "The organization has not treated me well, and I am going to get back at them."

What Does Fraud Mean in DoD?

In addition to becoming familiar with the commonly used definitions of fraud, waste, and abuse, it is important that contracting professionals understand DoD's definition of fraud. DoD Instruction 5505.2, "Criminal Investigations of Fraud Offenses," Feb. 6, 2003, defines fraud as follows:

> *Any intentional deception designed to deprive the United States of something of value or secure from the United States a benefit, privilege, allowance, or consideration to which he or she is not entitled. Such practices include:*

"Things in law tend to be black and white. But we all know that some people are a little bit guilty, while other people are guilty as hell."

Donald R. Cressey, Criminologist, 1919-1987

- *Offering payment or accepting bribes or gratuities.*
- *Making false statements.*
- *Submitting false claims.*
- *Using false weights or measures.*
- *Evading or corrupting inspectors or other officials.*
- *Deceiving either by suppressing the truth or misrepresenting a material fact.*
- *Adulterating or substituting materials.*
- *Falsifying records and books of accounts.*
- *Arranging for secret profits, kickbacks, or commissions.*
- *Conspiring to use any of these devices.*
- *Conflict of interest cases, criminal irregularities, and the unauthorized disclosure of official information relating to procurement and disposal matters.*

A May 2008 Defense Criminal Investigative Service case contained several examples of fraudulent practices prohibited by the department. Specifically, five defendants were involved with a multimillion dollar bribery scheme involving Army Medical Department contracts at Fort Sam Houston, Texas. According to court records, from April 2002 to August 2005, the defendants committed acts of bribery and fraud, accepted kickbacks, and disclosed privileged information to ensure that a defendant-owned company received government contracts.

Fraud Indicators

Fraud indicators are best described as symptoms or characteristics of possible fraud, the result of a fraudulent act, or an attempt to hide a fraudulent scheme. However, a fraud indicator may have nothing to do with a fraud scheme and might simply be a symptom of an internal control weakness within the organization. Similarly, the presence of more than one indicator does not necessarily mean that fraud has occurred. It is important for contracting professionals to be aware of indicators of fraud and fraud schemes when conducting their work.

Procurement fraud indicators are numerous and sometimes may not be obvious, depending on the knowledge and experience of the fraudster. Although this list is not all inclusive, the following are examples of procurement fraud indicators:

- Unusually high volume of purchases from the same vendor.
- Close socialization between government officials and vendors.
- Industry or country has a reputation for corruption.
- Losing bidder cannot be located in business directories.
- Vendor address is a mail drop or a P.O. box with no telephone number or street address.
- Vendor address or phone number matches a government employee's.
- Losing bids do not comply with bid specification, or only one bid is competitive and others are poorly prepared.
- Bidder participated in drafting contract specifications.
- Vague contract specifications followed by change orders.
- Purchase orders of contracts extended by change order rather than rebidding.
- Multiple awards for similar work are given to the same contractor.
- Significant transfers to scrap accounts or inventory write-off accounts.
- Cost is charged to original job order, but no physical inventory is left on the job.
- Apparent high prices compared to similar contracts, price lists, or industry averages.

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By Dan Ward, Chris Quaid, Gabe Mounce, and Jim Elmore

GREAT MOMENTS IN ACQUISITION HISTORY

1802: Napoleonic Army designers roll out the first camouflage headgear.

- Failure to adequately publicize requests for bids.

The Navy Acquisition Integrity Office (AIO) has developed a comprehensive list of fraud schemes that all DoD contracting professionals should be aware of when conducting their work. Common acquisition fraud schemes identified by AIO include:

- Bribery and Kickbacks—giving or receiving something of value to influence an official act.
- Collusive Bidding—Suppliers and contractors agree to prohibit or limit competition and rig prices to increase the amount of business available to each participant.
- Defective Pricing—Failure to submit current, complete, and accurate cost or pricing data in a price proposal to the government on a negotiated contract.
- Product Substitution—Intentional submission of goods and/or services that do not conform to the contract specifications or requirements.
- False Statements and Claims—Knowingly and willfully submitting false statements or claims with the intent to mislead.
- Unjustified Sole Source—Improper award of a contract without competition or prior review.

The Fight Against Fraud

Although the fight against fraud may seem like an uphill battle, DoD is making tools available to its personnel to help them level the playing field. Section 813 of the John Warner National Defense Authorization Act for fiscal year 2007, Public Law 109-364, directed DoD to establish a panel on contracting integrity. The panel consists of senior leaders throughout DoD tasked with conducting a department-wide review of progress made by DoD to eliminate areas of vulnerability in the contracting system that allow fraud, waste, and abuse to occur. The panel established 10 subcommittees to address a variety of issues such as contracting integrity in a combat/contingency environment, sufficient contract surveillance, and the identification of procurement fraud indicators. Subcommittee membership includes representatives from all the military departments; defense agencies; and other DoD organizations, including the Defense Contract Audit Agency, the Office of General Counsel, and the Office of the DoD Inspector General.

The panel took a strong stand against fraudulent activity with the establishment of the Procurement Fraud Indicators Subcommittee, which is chaired by the DoD assistant inspector general for acquisition and contract management in the Office of the DoD Inspector General. Subcommittee members represent a variety of disciplines and DoD organizations, including the Army Audit Agency, Naval Audit Service, Navy Acquisition Integrity Office, and the Air Force Office of Special Investigations.

Where to Find Information on Fraud

A subcommittee accomplishment is a partnering with the Defense Acquisition University to develop an online fraud training module for contracting professionals, available on the DAU Website (<www.dau.mil>) in April 2009. The DAU training will consist of one or two training modules that will take about two hours to complete. The modules will be available to anyone who would like to learn more about acquisition fraud, but are particularly targeted to individuals working in the acquisition field—such as contracting officers and specialists, program managers, and

Although the fight against fraud may seem like an uphill battle, DoD is making tools available to its personnel to help them level the playing field.

contracting officer's representatives—as well as to auditors, investigators, and attorneys. Persons completing the training will qualify for continuing professional education credits depending on the requirements of their field and/or professional license.

The online training has information on more than 15 acquisition fraud scenarios such as purchases for personal use, phantom vendors, and bid information leaks. The first part of the training will define and explain contracting fraud schemes and corresponding indicators. The second phase will provide an opportunity for participants to test their knowledge of fraud schemes and indicators.

A second subcommittee accomplishment is the October 2008 launching of the Fraud Indicators in Procurement and Other Defense Activities Web site (<www.dodig.osd.mil/inspections/apo/fraud/index.htm>), developed by the Office of the DoD Inspector General's Audit Policy and Oversight group. The Fraud Indicators Web site has a variety of resources for procurement professionals, auditors, investigators, and individuals interested in learning more about methods to detect and prevent fraud, waste, and abuse. More than 35 DoD agencies and components, as well as the American Institute of Certified Public Accountants, contributed to the development of the tool.

The Web site includes 40 scenarios and fraud indicators on a variety of topics such as contracting, in-theater operations, healthcare, and base allowance for housing. Contracting scenarios cover a variety of interesting topics such as suspect invoice charges, inherently governmental functions, contract progress reports, and fraudulent invoices. Additional fraud resources located on the Web page include fraud guidance for auditors, fraud handbooks developed by DoD and other federal agencies, information on upcoming fraud training and conferences, a fraud dictionary, an interactive fraud IQ tests, and useful links. Web site visitors are encouraged to submit comments, provide feedback, or submit a fraud scenario.

Reporting Fraud, Waste, or Abuse

Army Criminal Investigative Division
crimetips@conus.army.mil

Naval Criminal Investigative Service
1-800-264-6485 or ncistipline@ncis.navy.mil

Air Force Office of Special Investigations
1-877-246-1453 or hqafosi.watch@ogn.af.mil

Defense Criminal Investigative Service
1-800-424-9098 or hotline@dodig.mil

Additional information and reading material on contracting fraud issues:

Defense Contract Management Agency, Contract Integrity Center
http://home.dcma.mil/cntr-dcmac-y/fof/index.htm

Department of Defense, Office of Inspector General
www.dodig.mil/inspections/apo/fraud/index.htm

Navy Acquisition Integrity Office
http://ogc.navy.mil/aio.asp

Army Fraud Fighters
https://www.jagcnet.army.mil

Defense Acquisition University
www.dau.mil

National Procurement Fraud Task Force
www.usdoj.gov/criminal/npftf/

If It Looks Like Fraud…

Contracting professionals at all levels are the eyes and ears of DoD. When a contracting professional suspects that something is wrong, he or she should make a referral to a DoD attorney or investigator. It is better to request the assistance of attorneys and investigators when you see smoke instead of waiting for a three-alarm fire. Contracting professionals should not try to assume the role of detective; that is the responsibility of trained professionals. The investigators and attorneys will work together to answer the questions, "Is it fraud or stupidity?" and "Are they guilty as hell?"

Mark S. Boyll, associate general counsel, DoD Office of the Inspector General; Nancy Reuter, supervisory editor, Naval Audit Service; and Joseph P. Bentz, program director, Contract Audits, U.S. Army Audit Agency contributed to this article.

Comments and questions can provided at <www.dodig.osd.mil/inspections/apo/fraud/commentform.php>.

A Practical Approach to Enterprise Integration

DoD's Standard Procurement System

Sachin Chandra ■ *Robert Juarez*

mplementing enterprise integrations can be complex and daunting, especially for organizations with a legacy information technology environment. The practical approach to integrations should result in maximizing return on investment and achieve a forward-looking, flexible architecture aligned with broader enterprise architecture goals

Chandra *is vice president of information technology at Universal Consulting Services.* **Juarez** *is a technical manager at Universal Consulting Services.*

and the emergence of new technologies in the marketplace. In this article, we will shed light on determining and implementing such practical strategies for an organization's IT and business integration needs as well as highlight key aspects of the Standard Procurement System legacy integration strategy. SPS is one of the Department of Defense's contract writing systems, deployed to more than 23,000 users at over 750 sites worldwide. The program is managed by the SPS Joint Program Management Office (JPMO) within the Business Transformation Agency.

Implementing enterprise integrations can be complex and daunting, especially for organizations with a legacy information technology environment.

The Need for Enterprise Integration

IT environments at government and large corporate organizations are usually a result of years of evolution as business practices have changed and grown, and as new systems have been deployed. The systems include commercial off-the-shelf, government off-the-shelf, and custom applications that fulfill specific business needs for the organization. Not surprisingly, these applications are built on different technologies with unique architectures and have their own specific data formats for their business transactions. As a result, applications lack a way to share data or services, leading to islands of information and business capabilities within an organization. Such disconnected environments lead to duplication of data entry, information discrepancy, and lack of information visibility across the enterprise. How can organizations get around this problem?

The answer is enterprise integration, which is the industry term for real-time information exchange across the various business functions of an enterprise. However, integration can be complex and expensive. There are many integration software vendors in the marketplace that offer integration solutions. Instead of attempting to pick a specific tool or technology for implementing your integration solution, the first step is to determine the integration strategy that will best achieve your business needs. The integration strategy should implement a long-term, enterprise-wide model that sets a foundation for sharing data and capabilities across all applications of a business enterprise even as they are modified or replaced.

Integration Strategies

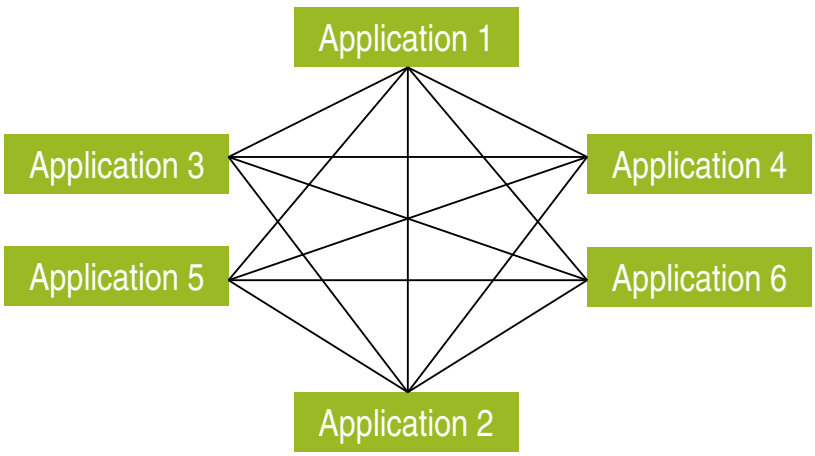
Integration technologies and concepts have evolved over the last decade, leading to a multitude of architectures and products in the IT market. Once you get past the marketing hype, however, there are really three broad integration strategies:

Point-to-Point

In a point-to-point integration approach, each application is integrated directly with the other application via an interface module. As shown in Figure 1, each line represents a distinct interface module between the various applications. The interface module contains all of the necessary business rules to extract and transform data between the two applications being integrated.

While interfaces of this type can be built and implemented relatively quickly and cheaply, the approach has limited consideration for enterprise-wide data integration. As more applications are interconnected with each other, the number of integration modules you need to build and maintain multiply exponentially. Additionally, those interface modules are directly impacted by underlying application upgrades and data changes. You should use a point-to-point integration approach only in an environment with a very limited set of legacy applications that are in sustainment and are not expected to be modified over time.

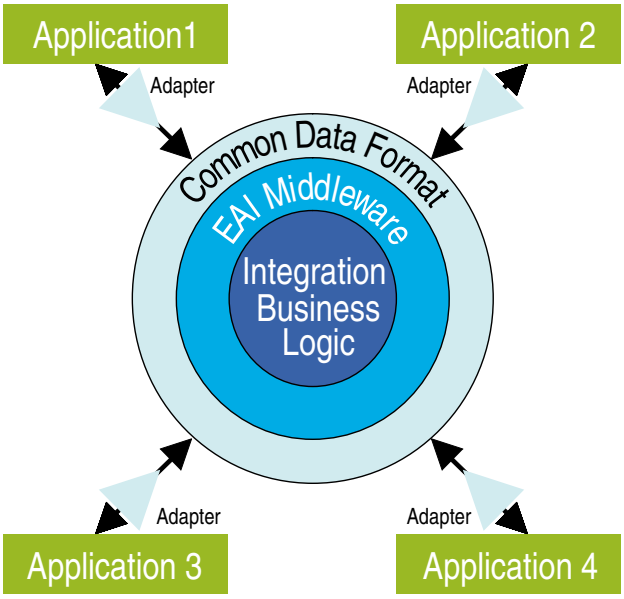
Figure 1: **Point to Point Approach**



Enterprise Application Integration

The EAI approach is based on a hub-and-spoke integration methodology. This approach consists of a central hub that houses and executes all of the integration logic for the enterprise. Business applications communicate via the hub and not directly with each other. As shown in Figure 2, the enterprise hub is typically supported by a specialized application known as the *EAI middleware*, which

Figure 2: **EAI Approach**



acts as a message broker, routing data exchanges between multiple applications. EAI middleware applications are available as commercial off-the-shelf products from companies specializing in integration technologies.

Underlying an effective EAI strategy is the implementation of a standardized enterprise data model. The standardized enterprise data model defines the structure and data elements for the business transaction of your organization. This allows for business applications to interface directly to the standardized data model instead of to each other. Each application's interface logic is coded in a module known as the *Adapter*. With this approach, the integrating applications can continue to be modified over time without having a direct impact on the other integrations, so long as the standardized data model does not change. Therefore, cross application dependency is minimized. Moreover, this architecture allows for a central data store for the integration of business processes and provides a single point of control for maintaining data integrity. The centralization of transformation, communication, security, and other business processes leads to easier maintenance and consolidated visibility.

Enterprise Service Bus Integration

The ESB Integration strategy is also based on the hub-and-spoke integration topology. With the advent of open, Web-based, and service-oriented business applications, EAI middleware applications have evolved to support Web-based communication standards such as SOAP, XML, HTTP, and other services. This new breed of service-oriented architecture-based integration middleware applications is known as ESB middleware.

As shown in Figure 3, with this approach, enterprise systems need to be capable of exchanging corporate data and business services across applications using standard Web-based formats and Web services. For legacy applications lacking a Web-services interface, that is achieved by developing an external layer of code often termed the *application wrapper*. The application wrapper allows for legacy business functions to be openly available for use as enterprise services. The application wrapper contains code to transform data and functions to a standard Web format for communication between the application and the ESB.

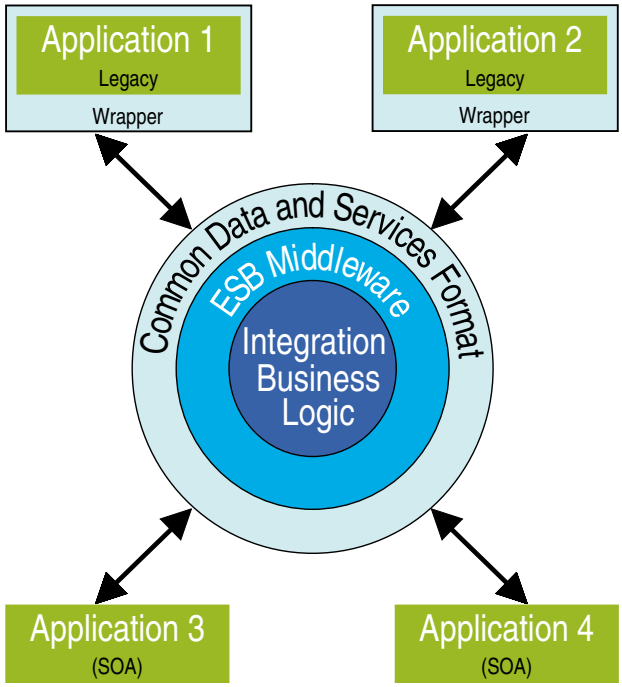
You will find many organizations implementing ESBs as part of their corporate integration strategy in conjunction with a service-oriented architecture. Like the EAI strategy, the ESB architecture allows for a central data store for the integration business processes, and it provides a single point of control for maintaining data integrity. If done correctly, it can lead to a very nimble IT organization that can adapt to changing business needs rapidly by allowing business applications to plug and play as and when needed.

The SPS Legacy Integration Strategy

Contracting data is at the epicenter of business transactions spanning financial, logistics, requisitioning, and contract management systems. When SPS was being implemented in the late 1990s, part of the requirement was to subsume interfaces to legacy financial and logistic systems from the contract writing systems that SPS was replacing. Consequently, point-to-point interfaces were developed.

The major technical challenges in developing and implementing an SPS integration strategy included:

Figure 3: **ESB Approach**



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Stovepiped legacy systems—The external systems were primarily stovepiped applications with limited interface capability.

Lack of a standard data format—There was no single standard data format for the business transactions that needed to flow across the systems.

Need for unique business rules—Because each legacy application had proprietary data structures and formats underlying their business transactions, the transformation rules and integration logic had to be tailored for each application being integrated.

By 2002, technology had improved, and the SPS JPMO was able to move away from the point-to-point interface concept and to leverage the SPS Adapter as part of a hub-and-spoke legacy integration approach with a centralized integration hub. The SPS Adapter allows the application to communicate and interchange data and business transactions with external applications. Examples of business transactions include solicitations, purchase requests, contract awards, award modifications, and vendor updates. The SPS Adapter uses a third-party product called webMethods™ as the middleware platform to achieve the data exchange.

The SPS hub-and-spoke-based integration model strikes a good balance between being flexible, feasible, and cost-effective. It is an example of a practical approach that can be leveraged by other organizations in similar situations. Today, SPS interfaces to more than 20 business applications at more than 200 military installations worldwide. Some of the key benefits of the SPS legacy integration strategy are:

Standardized integration architecture—All of the legacy external systems are integrated into SPS using a standard architecture approach. The integration logic is maintained centrally within a webMethods-based integration hub. The integration hub executes all of the unique data transformation rules and business logic required for the data interchange between SPS and each of the legacy external systems. In the current environment, each database server site has an instance of the integration hub.

Centralized development approach—The data transformation logic and business rules are developed and maintained within code modules called *translators and integration components*, which reside within the integration hub, providing a single location for ongoing development and maintenance.

Real-time execution—The integration hub allows for data to be interchanged in a real-time fashion. For, example, a contract award that is approved and released by a user within the SPS application simultaneously triggers all of the integrations that require awards to be sent out to external systems.

Central administration of integrations—The system administration is centralized and all of the data interchange is visible within the webMethods consoles. Additionally, the integrations generate detailed logging and statistics of the transactions.

Overall, this architecture approach is dynamic and flexible, allowing for integration business rules to be modified and maintained over time and for new technologies to be adopted as they become available. For example, the SPS integration architecture is already leveraging Web services as legacy applications are being replaced with more modern systems.

Lessons Learned

With the rapid advancement of integration technologies and architectures from commercial vendors, business organizations are faced with a complicated landscape of integration strategies and tools to choose from. It is important to maintain a simplified view of the integration landscape and consider the attributes and characteristics of the current IT environment when developing an integration strategy. In general, a hub-and-spoke-based approach provides the best flexibility for the ongoing evolution of your integration architecture. As organizations transform technologically to have standard communication protocols and Web services-based applications, integration will inherently be part of the overall IT strategy. The practical approach is to take well-calculated steps that enable your organization to implement the right foundation and function in an integrated fashion without overachieving and overspending.

Note: This article was written solely by Universal Consulting Services and not at the request of any government agency.

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Develop Your Own Management Style

Wayne Turk

Being a manager is a tough job; being a good one is even tougher.

You are a unique individual—one of a kind. Not only are you unique, everyone working for you is also unique. Therefore, you have to develop your own management style to be successful in managing all of that uniqueness. Your style will be shaped by your personality, values, personal and professional life experiences, mentors, role models, the people you supervise, and your training (or lack of it). You have to find out what works for you—and that may change over time, especially as your employee mix changes. It may also change depending on the current situation, time, pressure, and all of the other factors that impact a manager.

Here is some different advice. You don't necessarily want to apply the Golden Rule to your employees all of the time. Don't treat your employees as you would want to be treated. Instead,

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treat them as they want to be treated, and that may differ from your expectations. Get to know them, determine how they each should be treated, and apply a tailored management style in the way you treat each one. Of course, the general rules on treatment apply to how you manage everyone. That is an aspect of the Golden Rule that you do want to apply. Treat everyone with respect, listen to them, be considerate, be fair, and cultivate all of those habits and characteristics that good managers have—but apply them in your own way as it works best for your office.

Get to know your employees, determine how they each should be treated, and apply a tailored management style in the way you treat each one.

Management Styles of the Rich and Famous

There are many high-profile examples of how to develop a successful management style. Managers like Bill Gates, Warren Buffett, and Ricardo Semler have developed their own management style, as outlined in a *Thinking Managers* article by Edward de Bono and Richard Heller (<www.thinkingmanagers.com/business-management/management-styles.php>).

Actually, I wouldn't recommend styling yourself exactly after any of those men. What worked for them may or may not work for you, but it is worth looking at them as examples. The fact that each man has been highly successful shows that there are many different routes to success. The following descriptions are based on information from de Bono's and Heller's article.

Bill Gates' management at Microsoft® was based on control and managing the details—to the point of micromanagement. The Gates management style goes to the level of closely monitoring all details and getting to the nitty gritty level. This is demonstrated by the fact that he even used to review and sign the expense reports for Steve Ballmer, his number two man.

Warren Buffett, on the other hand, has always stated that he wanted the managers of Berkshire Hathaway to think like owners, de Bono and Heller write. He urged them to "look at the business you run as if it were the only asset of your family, one that must be operated for the next 50 years and can never be sold." He wanted them to function on their own, but he did maintain some oversight.

According to de Bono and Heller, Ricardo Semler (head of the Brazilian engineering company Semco) has taken a more unorthodox management style that turned out to be very effective for him and his company. Semler's management policies included unusual practices such as shutting down the company for an afternoon twice a year so all employees could clean out their work areas; limiting all memos and reports to one sheet of paper topped by an eye-catching tabloid-style headline to sum up the key message; and allowing employees to assess their own managers, with a low rating putting the manager's job at risk.

Management Styles for the Rest of Us

Remember all of your management theories from college or your training courses? Those are directly related to styles of management. You may want to go back and look at them. They include Theory X; Theory Y; Maslow's Hierarchy of Needs; Herzberg's Hygiene Theory; the theories of Chris Argyris, Rensis Likert, and Fred Luthans; and others. I won't repeat them, as I don't want to bore you. It is up you to glean out nuggets from them to fit yourself and your situation.

If you research what the current experts say, you will find that there are anywhere from two to eight major management styles—some of which overlap. Naturally, each expert has his/her own take, since they want to sell books or services. Let's take a look at some of them. Almost all of the experts agree on the first two in the below list as the broadest categories for management styles (under slightly different names, of course). After those two, we get in to smaller categories. We will get into the details of each and even some subcategories.

- Autocratic, authoritarian, or coercive
- Democratic, permissive, or participative
- Laissez-faire or hands off
- Authoritative or expert
- Affinitive or empathetic
- A coach.

Autocratic, Authoritarian, or Coercive

This is the manager who makes the decisions on his own. He doesn't take much, or any, input from subordinates. He is the boss and the decision maker. This management style typically is used in situations or businesses that require quick responses to a time crunch or a crisis situation. Most people tend to visualize this style as a dictatorial approach to management. This may be true for some managers, but it can be a necessary management style. Good examples include the military, a fast-paced trading environment, or an emergency in which there is no time for deliberation and group consideration. When used in other fields or other situations, it is not as successful, creating low morale and disharmony.

Democratic, Permissive, or Participative

In general, this style permits subordinates to take at least some part in decision making and provides them a considerable degree of autonomy in completing routine work activities. Most consider this to be more a motivating and more enjoyable work environment, but it does have some disadvantages such as possible inefficiencies in the decision-making process, being more time intensive, and opening the door to conflict in some cases. There are some subcategories to this management style that provide varying degrees of employee participation and job autonomy:

- Directive democrat—makes decisions participatively by taking input from subordinates most of the time, but closely supervises subordinates in their duties.
- Directive autocrat—makes most decisions unilaterally, but takes some input from subordinates. He, too, closely supervises subordinates.
- Permissive democrat—makes most decisions participatively by taking input from subordinates and gives subordinates more latitude in carrying out their work.
- Permissive autocrat—makes most decisions unilaterally, although usually with at least some input from subordinates, and gives subordinates latitude in carrying out their work.

Laissez-Faire or Hands Off

This style puts the complete trust of running the business or doing their job in the hands of employees, and allows a greater degree of autonomy (think Warren Buffet). This can be a great style in creative or entrepreneurial industries, but can lead to a fragmented or less-organized approach to doing business if implemented across an organization, especially a large one. It can also lead employees to wonder if the manager really cares about them and their work.

Authoritative or Expert

This is the style that can be used by managers who are the experts in their field. They lead by example and inspire confidence in those under them. They frequently have a vision of what needs to be done and how, but are charismatic enough to make people want to follow them. The problem is that you have to be the true expert for this to work. And if you make a mistake, you lose your creditability.

Affinitive or Empathetic

This is the manager who tries to build emotional bonds through empathetic communication. The people who are part of this manager's team always come first, sometimes even before the job (good for the employees, bad for the organization). This may be used successfully during times of stress, both in employees' work and personal environments. However, it is not always successful for the everyday work or for a long-term work environment.

A Coach

This is a manager who sets developmental steps so as to mature his or her staff for the future. He helps improve staff performance by developing long-term strengths. This can only be implemented over time, but can be (and I think should be) used in conjunction with other styles.

You will probably have to mix and match parts of management styles in different situations and at different times.

As you can see, there are many styles of management. All have their good and bad points. You will probably have to mix and match parts of each in different situations and at different times. I am not going to tell you which style is best for you, remembering that you and your people are unique. There is some general advice that I can provide, though. Most experts (and employees) agree that some level of participatory approach is the best. It creates the best work situation, the highest morale, and the best productivity. As I have said in past *Defense AT&L* articles, remember that you are the manager and have the final say in the decisions and actions. But it certainly doesn't hurt to listen to what your people have to say. Their input can be very helpful.

Don't forget guidance and suggestions from other writers and your own experience when you are developing your own unique style.

Elements to Balance

To be a successful manager with your own style, you have to balance certain elements and actions. What follows are some that Sam Boyer, a management consultant from

Colorado, pointed out in a speech and summarized in an article, "Developing an Effective Management Style" (<www.samboyer.com/articles/developing_an_effective_manager.htm>). I have taken the liberty of editing them somewhat and adding to them, so they are reflective of my thoughts, too.

- Good managers are assertive. They are not arrogant, nor are they aggressive in their dealings with others. They are decisive, focused on the problem and its solution. Effective managers show neither malice nor pity towards their subordinates.

- They have a positive attitude. The attitude of employees is a reflection of the attitude displayed by the manager. They display nothing less than a self-confident, "we are going to move forward, and we are going to do it now" positive attitude.

- They provide direction. They have annual and long-term goals. Those with an effective style do not wait until the end of the period to assess performance. Rather they assess ongoing performance and address situations that limit their success.

- They have written policies and procedures. Effective managers have personnel policies, operational procedures, job descriptions, and performance evaluations in writing. Not only are policies and procedures written down, but they are followed and enforced.

- They hold themselves and employees accountable. Managers with effective styles are fair managers. They do not show favoritism among their employees. They work to equalize the workload between employees and hold each accountable for completion of his or her assigned tasks. Effective managers show respect for their employees and work to obtain the same from the employees through holding themselves accountable.

- They celebrate small victories. Enough small victories and they become a large victory and a success for the organization.

- They are communicators. They actively communicate with their employees, other stakeholders, and the public. They make themselves available to those who have to communicate to them. They touch all bases by asking questions, coaching, and observing results. Individuals with effective management styles never stop learning. They ensure that not only are employees initially well trained, but also they insist upon ongoing training.

- They limit the number of supervisors between themselves and the bottom employees. Managers that have an effective style rely on their internal systems, written policies and procedures, and training to get things done—not on extra supervisors.

- They are ethical. They do not compromise personal standards or acceptable ethics to accomplish organizational goals. They dismiss employees who violate ethical standards.

- They use technology and state-of-the-art systems when and where appropriate. They realize the value of using new technology and systems.

- They do not say, "This is how we have done things for 20 years and we're successful; why should we change?" Effective managers continually make changes to ensure ongoing success.

- They have fair compensation for their employees. Managers with effective styles have compensation systems that pay for results. They live by the theory that having fewer well-paid employees is a better situation than a larger number of poorly paid individuals.

- If they are in the commercial field, they let their employees know the business is profitable and thriving. Employees feel better about themselves and their jobs when they know they are working for a profitable company. If they are in the public sector, they let their employees know what impact that they are making, which serves the same purpose.

- They treat their people as individuals, motivating and empowering them. They give them the chance to perform and learn.

- They allow people to try things. They want their people to learn from their mistakes; they don't necessarily punish employees for those mistakes.

Find What Works For You

Being a manager is a tough job; being a good one is even tougher. To be a successful and effective manager, you have to develop your own management style. It will vary over time and according to the situation and the specific employees involved. Just think about the things mentioned here and in other articles, factor in your experience, consider your observations of other managers (good and bad), and you can do it. Sure, you will make mistakes. Learn from them and forge ahead. If you don't make mistakes, you are not trying new things, different approaches, or making firm decisions. Read, learn, seek, and take advice, but shape your own style based on what works for you. And don't be afraid to change it if the situation calls for something different.

The author welcomes comments and questions and can be contacted at **wayne.turk@sussconsulting.com** or **rwturk@aol.com**.

Focusing Sustainment Logistics Toward Capabilities Development: Part I

Charles Borsch

This is part I of a two-part article suggesting that life cycle logisticians press to establish more persistent and thorough analysis of fielded defense system sustainment performance and associated operations and support costs. With growing emphasis on mitigating such costs, analyses could be used to greater effect by logistics advocates during the earliest capabilities-determination phases of acquisition. But timely analysis is not routinely cycling back (a necessity to an iterative acquisition process) to serve logistics advocacy in driving early-phase systems acquisition.

For life cycle logisticians, the extended development of new defense systems means extending service life sustainment for one or more legacy systems. Logisticians' assurance of supportability-related performance analyses associated with all such sustainment-phase work is invaluable. They should lead efforts to more uniformly compile, assess, digest, and report such analyses, and their efforts should be timed to serve a range of acquisition-phase life cycle sustainment-related considerations—specifically to:

- Specify supportability-related performance capability design and development parameters for new or upgraded defense systems
- Set life cycle ownership cost targets for those performance parameters that reflect incremental improvements in affordability or reflect enterprise-wide affordability constraints
- Provide greater and broader substance to the analysis of alternatives (AoA) process in terms of system and infrastructure total ownership cost impact
- Give veracity to the growing intent that costs for life-cycle supportability be more a decision factor during program decision forums.

Borsch *serves as the deputy of the acquisition logistics and strategy branch, Office of Deputy Chief of Naval Operations for Fleet Readiness and Logistics.*

Supportability performance, in this context, refers to system reliability, operational availability, and maintainability (RAM), plus the operations and support (O&S) cost to sustain that performance.

Supportability and Related O&S Cost Analyses

Analyses of fielded system RAM performance and related O&S costs are the best feedback that sustainment-phase logisticians can make to logisticians engaged in the front-end acquisition, starting with the generating of defense system performance capability parameters. Sustainment analysis rarely serves the early Joint Capabilities Integration and Development System (JCIDS) process of specifying system formal performance capability development parameters. But whenever available, it becomes the basis for logistician business case rationale for those shaping performance capability parameters that relate to effective and affordable supportability.

Logisticians … should lead efforts to more uniformly compile, assess, digest, and report [supportability-related performance] analyses, and their efforts should be timed to serve a range of acquisition-phase life cycle sustainment-related considerations.

The dearth of individual and systems analyses from the operational phase back to requirements-generating phases should become a logistics community focus and add quantified fidelity to a chronically underperforming JCIDS in this area of systems specification. While JCIDS is now diligent in having RAM category performance parameters under specification, little has been done to provide a more quantitative base of sustainment performance and analyses that might narrow the threshold/objective range of such RAM performance development targets. The intent, beyond just pushing the envelope in terms of system-inherent reliability and maintainability, is to ensure that program life cycle management success is strongly defined by how well its logistics structure persistently sustains system operational availability at optimally affordable ownership cost. Sustainment logisticians can help with the first step of better attuning JCIDS RAM performance capability to a more narrow, challenging, and defendable range of design and development engineering threshold and objective values. Future analyses-driven reduction to the imprecision of JCIDS supportability key performance parameter (KPP) and key systems attributes (KSA) specification, resulting in improved programmatic focus and resources towards systems development of RAM performance, can help end an old paradigm: that deployed supportability performance and, especially, its cost effectiveness "is what it is" once all else of a system's configuration and development is settled upon.

What are the impediments to driving better sustainment performance analyses into early-phase acquisition? One is the Service's requirements-generation and sponsorship offices, which set defense system performance capability development parameters. They employ a system-by-system approach and have no role in the compilation of systems-wide supportability and ownership cost analyses across systems for JCIDS purposes. Uniformly, they employ no staff expertise in logistics operational performance that might enlighten their responsibilities for diligent initial systems RAM specification and an associated mitigation of system and enterprise ownership cost. In terms of opportunity lost to leverage JCIDS to ensure maximum supportability performance at optimal ownership cost, this narrow scope will expand as systems acquisition decisions are made more with a view to enterprise opportunities and cost. First must come sufficient supportability analysis and data, fed back into those earlier phase process, to substantiate logistician business-case recommendations. It is evident that it has not evolved naturally—from a growing understanding of the need to mitigate future systems affordability—given the fact that all requirements-generation JCIDS prioritization of RAM performance specification has had to be mandated by the Department of Defense (and the Department of the Navy) policy.

Life Cycle Management

Program management should not need a specific policy to steer a more comprehensive total systems life cycle management perspective, such as is now warranted by DoD's

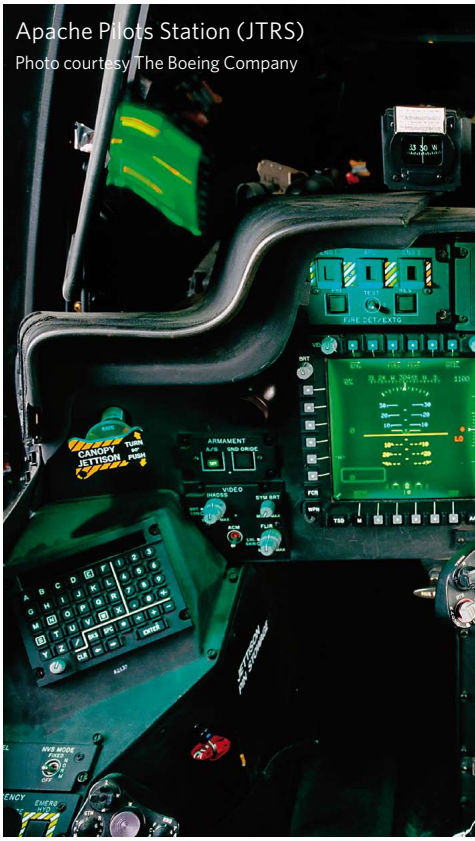
Focusing Sustainment Logistics *continued on page 58*

What's Next After Awarding a Contract?

The Government/Industry New Program Startup Workshop

Jesse Stewart ■ *Norman S. Bull*

C-5M Super Galaxy
U.S. Air Force photo/Senior Airman Jonathan Snyder



Apache Pilot's Station (JTRS)
Photo courtesy The Boeing Company

The contract has finally been awarded. Now what? Industry and Department of Defense program managers are committed to achieving success in the program they manage. They both have the responsibility and the authority to execute managerial and technical actions that could lead to success. If they are smart, they know that one of their upfront managerial tools should be a joint DoD/industry New Program Startup Workshop (NPSW), and it should be on the near-term agendas of both government and industry PMs. That's because a properly planned and executed workshop is a positive element for use in the early stages of any program phase. Improving DoD/industry joint integrated product team (IPT) product alignment is key to a successful program, and that's what the workshop offers.

Stewart, *a retired Navy captain, is a professor of program management at DAU.* **Bull**, *a retired Navy captain, is an independent weapons system program management education consultant for DAU.*

BAMS
Image courtesy Northrop Grumman

"Every ACAT program that hopes to be successful should hold a program startup workshop," said Navy Capt. Bob Dishman, program manager for the Navy Broad Area Maritime Surveillance, Unmanned Aircraft Systems, who participated in a workshop Sept. 3 through 5, 2008.

Goals, Benefits, and Objectives

An NPSW sets the foundation for a well-executed program. The goal of the NPSW is to overcome the struggle and some of the failures experienced by many programs, particularly at startup. Specifically, the NPSW is intended to:

- Create an environment of teamwork, collaboration, communication, and trust
- Be held soon (four to six weeks) after contract award
- Be conducted jointly with government/contractor teams
- Be a high-energy concentrated effort over two and a half to four days
- Align government and contractor startup activities
- Focus on improved program execution.

Benefits programs have received:

- The joint establishment of common DoD/industry vision and plan for success
- The joint building of a mutually supportive environment

- The joint foundation of a mutually understood and agreed-upon performance measurement baseline, including program risk.

The benefits will become reality if the PMs and their teams set the goal of facilitating a partnering experience—which includes key industry and government stakeholders—and set the goal of building an environment of collaboration, teamwork, trust, and communication; and educate their teams on effective program startup actions and facilitate them through key steps in the program startup process.

Both industry and government spoke of the NPSW benefits. Glenn Kurowski of Lockheed Martin, and Army Col. Ray Jones and Navy Capt. Jeff Dunlap of the Joint Tactical Radio System program stated jointly, "Getting the team together early with focused tasks resulted in opening and reopening lines of communications and exposing blind spots early." They also noted that "partnership and collaboration is not a one-time event." The Joint Tactical Radio System program participated in the NPSW May 12 to 15, 2008.

Where Are We Going with Workshops?

The workshops started several years ago through a joint effort between industry and DAU. You may wish to review an earlier article published in the January-February 2007 *Defense AT&L*, "Program Startup Workshop," which links the workshop efforts to the Marine Corps' CH-53K heavy-lift helicopter (a derivative design of the CH-53E Super Stallion).

Recently, Dave Ahern, the director for portfolio systems acquisition in the Office of the Deputy Under Secretary of Defense for Acquisition and Technology, in conjunction with the National Defense Industrial Association's Industrial Committee on Program Management, has received briefings on specific NPSWs. Prior to the workshop, both government and industry PMs said they thought it would be a waste of their time. Following the workshop, they said the workshop was extraordinarily valuable! Why the negative attitude going in and the positive attitude coming out?

"The negative perception derives from effort involved in setting up the workshop versus getting on with the real work of setting up the program. The positive attitude coming out of the workshop is attributed to open communications as initial personal relationships and expectations are established that improve government/contractor team alignment," said Ahern.

Due to the industry consensus reached in the National Defense Industrial Association's Industrial Committee on Program Management's meetings, NPSW now includes additional activities applicable to milestones A, B, and C post-awards, as well as special events. That has led to the hosting of NPSWs for DoD programs such as:

- Joint Tactical Radio System, Airborne and Maritime/Fixed Station
- C-5 Reliability Enhancement and Reengineering Program
- Broad Area Maritime Surveillance
- Joint Air to Ground Missile
- Joint Precision Approach and Landing System
- Joint Land Tactical Vehicle (early coordination only).

The C-5 Reliability Enhancement and Reengineering Program workshop was the first workshop that wasn't focused on a milestone B transition. In a presentation at a National Defense Industrial Association meeting, the industry and government PMs identified some key benefits of conducting the workshop after a Nunn-McCurdy breach, such as the examination of the cultural shift to fixed price environment and a shared awareness of what is important. Participants stated the workshop "provided a vehicle to put future issues on the table early, resulting in more time for them to be resolved."

Numerous program orientation and presentation activities are conducted during the workshop, which can last two and a half to four days. Challenges effecting workshop structure include program complexity, technology maturity, and government/contractor cultural differences. However, the creation and alignment of the DoD/industry joint IPTs are the most fundamental and powerful action to flow from any workshop and should apply across most, if not all, programs.

Although not a system that has employed the NPSW process, the Navy E-2D Advanced Hawkeye airborne early warning aircraft program is an excellent example of the application of joint IPTs. Using proven IPT earned value and communication processes with Northrop Grumman, the Hawkeye PMs oversaw significant enhancements in program transparency, near-real-time status reporting, and the facilitation of well-understood risk-/opportunity-oriented joint PM decisions. The benefits flow from the joint IPT work on the integrated baseline review and attention to earned value management. Timeliness is essential; thus, the PMs receive comprehensive weekly contractor/staff briefings using noncertified but maturing EVM data as well as other metrics. Their process is used as a workshop example.

Getting the Workshop Off the Ground

Prior to any decision to conduct an NPSW, the respective industry and DoD PMs need to meet/communicate and decide if there will be a workshop and, if so, what is to be accomplished in the workshop. This meeting or conference call should occur no later than one week after contract award or the start of a new phase or major new event. If the decision is to conduct an NPSW, a DAU facilitator should be contacted immediately to firm up the outputs mentioned in the following paragraph. Provision for an NPSW is recommended for inclusion in the request for proposal and should be focused on preworkshop coordination and/or training. Desired out-

"The negative perception derives from the effort involved in setting up the workshop versus getting on with the real work of setting up the program. The positive attitude coming out of the workshop is attributed to open communications as initial personal relationships and expectations are established that improve government/contractor team alignment."

Dave Ahern, director for portfolio systems acquisition, Office of the Deputy Under Secretary of Defense for Acquisition and Technology

puts from the contacts, meeting, and/or conference call(s) in which the facilitator is included should address:

- Outputs supporting the PM's needs—defined workshop success factors, defined constraints of the workshop, an understanding that the workshop can offer the opportunity to gain mutual perceptions and expectations of each other and staff members.

- Outputs supporting PMs and the facilitator—agreements on convening a preworkshop agenda-setting meeting (defined/agreed upon meeting output, who will attend, the scheduling of such a meeting in terms of where, when, and how long). (Note: The preworkshop agenda-setting meeting should occur within two weeks after contract award.)

- Outputs supporting the facilitator's workshop needs—the full support and agreement of the PMs that DAU will facilitate the NPSW, affirmation that the PMs really want the help the workshop is designed to provide, and a preworkshop go/no-go decision by the PMs.

One often-asked question is why have an outside facilitator or corporate advisor? The answer is that an experienced professional who has seen many avoidable prior startup issues plus early program successes can be a worthy advisor. But whether it's corporate or government members, they are major stakeholders with a need to know, and some have previously been down the startup road themselves.

Representative Workshop Content

The PMs will tailor their workshops during the preworkshop agenda-setting meeting. A workshop can include, but is not limited to, workshop orientation, integrated baseline review, contract management, key practices, IPTs, communications, risk management, and metrics. Presentations can be made by both the industry and DoD PMs, the DAU facilitator, the government contracting officer, and others as specified by the PMs.

Workshop Methodology

The methodology for conducting the NPSW is grounded in several activities that call for the government and contractor teams to work through a process of alignment. The initial focus of the workshop is to emphasize planning for the integrated baseline review and IPT alignment. While the integrated baseline review planning is relatively straightforward, aligning the IPTs requires the government and contractor teams to quickly move to the operational phase of the contract's pending activities in order to model their key post-award management processes.

Other core workshop activities include contractor and government presentations on their processes and near-term activities, contract baseline and incentives, change management, program metrics, risk and opportunity management, and integrated master plan; and scheduling of top-level reviews. The briefings and discussions serve as a basis for in-depth discussions during the IPT module. The IPT portion of the workshop is planned as the last workshop activity requiring team interaction; and it should last a minimum of four hours, averaging six to eight hours. Desired inputs to the workshop are the draft joint IPT charters facilitating alignment of the government team organization with the contractor's team for management purposes. That includes assigning teams the appropriate work-breakdown structure items for them to manage, creating a joint-risk register with appropriately identified owners, and developing an integrated master schedule further integrated with the earned value management system. Completion of those actions indicates the availability of a mature set of processes from which the program managers can oversee the work done using both the contractor's management processes and the earned value management system.

While all of those processes will not necessarily be in place at the time of the workshop, achieving such processes must be a clear goal of each IPT. That allows the IPTs during the workshop to identify their responsibilities, authority, and interdependencies; and to express an understanding of allocated work. Goals also include establishing co-IPT lead roles and responsibilities, noting risks/opportunities, reviewing integrated master schedule linkage to the EVM system, structuring communications plans, and addressing deliv-

erables. Discussing these items in the milestone or event-orientated workshop and early in the contract establishes a management system, running from the PM through the IPTs, and allows for the effective management of the program.

If the program office (either government or contractor) has not carefully thought out its management post-award processes affecting contract execution, completing the IPT module may be a challenge!

The Communications Plan—An Essential!

The communications plan is very important and can start with individual notes on possible communication issues. Certain assumptions are necessary:

- Are IPT structures available?
- Are IPT charters available?
- Are both formal and informal communication channels operating simultaneously?
- Is the facilitator communication planning checklist available and being executed?
- Is the contractor/program office team data/workflow compatibility established?

Module objectives:

- Develop team communication plans
- Agree on a method to orient new team members to the program
- Identify management techniques and a resolution model for team conflict
- Preliminary collaborative workflow processes identified.

Inputs/prerequisites:

- Determine *what* information needs to be communicated before identifying *how* this information will be exchanged (design the process to fit the requirement)
- Facilitator and PMs actions
- Contractor internal/external early warning system
- Government inputs
- Mechanisms for establishing facts, drawing conclusions, and making logical recommendations relative to appropriate and timely corrective actions
- Draft IPT charters and assignments.

When Should I Sign Up?

Ideally, provisions for an NPSW should be included in pre-request for proposal contractor briefings, be considered in the request for proposal, included in post-request for proposal management planning, and kept in mind during communications initiated between the PMs right after the contract award.

If you are interested in conducting a workshop, please contact Jesse Stewart at jesse.stewart@dau.mil or 703-805-4614.

The authors welcome comments and questions and can be contacted at **jesse.stewart@dau.mil** and **norm.bull@dau.mil**.

Focusing Sustainment Logistics *continued from page 53*

Total Life Cycle Systems Management policy. From a RAM and logistician community perspective, TLCSM means that all major decisions are made with a clear view towards their effect on total system life cycle effectiveness and affordability. TLCSM should naturally generate the need for increased degrees and amounts of supportability analyses, but must overcome the view that TLCSM entails high programmatic "risk" by not focusing on the nearest milestone events. To prevail, TLCSM must span numerous program management tenures with equitable (in terms of all other specified technical performance criteria) priority and resources focus on RAM performance development and growth.

As is the case with JCIDS requirements-generation staffs, RAM and ownership cost mitigation will not be stronger priorities until conveyed as such by program sponsors, as they direct the course of AoAs and transcribe technically better-substantiated RAM criteria into subsequent program baseline documents, acquisition strategies, and solicitations. The message, conveyed by a stronger analytical basis for a system's RAM specifications, is that more analytic rigor must be applied whenever seeking to trade deployed supportability effectiveness and affordability; and further, that fielded systems are expected to be persistently and affordably sustained to more quantitative degrees.

Broadening the Scope and Utility of Supportability Analysis

Setting RAM performance ranges and projecting ownership cost for individual programs under development is the central use of sustainment analysis, fed back into the early phases of acquisition. But it can also provide a crosscutting view of whether maximum sustainment performance and ownership cost projections for any individual systems alternative may not also affect a broader spectrum of defense systems, to be logistically supported within the broader sustainment infrastructure—in other words, there is room for a more cumulative range of supportability analyses to give decision makers a new set of cost-related decision criteria and open for discussion an individual program's impact on the enterprise-wide sustainment infrastructure.

Logistics advocates and O&S fund sponsors can better ensure that decisions to acquire any particular defense system performance capability are based on the continued assurance that the overarching enterprise logistics and sustainment infrastructure remains optimally affordable. The expanded and more cross-cutting analysis should help answer the question of whether the sustainment costs associated with performance capabilities to be provided by a new defense system exceed reasonable expectation of out-year funds availability, given that funds must be sufficient to operationally sustain each of those new performance capabilities to at least their minimal JCIDS-specified threshold levels of operational performance, availability, and affordability.

Logistics advocates should prepare to challenge, if needed, the operative principle that whatever is the best life cycle logistics and sustainment strategy for any individual program is also best from the perspective of enterprise-wide logistics and sustainment cost.

It should be to the interest of sustainment logisticians that decision makers have a broader picture of how an individual program may affect enterprise-wide sustainment infrastructure and total O&S affordability. Such questions are not raised in an insular program review and decision process. But just such an expanded focus on the lessons of deployed system supportability and O&S cost data, compiled and drawn into increasingly earlier acquisition phases (e.g., the AoA), will spur a broader range of enterprise affordability questions before major courses of action for individual systems initiatives are locked into place.

Life Cycle Logisticians off the Sidelines

I've suggested that supportability analysis of deployed system sustainment performance and cost can bridge a sustainment phase back to the requirements-generation gap to serve as a strong business case backing for logisticians who help set JCIDS performance parameters, drive AoA terms, and sponsor sustainment resources. Where there are no such supportability analyses to substantiate these earliest activities and decisions, there are also few or no life cycle logisticians at work.

But it is here that logisticians need to become far more involved and persuasive, since these actions are the most consequential to eventual sustainment life cycle effectiveness and affordability. New DoD policy for supportability-related KPP/KSAs is not matched by direct logistician involvement in shaping those parameters, which has led to perfunctory decisions in setting RAM criteria ranges of threshold and objective performance target values. Those unrefined supportability parameter design and development threshold and objective values receive little AoA scrutiny under present conditions, so a string of presumptions is begun and perpetuated. RAM performance criteria and outcome metrics should instead build upon a progressive improvement to fielded systems' reported sustainment and O&S cost. And as I have suggested, analysis-based recommendations should always both demonstrate maximum sustainability of individual defense system alternatives under consideration and underpin recommendations that serve the long-term effectiveness and affordability of the entire enterprise logistics infrastructure. But again, there are no front-end logistics and O&S cost advocates to build such business case alternatives where there is not a solid base of fielded system sustainment performance and associated O&S cost analysis.

New Venues

Another reason why few logisticians contribute to major initial acquisition program decisions is that the program review and decision structure does not invite supportability or affordability questions, either for the individual initiative at hand or in terms of enterprise- or portfolio-wide impact.

That is changing under the Department of the Navy's new six-Gate program review and decision forum, where there is growing opportunity to raise such questions. The forums are a series of compressed (up to Milestone C) strategic pauses in the earliest acquisition phase activity of capabilities development and program acquisition. Without diminishing the speed of decision making, Gate reviews of acquisition programs offer greater collective visibility and participation among parties with systems life cycle responsibility across the naval enterprise. All Gate reviews include the topics of system sustainment and logistics adequacy as a matter of projecting program health and risk. With this new visibility, logistics and O&S cost advocates must come to Gate reviews prepared with business cases that propose exactly how performance capability parameters or acquisition strategies and solicitations should be structured. Gate review briefings of individual system life cycle sustainment should increasingly be balanced by a perspective of sustainment affordability for related and collective warfighting performance capabilities that the Navy will be sustaining over the same period of time. That is, logistics advocates should prepare to challenge, if needed, the operative principle that whatever is the best life cycle logistics and sustainment strategy for any individual program is also best from the perspective of enterprise-wide logistics and sustainment cost. This principle cannot be challenged within the program review and decision structure without supportability-based analysis that may point to programmatic alternatives.

Part II of this article will propose practical benchmarks and actions associated with each Gate review stage.

The author welcomes comments and questions and can be contacted at **charles.borsch@navy.mil**.

Coast Guard Modernizes Acquisition System

Coast Guard Lt. Tony Migliorini
SPECIAL TO AMERICAN FORCES PRESS SERVICE (NOV. 7, 2008)

WASHINGTON—A newly transformed Coast Guard directorate has reached its full operating capability in recent weeks, working to modernize the Service's acquisition system and build its operational assets for the 21st century, a senior officer said Nov. 7.

Coast Guard Rear Adm. Gary Blore, assistant commandant for acquisition and chief acquisition officer, participated in a roundtable discussion with online journalists concerning the Coast Guard's modernized acquisition program.

The acquisition directorate manages all major Coast Guard acquisition projects. Among the 22 major projects now under way are the HC-144A "Ocean Sentry," a medium range surveillance aircraft, the Response Boat-Medium, and the flagship of the Coast Guard's new fleet, the National Security Cutter.

The first National Security Cutter, *Bertholf,* is operating off the West Coast, Blore said. *Waesche,* the second such cutter, has been christened, and fabrication work has started on a third, named *Stratton.* The National Security Cutter is the largest and most technically advanced cutter to be built for the Coast Guard, he said.

Blore said four boats in the Response Boat-Medium program have been delivered, and that a new facility that officially opened in Green Bay, Wis., "will allow us to go to a full operating capability on that project of about 30 boats per year until we get to 180 boats."

The modernized acquisition program will allow the Coast Guard to mitigate many of the potential problems that can occur during a major acquisition project, Blore said. The Fast Response Cutter project will be a fixed-price contract to control costs, and the Coast Guard will have personnel onsite to be directly involved with the manufacturer throughout the project, he said.

Blore credited Coast Guard Commandant Adm. Thad W. Allen with being a driving force behind modernizing the acquisition process.

"Coincidentally with my arrival, Admiral Allen became the commandant and started us on a path of acquisition reform," he said.

Migliorini serves at the Coast Guard Headquarters Office of Public Affairs.

Department of Defense Releases Selected Acquisition Reports

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 17, 2008)

The Department of Defense has released details on major defense acquisition program cost, schedule, and performance changes since the June 2008 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the September 2008 reporting period.

SARs summarize the latest estimates of cost, schedule, and performance status. These reports are prepared annually in conjunction with the president's budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent or schedule delays of at least six months. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are rebaselined at major milestone decisions.

The total program cost estimates provided in the SARs include research and development, procurement, military construction, and acquisition-related operation and maintenance (except for pre-Milestone B programs, which are limited to development costs pursuant to 10 U.S.C. §2432). Total program costs reflect actual costs to date as well as future anticipated costs. All estimates include anticipated inflation allowances.

The current estimate of program acquisition costs for programs covered by SARs for the prior reporting period (June 2008) was $1,642,568.5 million. After subtracting the costs for two final reports (ERM and MM III GRP), and adding the costs for four new programs (EA-6B ICAP III, GPS IIIA, IDECM, and JCA) from the June 2008 reporting period, the adjusted current estimate of program acquisition costs was $1,651,157.9 million. For the September 2008 reporting period, there was a net cost decrease of $2,865.6 million (-0.2 percent), due primarily to the termination of the Armed Reconnaissance Helicopter (ARH) program during the Nunn-McCurdy certification process.

For the September 2008 reporting period, there were quarterly exception SARs submitted for five programs. The reasons for the submissions are provided below.

Army

ARH (Armed Reconnaissance Helicopter)—Program costs decreased $4,748.0 million from $5,259.7 million to $501.7 million (-90.5 percent), due to program termination during the Nunn-McCurdy certification process.

	Current Estimate ($ in millions)
June 2008 (89 programs)	**$1,642,568.6**
Less final reports on two programs (ERM and MM III GRP)	-2,835.9
Plus initial reports on four programs (EA-6B ICAP III, GPS IIIA, IDECM, and JCA)	+11,425.2
June 2008 Adjusted (91 programs)	**$ 1,651,157.9**
Changes Since Last Report	
Economic	$ 0.0
Quantity	-3,062.0
Schedule	+876.9
Engineering	+72.2
Estimating	+562.9
Other	0.0
Support	-1,315.6
Net Cost Change	**$ -2,865.6**
September 2008 (91 programs)	**$1,648,292.3**

FBCB2 (Force XXI Battle Command Brigade and below)—The SAR was submitted to reflect schedule delays of greater than six months. Specifically, follow-on test and evaluation slipped six months from May 2009 to November 2009 to coincide with the Army Software Blocking 2+ Operational Evaluation. Program costs increased $357.8 million from $3,371.1 million to $3,728.9 million (+10.6 percent), due to an increase in quantity of 6,955 units from 73,463 to 80,418 (+$162.5 million) and associated schedule, engineering, and estimating allocations* (+$58.9 million). In addition, there were increases in support associated with the quantity increase (+$138.5 million).

Air Force

AEHF (Advanced Extremely High Frequency)—Program costs increased $2,576.6 million from $5,645.3 million to $9,938.6 million (+35.0 percent) to reflect cost increases, which have resulted in a critical Nunn-McCurdy unit cost breach currently undergoing certification review.

DoD

Chem-Demil-ACWA (Chemical Demilitarization-Assembled Chemical Weapons Alternatives)—The SAR was submitted to reflect schedule delays of greater than six months. Specifically, the Pueblo "begin operations" milestone slipped 23 months from January 2015 to December 2016, and the Blue Grass "begin operations" milestone slipped 49 months from January 2017 to February 2021. DoD is currently evaluating the cost impacts of these schedule slips.

Chem-Demil-CMA (Chemical Demilitarization-Chemical Materials Agency)—The SAR was submitted to reflect schedule delays of greater than six months. Specifically, the Pine Bluff Explosive Destruction System (PBEDS) complete operations milestone slipped 34 months from December 2008 to October 2011, pending the ongoing technology selection process. There were no cost changes.

* Note: Quantity changes are estimated based on the original SAR baseline cost-quantity relationship. Cost changes since the original baseline are separately categorized as schedule, engineering, or estimating "allocations." The total impact of a quantity change is the identified "quantity" change plus all associated "allocations."

New Effort Taps Best Commercial Practices for Defense Acquisition

Donna Miles
AMERICAN FORCES PRESS SERVICE (NOV. 19, 2008)

WASHINGTON—When a shopper goes online to make a purchase, a click of the mouse will identify which retailers offer the product and at what price, and how much they'll charge to deliver it to the buyer's doorstep.

U.S. Transportation Command's new Corporate Services Vision is bringing that model to the military acquisition process, a senior TRANSCOM official said.

The initiative taps into the best practices being perfected in the commercial sector and puts them at the fingertips of warfighters and those who support them, said Robert J. Osborn II, TRANSCOM's deputy director for distribution portfolio management, command, control, communications, and computer systems.

Corporate Services Vision is in the process of being rolled out, and will streamline the processes used to do everything from arranging troop transportation to ordering spare parts and tracking their delivery, Osborn said. Instead of having to go into different systems to order equipment and track shipments, users will have access to a virtual one-stop shopping experience.

"Today, if you are trying to order transportation for something, track your shipment, [or] find out if it has been delivered, there are multiple systems you have to log onto to get the information you need," Osborn said. "Then it is up to you as the user to collate that information."

Corporate Services Vision is changing that, integrating myriad redundant and often incompatible systems into a single operation across the enterprise, he said. This will simplify the acquisition process, saving money and making many of the steps all but transparent to the user.

Osborn compared the effort to what a consumer experiences when buying an item online. The buyer simply keys in an item name to determine which vendors offer the product and at what price. Then the buyer selects a vendor and designates how quickly he wants delivery and how much it will cost. Finally, the buyer pays by credit card and receives a code to track the shipment to delivery.

The queries that drive these transactions—to vendors and transportation companies—are transparent to the user.

That's what the Corporate Services Vision will bring warfighters, Osborn said. "We are changing the onus of you as a user [having] to go to different systems to find out your information," he said. "Now you will log onto a Web site, a browser we are providing, and you will be able to conduct business based on what capabilities you need."

Ultimately, this will benefit warfighters by allowing them to concentrate on their mission, not on how to get what they need to accomplish it, he said.

"If you are at the front of the spear out in the field trying to do your job, now that information is being given to you so you can concentrate on making the right decision based on what your job is, rather than spending your time trying to get information," Osborn said.

FCS Launcher to Protect New Class of Navy Ship

Sam P. Tricomo
ARMY NEWS SERVICE (NOV. 19, 2008)

MILWAUKEE—The Non-Line of Sight Launch System being developed as part of the Army's Future Combat Systems has been selected for use aboard the first of the U.S. Navy's Littoral Combat Ships, the *USS Freedom*.

USS Freedom was commissioned Nov. 8 during a ceremony in Milwaukee in which the ship's sponsor was Birgit Smith, the widow of Medal of Honor recipient Sgt. 1st Class Paul Ray Smith of the 3rd Infantry Division, who was killed in Iraq.

The 378-foot *Freedom*—along with its sister ship, *Independence*, being built in Mobile, Ala.—represents a new class of ship for the Navy. The littoral combat ships are designed to operate quickly in shallow water to counter threats in costal regions, known as littoral areas, Navy officials said. They said the ships are specifically designed to counter mines, submarines, and fast in-shore attack craft.

At the core of the new ship's capability to counter the coastal threats is the NLOS-Launch System, said Allan Ashley, the Navy liaison at the NLOS-LS Project Office. He said the launch system is scheduled to be evaluated aboard the new ship during tests set for early 2009.

NLOS-LS is being developed as part of the Army's FCS program to provide soldiers with a rapidly deployable precision-fires delivery system. NLOS-LS is one of the first FCS components slated to be fielded and is scheduled for delivery to infantry brigade combat teams in 2011.

The NLOS-LS consists of a rapidly deployable networked container launch unit that houses 15 precision attack missiles. Through the network, NLOS-LS can accept remote mission commands and conduct firing operations without the use of an attendant crew and attack a variety of targets. The unit is platform-independent, officials said, and can quickly be installed on ground, manned, and unmanned vehicles.

In the Navy application, four 15-missile NLOS-LS container launch units are integrated together into one 60-missile mission module. Littoral combat ships will have weapons zones for up to three mission modules per ship. Therefore, depending on the operation, as many as 180 NLOS-LS precision attack missiles may be available to the ship's captain to counter the threat of fast inshore attack craft.

Sea Cadets stand in formation as the crew of the littoral combat ship *USS Freedom* (LCS 1) mans the rails during her commissioning ceremony at Veterans Park in Milwaukee, Wis., Nov. 8. *USS Freedom* is the first of a new class of Navy ship and its weapons will include the NLOS-Launch System, being developed as part of the Army's Future Combat Systems.
Photo by Navy Mass Communications Specialist 2nd Class Katherine Boeder

Adapting the NLOS-LS for Navy use represents commitment among military services to ensure warfighting success by continuing to develop the joint warfighting force concept and building jointness in early, FCS officials said. They said in the case of NLOS-LS, this is being done at the system development and demonstration phase of acquisition .

"The U.S. Navy is moving toward using a sea-based approach—being able to deploy and control enough resources from an offshore location that we will not need to rely on a foreign country to establish a base of operations," said Ashley, the NLOS-LS Navy liaison.

Ashley said the NLOS-LS is critical to protecting the littoral combat ship itself. He said it is also crucial to counter a range of threats, including Marine landing operations, maritime special operations missions, and counter-piracy activities.

"In short, NLOS-LS not only protects our ship and sea-based assets," Ashley said, "but our Marines and Navy SEALs as they go ashore and conduct other operations in the littoral battlespace."

Although the ship was formally commissioned this month, it was actually launched in September 2006. The first testing to determine the system's ability to track against fast in-shore attack craft was completed in August in the waters off Eglin Air Force Base on the Florida panhandle.

Tricomo serves with the FCS Public Communications Office in Warren, Mich.

Contractor Answers Nation's Call for Mine-Resistant Vehicles

John J. Kruzel
AMERICAN FORCES PRESS SERVICE (NOV. 21, 2008)

SEALY, Texas—Conventional military wisdom holds that enemies have a vote in combat. But manufacturers of the mine-resistant, ambush-protected vehicle have worked to disenfranchise them.

When the Defense Department in July 2007 requested nearly $1.2 billion from Congress and asked for an influx of MRAPs for troops in Iraq, BAE Systems was one contractor that answered the call, a response that culminated at the facility this week.

"The question was how many can you build and how fast can you build them?" said Paul Mann, the MRAP joint program

manager at BAE, which capped off its end of production with a retrospective feting.

The MRAP's unique V-shaped hull diffuses blasts away from the vehicle's underbelly, which has proven an effective countermeasure against the roadside bombs that have killed and injured scores of troops since operations began in Iraq and Afghanistan.

Invoking Defense Secretary Robert M. Gates' plea to industry for an additional 2,650 MRAPs, Mann said that when the Defense Department made force protection its No. 1 acquisition priority, it spurred workers into action.

BAE responded by kicking into high gear, more than doubling its production from about 15 Caiman trucks per day to roughly 35. In total, it has produced more than 5,000 MRAP vehicles—2,868 Caimans and 2,182 RG33s—under Army and Marine Corps contracts over the past 22 months.

"The quality and quantity of your commitment to this mission will never be forgotten by the armed services," Mann told the Sealy plant workers gathered in a facility room for the day's event.

A news report in June cited roadside bomb attacks and fatalities in Iraq as decreasing by almost 90 percent since June 2007, according to Pentagon records and interviews with military leaders.

Dennis M. Dellinger, BAE's president of mobility and protection systems, spoke from an unarmored 5-ton medium tactical vehicle that doubled as a stage in a facility warehouse.

"Today's celebration is about the fact that there are scores of soldiers that will be able to come home in one piece because of the work you've done," he said.

Dellinger said it's "no coincidence" that the MRAP program led to a decline in combat casualties.

"A number of factors went into that, but one certainly was putting the right kind of protection into the vehicles that they traveled around in," he said. "It was an amoeba if you will, in that we kept adjusting as the threat adjusted."

Praising the people involved in the push—from the concept and design teams, to the manufacturers, testers, and government assessment personnel—Dellinger said everybody who contributed to the process should be proud.

"[This] was something that probably was not matched anywhere else in military production history since at least World War II," he said of the speed of production that met time and cost requirements.

Chris Chambers, the vice president of medium/heavy vehicles department of mobility and protection systems, described the encouraging track record of the Caiman vehicle, the last of which rolled off the Sealy lot this week.

The vehicle, which holds up to 10 troops, has been targeted in hundreds of attacks—everything from small-arms fire to smaller roadside bombs—including significant attacks that involved large makeshift explosives, he said.

"They've done very well," he said of the vehicles' resilience to attacks. "They're very reliable."

Providing an eyewitness account of the Caiman's durability under fire was William Thibaux Jr., an equipment operator who serves as a petty officer 2nd class in the Navy Reserve. While serving in Iraq last year, Thibaux said, he saw the effects on a convoy of Marine MRAPs hit by a makeshift bomb.

"Of the seven that were in that vehicle, only one walked away with a broken leg," he recalled. "If you would have seen the vehicle, you would have thought everyone would have died, ... but everyone survived."

Besides its contribution to force protection, BAE has other ties to the military. It is a recipient of the Employer Support of the Guard and Reserve award, a Defense Department honor that highlights employers who convey exceptional levels of support to National Guard and Reserve forces on their payrolls.

The company also employs retired servicemembers like Bob German, an inventory control supervisor. German, a retired Marine Corps corporal, has a son who recently enlisted in the Army and is likely to deploy within the next year, he said.

"Knowing that lives actually do depend on the vehicles we build here, and that we are actually saving lives, is phenomenal," German said. "I get a knot in my throat every time I think about it. You never know if the vehicle we build could be carrying my son or friends of my son's or kids I watched grow up."

MARINE CORPS BASE QUANTICO, Va.—With the base of the frame only 2.5 feet in width and low noise signature, the K-MAX has the ability to deliver cargo with the possibility of not being noticed by the enemy. Photo by Marine Lance Cpl. Meloney R. Moses

New Aircraft Boasts New, Improved Capabilities

Marine Lance Cpl. Meloney R. Moses
MARINE CORPS NEWS (NOV. 26, 2008)

MARINE CORPS BASE QUANTICO, Va.—Military helicopters over Quantico, are a common sight, yet many individuals watching do not automatically assume there is no one inside.

Kaman Aerospace Group demonstrated the K-MAX Unmanned Multi-Mission Helicopter at the Marine Corps Air Facility Nov. 20 to highlight its potential benefits to future battlefield operations.

"It is the best aircraft made for lifting," said Bill Hart, the safety pilot aboard the aircraft during demonstration. "It's not the fastest, but we are trying to increase the speed and weight capability, which requires more testing."

The K-MAX exhibited the ability to support the weight of 6,000 pounds of cargo with its multi-hook capacity and auto landing and drop off capabilities, essentially unmanned.

The craft is contractor-supported, managed by a ground controller using a hand-held tablet computer system with electric actuators inside the craft and standard helicopter controls for easy alternating from unmanned to manned.

"There are switches inside that allow me to take over fast and easy, if I need to," said Hart.

The unmanned aircraft systems requirements officer of the combat development directorate/fires and maneuver integration division, Maj. Thomas Heffern, explained that the Marine Corps is more interested in the capabilities and vision than the actual aircraft.

The vision for the K-MAX is to deliver cargo to Marines and move logistics around the battlefield without excessive manpower, said Cliff Gunsallus, the vice president of engineering for Kaman.

As demonstrated and explained during the air show, the K-MAX also has the ability to quickly change its route when it is alerted of a threat.

"We are looking at this as a potential capability to mitigate against threats," said Heffern. "In the next five years or so this could potentially save men for more important jobs."

Selling for around $7 million, the K-MAX, which has one engine and can hold 228 gallons of fuel, adding 1,550 pounds to the already 12,000-pound helicopter, is currently limited in quantity with only 22 operating worldwide in seven countries to date.

Moses serves at Marine Corps Base Quantico, Quantico, Va.

Re-Invigorating Nuclear Enterprise a Top Priority

Air Force Staff Sgt. Matthew Bates
AIR FORCE NEWS SERVICE (DEC. 4, 2008)

LOS ANGELES—Maintaining accountability and improving stewardship of the Air Force's nuclear program is the top priority, said the Service's 19th chief of staff recently.

Gen. Norton Schwartz said the Air Force has gone through some "rough" air in the realm of nuclear deterrence, but the Service is already on the path to recovery.

"The nuclear enterprise is getting a lot of my own and Secretary of the Air Force Michael B. Donley's attention," he said.

As a result, Air Force officials have a rigorous accountability and "back to basics" approach for compliance, precision, and reliability within the nuclear arena. The goal is to restore the Air Force's nuclear mission to the standard of excellence for which it was known throughout the entire Cold War.

"We will train, organize, and inspect to that standard," Schwartz said. "The bottom line is we lost focus, and we're bringing that focus back."

One way the Service plans to accomplish this is by setting up a nuclear-only major command, called the Global Strike Command. This organization will include both the 8th and 20th Air Forces and will be responsible for the management of the Air Force's nuclear assets.

"We will have the nuclear missiles and the nuclear-capable bombers in the same organization, and the focus will be on the nuclear mission," Schwartz said. "We're going to make sure that we're focusing on doing our nuclear mission the right way, which is the Air Force way."

In addition to establishing this new command, Air Force leaders also created a new Air Staff directorate, or A10, for nuclear matters. Called the Strategic Deterrence and Nuclear Integration Office, and led by Maj. Gen. C. Donald Alston, the office will be the focal point on the Air Staff for the Air Force nuclear enterprise.

"The new directorate provides policy oversight, increased institutional focus, and staff integration for nuclear issues," Schwartz said. "The A10 will be instrumental in managing the overall nuclear enterprise and will be directly involved in implementing the Air Force nuclear roadmap as well as preparing to stand up Air Force Global Strike Command."

Other changes to the Air Force's nuclear enterprise are also under way. The Nuclear Weapons Center at Kirtland Air Force Base, N.M., has been revitalized and expanded, with clearly understood chains of command to prevent repeats of past problems, the general said.

"The Nuclear Weapons Center now has complete control over the whole sustainment supply chain," Schwartz said. "That wasn't the case earlier, and so now we will have a single entity that is responsible for ops and employment and a single entity that is responsible for sustainment."

The chief of staff also pointed to efforts within the Air Force to develop a more centralized inspection process to ensure nuclear material is handled properly.

The general has been impressed with the progress made in the past three to four months and looks forward to tackling the other large nuclear enterprise issues such as how the Air Force can systematically rebuild its nuclear expertise within its ranks of airmen through training and career development.

According to the general, all these changes are a vital part of Air Force stewardship of the strategic nuclear deterrence capabilities, which serves as an important national security backdrop for America and its allies.

"While today's fight is vitally important to our Air Force, the capabilities that we provide in support of our nation's nuclear deterrent force is just as, if not more, important," he said.

"We have to return our focus to the fundamental capabilities of supporting deterrence," he said. "Air Force capabilities help dissuade and deter our adversaries, and it is always best to win without fighting."

Bates writes for Defense Media Activity-San Antonio.

Gates: Procurement System Must Be More Responsive to Current Requirements

Donna Miles
AMERICAN FORCES PRESS SERVICE (DEC. 15, 2008)

WASHINGTON—The military procurement system needs to broaden its focus beyond high-end, high-tech systems so it's better prepared to meet warfighters' current requirements, Defense Secretary Robert M. Gates wrote in the January/February issue of *Foreign Affairs* magazine.

Gates' article, titled "A Balanced Strategy: Reprogramming the Pentagon for a New Age," cites an almost 50-year trend in which the military opts for lower numbers of increasingly more capable systems.

"In recent years, these platforms have grown ever more baroque, have become ever more costly, are taking longer to build, and are being fielded in ever-dwindling quantities," he said.

The problem, Gates said, is that the dynamic of exchanging numbers for capability is approaching a point of diminishing returns. "A given ship or aircraft, no matter how capable or well equipped, can be in only one place at one time," he said.

The secretary recognized that many high-end weapons and units can be used in low-end operations. Strategic bombers have provided close-air support for riflemen on horseback. M-1 Abrams tanks have routed Iraqi insurgents in Fallujah and Najaf. Billion-dollar ships track pirates and deliver humanitarian aid. And as the Army moves its Future Combat Systems program forward, it's spinning out parts of it now to support troops in Afghanistan and Iraq. FCS is a modernization program aimed at providing soldiers the best equipment and technology available as soon as practical.

But in light of the situations the United States is most likely to face in the future, Gates said, it's time for the defense establishment to consider the requirements to support those efforts up front, not after the fact. This includes relatively low-tech equipment suited for stability and counterinsurgency missions.

Gates recalled the struggles the military encountered to field up-armored Humvees; mine-resistant, ambush-protected vehicles; and intelligence, surveillance, and reconnaissance assets to Iraq.

"Why was it necessary to go outside the normal bureaucratic process to develop technologies to counter improvised explosive devices, to build MRAPs, and to quickly expand the United States' ISR capability?" he wrote. "In short, why was it necessary to bypass existing institutions and procedures to get the capabilities needed to protect U.S. troops and fight ongoing wars?"

Gates said it's time to think hard about how to institutionalize the system that procures these capabilities so they can get fielded quickly.

The secretary noted the difference between what defense planners too often strive for and what's really needed. "The Department of Defense's conventional modernization programs seek a 99-percent solution over a period of years," he said. "Stability and counterinsurgency missions require 75-percent solutions over a period of months."

So the challenge, he said, is to recognize where the 99-percent solution is needed, and where the 75-percent one will do.

"The Defense Department has to consider whether, in situations in which the United States has total air dominance, it makes sense to employ lower-cost, lower-tech aircraft that can be employed in large quantities and used by U.S. partners," he said, as one example.

Task Force ODIN—Observe, Detect, Identify, and Neutralize—in Iraq stands as an example of this concept, he noted. The Army aviation battalion stood up in 2006 to conduct reconnaissance, surveillance, targeting, and acquisition operations to counter improvised explosive devices. Since then, the unit has mated advanced sensors with turboprop aircraft to produce a massive increase in the amount of surveillance and reconnaissance coverage.

Gates said officials need to extend this mind-set more broadly throughout the Defense Department.

"The issue then becomes how to build this kind of innovative thinking and flexibility into the rigid procurement processes at home," he said. "The key is to make sure that the strategy and risk assessment drive the procurement, rather than the other way around."

Gates' article calls "balance" a defining principle in the Pentagon's new National Defense Strategy. The strategy strives for balance between:

- Prevailing in current conflicts and preparing for other contingencies;
- Instituting nonconventional capabilities while maintaining a conventional and strategic edge; and
- Retaining core traits that have made the military successful while shedding those that hamper its effectiveness.

"The United States cannot expect to eliminate national security risks through higher defense budgets to do everything and buy everything," Gates wrote. "The Department of Defense must set priorities and consider inescapable trade-offs and opportunity costs."

This is the second article in a series based on Defense Secretary Robert M. Gates' article, "A Balanced Strategy: Reprogramming the Pentagon for a New Age," published in the January/February 2009 issue of Foreign Affairs *magazine.*

Engineers Develop Cost-Saving Repair for Damaged Helmets

Mindy Cooper
AIR FORCE MATERIEL COMMAND NEWS RELEASE (DEC. 17, 2008)

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—Air Force and University of Dayton Research Institute engineers together have identified Joint Helmet Mounted Cueing System, or JHMCS, display unit materials and processing issues and developed a repair capability for damaged systems.

Responding to high failure rates, the repairs are intended to return damaged units to service at substantial cost avoid-

ance to the Air Force and Navy. In addition, implementation of recommended materials and processing changes by the original equipment manufacturer could potentially reduce or eliminate field failures of newly acquired assets.

Program managers for the system from Aeronautical Systems Center's 641st Aeronautical Systems Squadron asked Air Force Research Laboratory's materials and manufacturing directorate engineers to determine if a repair capability could be developed to address failures to the helmet's electronic and optical display. Engineers were also asked to investigate the manufacturing process of display units to determine if any materials and processing practices were contributing to failures and whether particular changes to discovered materials and processing deficiencies may lead to a more rugged, robust system.

By developing a method to repair currently damaged assets, engineers said they have eliminated the need to replace damaged systems, estimated at $60,000 per unit. With the current number of damaged assets, a repair cost of only $1,000 per unit translates into a cost avoidance of $18 million. Just as important, the engineered fix prevents a JHMCS display unit shortage.

According to AFRL's Erik Ripberger, the materials research engineer managing the program, military fighter pilots wear HGU-55/P helmets modified with a JHMCS. The JHMCS display unit allows the pilot to look at a selected target, lock on, and engage.

"This system projects visual targeting and aircraft performance information on the display unit's visor, enabling the pilot to monitor this information without interrupting his field of view, effectively increasing the pilot's situational awareness," Ripberger said. "The visor is also critical for face and eye protection in the event of an ejection.

"Because the performance of the system is so crucial to the pilot's safety and mission, it is imperative that the structural integrity of every display unit is maintained," he continued. "Since no repair capability previously existed, any damaged display units were categorized as beyond economical repair and taken out of service. Due to the high failure rate of these systems, the Air Force and Navy are suffering a shortage of display units."

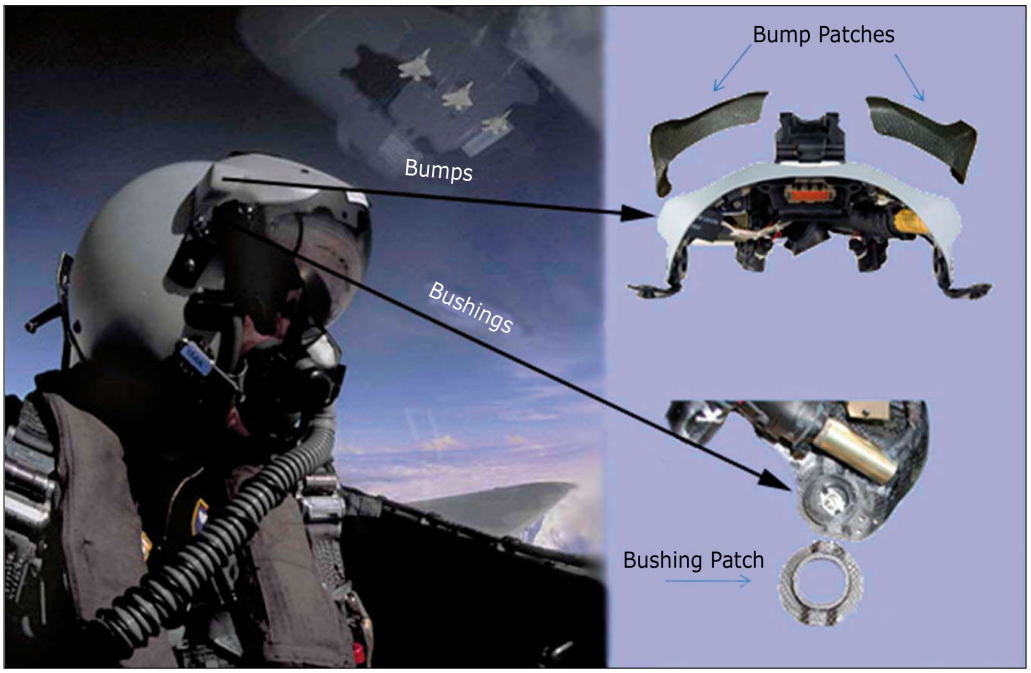
Most in-service damage occurs to the Relay Optics Mount Assembly, a composite shell that houses all electronic and optical components of the display units. The Relay Optics Mount Assembly consists of inner and outer composite shells, each fabricated from two layers of carbon fiber fabric infused with epoxy resin. The inner and outer shells are adhesively bonded to form the Relay Optics Mount Assembly.

Four locations on the Relay Optics Mount Assembly, the left and right bumps as well as the left and right visor mount bushings, are incurring the most damage. The left and right bumps, located at the top, aft portion of the Relay Optics Mount Assembly, are areas which sustain significant impact damage as a result of pilots striking their helmet on the canopy and canopy frames during flight maneuvers. The visor mount bushings secure the visor to the display unit while allowing the visor to pivot up and down over the pilot's face. The visor mount bushings are mounted to the Relay Optics Mount Assembly at the visor bushing mounts. Although not completely understood, engineers believe bushing damage is associated with load transferred to the bushing area during impacts or helmet donning/doffing.

Supported by laboratory testing, engineers recommended several key display unit manufacturing materials and processing changes. First, they recommended the manufacturer change the carbon fiber fabric style to a tighter weave and modify the orientation in which it is laid over the tooling to reduce or eliminate splaying in the bump areas. Second, engineers suggested the grit blast media used by the manufacturer be replaced with the materials and manufacturing directorate recommended media to prevent Relay Optics Mount Assembly shell thinning during blasting operations. Third, engineers recommended the manufacturer incorporate materials and manufacturing directorate standard best bonding practices coupled with a more comprehensive method for applying adhesive to and preparing the surfaces of the visor bushing and visor bushing mount bond surfaces. Lastly, engineers recommended a Relay Optics Mount Assembly visor bushing mount design change which would significantly increase the visor bushing mount bond surface area.

Engineers documented and delivered all materials and processing recommendations and repair processes to the 641st AESS program office. The program office is currently leveraging AFRL's findings to influence the manufacturer to change several of their materials and processing practices.

Engineers worked extensively with the Naval Surface Warfare Center, Crane Division, located in Crane, Ind., to effectively transition the repair technology. Engineers ensured Crane personnel were familiar with all aspects of the manufacture and installation of the doublers and ensured the



A fighter pilot wearing a Joint Helmet Mounted Cueing System is shown on the left. Helmet repairs developed by Air Force Research Laboratory engineers at Wright-Patterson Air Force Base, Ohio, are shown on the right. Air Force graphic image

readiness of their facilities to complete the associated tasks. The repair process has been fully implemented at the Naval Surface Warfare Center. Crane personnel have repaired their first 10 display units, which will be returned to the field by the end of 2008, and are readying to complete the next 100 display unit repairs.

Cooper is with the materials and manufacturing directorate, Air Force Research Laboratory.

Iraqis Improve Logistics Enroute to Becoming Self-Sufficient

Army Pfc. Lyndsey Dransfield
Special to American Forces Press Service (DEC. 17, 2008)

CAMP LIBERTY, Iraq—Iraqi security forces, aided by U.S. soldiers, have taken another step toward self-sufficiency by securing the supplies and equipment they need to sustain operations.

In the past five years, Iraqi army logistics has struggled to make ends meet for its soldiers. One of the crucial issues involved obtaining spare parts for Humvees, the primary vehicles Iraqi soldiers use on their daily missions.

"It became such an inhibitor that it was an issue brought up in every meeting we went to. It was keeping them off the road from successfully conducting current operations," Army Maj. John Joseph, officer in charge of the 4th Infantry Division's Iraqi security forces logistics cell, said.

A lack of spare parts was not the issue. The Iraqi army had ordered and received the parts, but a plan to distribute them to the battalion and brigade levels did not exist.

"There was a bunch of spare parts sitting unorganized in a warehouse in Taji," Joseph said.

In September, the Iraqi Ministry of Defense, along with coalition military officials, developed a program that organized spare parts, put them into packages, and distributed them to the 6th, 9th, 11th, and 14th Iraqi army divisions in Baghdad.

The divisions then developed their own plans to distribute them to the brigade and battalion levels, Joseph said.

Joseph, along with Army Maj. Shane Upton, the officer in charge of the Iraqi security forces logistics cell, has been monitoring the implementation of the program from the beginning, and will see it through its completion at the end of this month.

"This is a true test of the Iraqi army logistics system and the capabilities of the headquarters support companies," Joseph said.

Many Iraqi soldiers were trained by military police transition teams as mechanics, but the lack of parts prevented them from putting their training to use. Now that the parts are being distributed, mechanics can be pulled from checkpoints and do what they were trained to do—fix vehicles, he said. "The Iraqi logistics system now has a chance to work for itself, which is our goal."

Iraqi soldiers check the placement of a Humvee tire jack during a training class taught by Multinational Division Baghdad soldiers at Camp Taji, Iraq. U.S. Army photo by Pfc. Lyndsey Dransfield

Although coalition forces played a vital role in the execution of the program, the Iraqi security forces should take credit for the progress, Joseph said.

"We are here to help them execute their system," he said. "We're not here to redesign it or change it in any way. Their system is centralized because it is culturally based, and it's how the Iraqi army functions."

In 2005, coalition forces began implementing the United States' systems to improve Iraq's infrastructure, but "doing things our way was quickly proven to be an unsuccessful endeavor," Joseph said. "[The Iraqis] wouldn't execute our system unless we were hand in hand with them."

When coalition forces leaders realized the plan wasn't working, they quickly changed their actions to support the Iraqi system by providing resources and provoking actions to occur, Joseph explained.

"It is not up to us to do it for them or dictate how their system should work," he said. "We show them some methods; it may not be methods they adopt, but they're methods that work for us. They can take the best practice out of that and apply it if and how they want."

The key, however, was to let them figure out how to make the system work and to provide assistance where needed. "Our effort didn't change anything about their system," Upton said. "It just promoted their system by helping them push the packages down to those who need them."

The logistics cell is planning a similar program for Iraqi national police in the near future, Upton said.

"The police force also has nontactical vehicles that they use to complete their missions. These parts are in their warehouse and need to be organized," he said. "This isn't a one-time deal. The program is proven to be effective, and will be used throughout the future."

Dransfield serves in the Multinational Baghdad public affairs office.

DAU and NDIA to Sponsor Defense Systems Acquisition Management Course Offering for Industry Managers

Defense Acquisition University and the National Defense Industrial Association will sponsor an offering of the Defense Systems Acquisition Management course for interested industry managers March 2-6, 2009, at the MiraMonte Resort and Spa, Indian Wells, Calif. DSAM presents the same acquisition policy information provided to DoD students who attend the DAU courses for acquisition certification training. It is designed to meet the needs of defense industry acquisition managers in today's dynamic environment, providing the latest information related to:

- Defense acquisition policy for weapons and information technology systems, including discussion of the DoD 5000 series (directive and instruction), and the *Defense Acquisition Guidebook*
- Defense acquisition reform and initiatives
- Defense acquisition procedures and processes
- The planning, programming, budgeting, and execution process, and the congressional budget process
- The relationship between capability needs determination, resource allocation, science and technology activities, and acquisition programs.

All course materials will be provided to students on CD ROM. It is highly recommended that students bring a laptop computer with them to the class. If students do not have access to a laptop, please contact the respective meeting planner as soon as possible. There will be a limited number of laptops available for use through NDIA, so please call early.

For further information see "Courses Offered" under "Meetings and Events" at <www.ndia.org>. Industry students should contact Michael Dauth, mdauth@ndia.org or 703-247-2593. A limited number of experienced government students may be selected to attend each offering. Prospective government students must first contact Karen Byrd at karen.byrd@dau.mil or 703-805-3728 prior to registering with NDIA.

DoDI 5000.02 Supporting Documents

The new Integrated Defense Acquisition, Technology and Logistics Life Cycle Management System Chart (front and back) is available for review on the Defense Acquisition University's AT&L Knowledge Sharing System Web site at <https://akss.dau.mil/default.aspx>. The chart is currently available only as a PDF file. The interactive chart, however, is under development and will be deployed after the new links and URLs have been created.

DAU Announces New iCatalog

DAU is pleased to introduce the new Interactive Catalog, or iCatalog. The iCatalog, a Web-based version of the university's printed catalog, provides the most current information available to the workforce regarding DAU courses, the acquisition career fields, the Certification and Core Plus Development Guides, and other information traditionally found in the DAU printed catalog.

The iCatalog introduces an interactive-based platform for navigation of catalog information. It has been designed so you can easily find the information you're looking for in just one to three clicks of the mouse. Through the iCatalog, you can also access your component's course registration system and the browse feature of most distance learning (training and continuous learning) courses—a one-stop-shopping experience for all your acquisition career-long learning needs. Try it out at <http://icatalog.dau.mil/>. The iCatalog will continue to improve to meet your needs. If you have thoughts or comments, click on the comment link at the bottom of the iCatalog home page.

Strategic Goals Implementation Plan V2.0 2008

Under Secretary of Defense for Acquisition, Technology and Logistics John Young continues to emphasize the importance of the AT&L Source Document. This document seeks to provide the acquisition team a foundational set of principles for how AT&L runs its business. Review the entire AT&L Source Document at <https://akss.dau.mil/documents/policy/20080207_sgip.pdf>.

Young encourages acquisition professionals to use the Source Document principles, approaches, and goals to guide management and execution of defense acquisition programs.

DoD Announces Major Revision to Acquisition Policy

The AT&L Knowledge Sharing System Web Site, sponsored by the Defense Acquisition University, has posted a major revision to DoD Instruction 5000.02, DoD Acquisition System at <https://akss.dau.mil/default.aspx>. The revision was approved by Under Secretary of Defense for Acquisition, Technology and Logistics John Young effective Dec. 8, 2008.

This revision, the first major change to acquisition policy in over five years, reflects the department's determination to improve the effectiveness and efficiency of its enterprise-wide acquisition business processes so it can continue to provide warfighters with the best weapons systems and support in the world. Highlights of the new directive:

- A mandatory acquisition process entry point: Programs will be required to proceed through a materiel devel-

opment decision review to ensure they are based on approved requirements and a rigorous assessment of alternatives.
- Competitive prototyping: Programs will be required to implement acquisition strategies requiring a technology development phase where two or more competing teams will produce prototypes of the system or key components. Consequently, technologies will have to be demonstrated and proven before engineering development is initiated.
- More frequent and effective program reviews to assess progress. Two key engineering reviews, the preliminary design review and the critical design review, become significant program decision points to allow acquisition authorities to assess progress.
- Configuration steering boards: These boards provide a forum that can preclude destabilizing requirements changes and avoid a problem that has traditionally contributed to increased costs and extended schedules. Program managers can use this forum to control requirements creep and seek moderation of requirements, which become costly drivers in the system design.
- Technology readiness assessments: Independent reviews must certify the maturity of program technologies for a program to progress to the costly final phase of development.
- Engineering and manufacturing development: The final phase of system development is returned to the previous label of "Engineering and Manufacturing Development." This name change is intended to emphasize the focus on engineering and manufacturing development during the final, costly phase that leads to initial production. Technology development and basic system design work should be accomplished in the earlier technology development phase.
- More effective test and evaluation: Test activity will be integrated into every acquisition development phase to facilitate early identification and correction of technical and operational deficiencies.

Young co-signed the new policies with Dr. Charles E. McQueary, the director, Operational Test and Evaluation, and John G. Grimes, assistant secretary of defense for Networks and Information Integration. McQueary noted that "this policy revision incorporates all the policy initiatives I have supported—principal among them being integrated developmental and operational testing with results available to all." Young said, "The directive reflects his conviction that our policies must be more disciplined and effective to ensure that results are more predictable and that we are better stewards of taxpayer dollars." Grimes commented, "This directive is particularly important because it sets in place policy guiding early consideration of the radio frequency spectrum to enable better management of competing battlefield requirements that have become a growing concern in theater. As the DoD CIO, this new instruction also reinforces early consideration of information security, information technology architecture, and interoperability to ensure we can continue to benefit from assured net-centric operations."

DAU Continuous Learning Center

The Defense Acquisition University Continuous Learning Center <http://clc.dau.mil> is dedicated to the delivery of continuous learning opportunities supporting the acquisition workforce.

To fulfill the DoD acquisition professional's requirement for obtaining 80 continuous learning points every two years, the Continuous Learning Center offers 228 learning modules (as of Nov. 12) that encompass seven categories:
- Acquisition Management
- Business
- Contracting
- Engineering and Technology
- Harvard ManageMentor Plus Topics
- Logistics
- Program Management

ACQuipedia—It's About Collaboration

Have you ever needed more information on a topic than merely a definition from the Defense Acquisition University Glossary, but considerably less information than contained in an entire manual? Then ACQuipedia is your solution! ACQuipedia is an encyclopedia of common acquisition topics and terms. It is a collaborative, peer-created reference tool for sharing authoritative information on topics of interest to the acquisition community. Information is presented in articles that contain a brief definition or description of the topic and a narrative that provides further detail. An ACQuipedia article will also contain links to relevant policies and directives, guides and tools, training, and other resources. This will provide the workforce with quick access to the information they want tailored to their specific needs. ACQuipedia articles will be created by DAU faculty, staff, and qualified subject matter experts from outside the university. Article topics can be selected based on personal knowledge or interest or may be selected from a list of topics needed.

Get involved today! For more information, visit <https://acc.dau.mil/acquipediaws>.

Policy Update to Make Civilian Hiring Quicker

AIR FORCE NEWS SERVICE (DEC. 19, 2008)

RANDOLPH AIR FORCE BASE, Texas—To increase the efficiency in filling civilian vacancies, effective Jan. 1, selecting officials will have 45 days instead of 90 to choose the best-qualified candidate.

"We continue to refine the civilian hiring process where we can to speed up the hiring action," said Maj. Gen. K.C. McClain, Air Force Personnel Center commander. "We understand that mission requirements are hampered when positions remain vacant. Our goal is to fill civilian vacancies in less than 120 days, and with the support of managers Air Force-wide, we can get Air Force jobs filled in a timelier manner."

Under current policy, managers have 90 days to make a selection once they receive a list of candidates. The 90-day rule was put in place in June 2007 to ease the transition into the National Security Personnel System. A review of policy showed managers were more comfortable with the system and could make the decision in 45 days or less.

Jamie Beattie with the directorate of civilian force integration at AFPC said she doesn't anticipate managers having any problems keeping within the 45-day window.

"This is not only a very doable requirement, but right now, many of our managers are currently making their decisions in less than 45 days because they are anxious to get their workforce up to full strength" said Beattie. "In those rare cases where an exception is needed, the new rules will allow the wing commander or equivalent to grant a 15-day extension when extenuating circumstances dictate."

Hiring officials also are encouraged to submit a personnel action as soon as they are aware there will be a vacancy.

"Hiring officials do not have to wait for the position to be vacant before they begin the fill action," said Beattie. "We need the action in the system so we can begin the hiring process. By working together, we can better deliver capability to commanders."

AFPC officials continue to work internal process initiatives that reduce hiring time. Specialists at the center are currently working with their counterparts in the office of the secretary of defense on a single system that will streamline the hiring actions by replacing three existing systems.

Air Force officials are scheduled to launch that system in February with all Pacific Air Forces bases; Lackland AFB, Texas; and Randolph AFB, Texas, as the test bases.

For more information, visit AFPC's "Ask" Web site or call the 24-hour Air Force Contact Center at 800-616-3775.

National Contract Management Association Professional Certification Program

The Certified Professional Contracts Manager, Certified Federal Contracts Manager, and Certified Commercial Contracts Manager are certifications awarded to candidates who meet rigorous standards, including experience, education, training, and knowledge. They are professional designations of distinction, and carry the respect of their peers in the profession. NCMA certifications are competency-based, legally defensible, and are based on sound objective examination of knowledge. The NCMA professional certification program is designed to elevate professional standards, enhance individual performance, and distinguish those who demonstrate knowledge essential to the practice of contract management.

Certifications available are:

- CFCM—Certified Federal Contracts Manager shows that you are knowledgeable about the practice of contracts management in the federal environment.
- CCCM—Certified Commercial Contracts Manager shows that you are knowledgeable about the practice of contracts management in the commercial environment.
- CPCM—Certified Professional Contracts Manager shows that you are knowledgeable about all facets of contracts management, both within the government and the commercial arenas.

Learn more about contracting certification at <www.ncmahq.org>.

A Program to Help Jumpstart Your Career

FEDERAL ACQUISITION INTERN COALITION

The Federal Acquisition Intern Coalition is designed to help you explore a dynamic and stimulating way to find the right job to help jumpstart your career in acquisition. FAIC makes it easy for you to discover everything you need to know about careers in acquisition—from available paid internships and jobs to a variety of career benefits and training opportunities.

In 2007, the Federal Acquisition Institute was tasked with raising the visibility of the acquisition career field, specifically that of the contracting professional, on behalf of the entire federal government. This task ultimately led to the creation

of the FAIC, which pulls together in one location agency acquisition intern and other career development programs. In addition, the FAIC provides access to other valuable career tools to assist job seekers in finding the best place to start their futures in the field of acquisition.

The FAIC encompasses positions at every stage of an acquisition career across multiple federal agencies. Whether you are a graduating college student or an experienced professional looking to change careers, you can find an outstanding and exciting opportunity through FAIC. Learn more at <www.fai.gov/faic/default.asp>.

Army Management Staff College Extends Deadlines for Civilian Courses

ARMY NEWS SERVICE (DEC. 17, 2008)

FORT BELVOIR, Va.—Application deadlines have been extended for 30 days for civilian employees wanting to attend the basic or intermediate courses at the Army Management Staff College.

All basic and intermediate courses for 2009 will allow 30 extra days for employees to apply, AMSC officials said, until further notice. Applications will close 60 days before the start of a class, instead of 90 days out as in the past.

These courses are centrally funded and seats are available, said Jim Warner, president of the new Army Civilian University, which began assuming oversight of AMSC this month. Warner emphasized that AMSC courses are funded through Department of the Army headquarters at no cost to commands.

Last year, AMSC began shifting from what Warner called "the old paradigm" of one 16-week course to offering four new shorter courses. The idea, he said, is to provide leader development at different levels along an employee's career path.

Foundation Course

A "Foundation" Course was established for new employees. This is strictly a distance-learning course taken online. It is designed to give students an orientation to the Army and begin their professional development. The course is required for interns, team leaders, supervisors, and managers hired after Sept. 30, 2006.

Basic Course

The Basic Course is designed to educate direct-level supervisors or team leaders on the foundations of leadership and management skills to facilitate mission accomplishment. This course is a combination of distance learning and two weeks of resident instruction at the AMSC Fort Leavenworth campus.

Intermediate Course

The Intermediate Course is designed for leaders who exercise direct and indirect supervision. Students should enhance their leadership abilities and develop skills to manage human and financial resources. The course is a combination of distance learning and two weeks of resident instruction at either Fort Leavenworth or Fort Belvoir.

Advanced Course

The Advanced Course is designed for civilian leaders, GS-13 and above or within an equivalent pay band, who exercise predominately indirect supervision. This course is a combination of distance learning and four weeks of resident instruction at Fort Belvoir.

It's especially hard for an employee to transition when first promoted to a supervisory position, Warner said.

"I need to build a bridge to get [the employee] from subordinate to supervisor," Warner said. "It's a huge jump."

It's also hard for employees to make the jump from senior civilian to SES, Warner said. So AMSC offers Continuing Education for Senior Leaders.

CESL provides a participatory environment where senior leaders, GS-14 and above, discuss current issues and challenges facing civilian and military leaders. It prepares students for transition to senior-level leadership positions requiring strategic-level decision-making skills. This course is a combination of 40 hours of distance learning and one week of resident instruction at Fort Belvoir.

Other courses AMSC offers include an Action Officer Development Course , a Supervisor Development Course, and a Manager Development Course. All these courses together make up the Civilian Education System.

For class schedules and registration information, visit the AMSC Web site at <www.amsc.belvoir.army.mil>.

To apply for any of the courses, use the Civilian Human Resource Training Application System at <www.atrrs.army.mil/channels/chrtas>.

Army Launches First Executive Mentorship Program

Jill Mueller
ARMY NEWS SERVICE (DEC. 17, 2008)

ARLINGTON, Va.—The Army paired up 38 senior executives Dec. 15 to begin the first formal mentoring initiative of its kind.

The mentorships are designed to be a primary tier of the Army Senior Fellows program. This program was established to sharpen the executive skills of select senior civilians through leadership opportunities and education.

At a half-day seminar outlining the formal structure of the mentorship program, 19 leaders from the Senior Executive Service Corps were introduced to their mentees, one of 19 Army Senior Fellows, immediately starting them on the pathway for future meetings and discussions.

"Mentorship means many different things within and outside the Army; and there are various degrees of mentoring going on," said Karen Nolan, executive director, Army Senior Fellows. "But this one is unique because it structures and solidifies that partnership."

Army Senior Fellow Lynne Caroe connects with newly assigned mentor Jerry Hansen, deputy assistant secretary of the Army, Strategic Infrastructure. The Army's first formal mentorship program initiated 19 partnerships between Senior Executive Service leaders and Army Senior Fellows at a half-day seminar Dec. 15. Photo by Jill Mueller

The success of the partnerships depends on starting out with a good match, Nolan said. So much preparation went into laying down the groundwork.

Nolan hired Pathbuilders Inc., to create a mentorship program for the Army Senior Fellows. Consultants began the process with initiating hour-long interviews with senior fellows and senior executives who volunteered for the program, to assess their values, goals, and career paths.

The glue that holds the partnerships together is regularly scheduled meetings every month, goal-setting, and follow-up discussion. Partners will actively share information and experiences, successes, and failures, said Pathbuilders President Helene Lollis.

The benefits of the partnership are not one-sided, Lollis said. Through the exchange, "both participants will increase their knowledge, develop skills, and grow."

The Army Senior Fellows Program mission is to identify high-potential civilian leaders and provide them developmental opportunities to strengthen their executive competencies, equipping the Fellows to function as dynamic leaders who are experts in the business of running the Army.

The program is now seeking GS-15/YC-3 applicants who are high-potential future civilian leaders. Applicants should demonstrate:

- Commitment to the Army, its soldiers, Army families, and civilian employees
- Competency to lead, direct, and evaluate programs and activities
- Strong written and verbal communication skills
- Diverse background
- Interest in lifelong learning and challenging self-development through education, experience, and learning opportunities.

Application instructions are found in the Army Civilian Training, Education, and Development System, or ACTEDS catalog, located at <http://cpol.army.mil/library/train/catalog/ch04asfp.html>.

New University to Take Lead in Educating Army Civilians

Gary Sheftick
ARMY NEWS SERVICE (DEC. 15, 2008)

ARLINGTON, Va.—The new Army Civilian University is taking its first major step by assuming oversight of the Army Management Staff College at Fort Belvoir, Va. AMSC has been the Army's premier school for civilian leader education for more than two decades, and its transfer to ACU will take place over a 60-day period from Dec. 1 until Jan. 30.

The Army Civilian University was established last year by Secretary of the Army Pete Geren and Chief of Staff of the Army Gen. George Casey Jr. as a direct answer to several studies recommending greater access to education for the Civilian Corps. When they signed a memorandum approving Army Initiative 5 to "accelerate leader development," they created Army Civilian University.

For Army civilians—and for the Army as a whole—this is very good news, said ACU President Jim Warner, who has a master's degree in business administration from Harvard. He also served as deputy commandant of the Command and General Staff College at Fort Leavenworth, Kan., before retiring from the Army as a brigadier general.

"We want to provide a system that enables all civilian employees to reach their aspirations and their potential," Warner said about Army Civilian University.

This will be done by fostering collaboration, he said. The new university will have the ability to look across a broad spectrum of activities, he said, and it will work to establish more effective and efficient leadership development.

One thing ACU won't do, however, is dictate curriculum, Warner said. He said universities typically do two things:
- Take the administration burden off schools
- Advance modern education methodologies.

"Mathematicians and poets are not studying learning methods," Warner said, emphasizing that they focus on subject-matter expertise. "They'd still be sitting in wooden chairs and scratching on blackboards" if left to their own devices, Warner said.

The Army Civilian University will not be a bricks and mortar institution at Fort Belvoir, Warner said, although he and his staff are currently moving there to Building 1466 on Gunston Road.The new university is a "governance construct," Warner said. It will connect the institutions that focus on educating Army civilians, he said. Right now, that's AMSC, but Warner said he will over time look at other schools that Army civilians attend, adding there are 17 schools currently associated with civilian career programs.

In the past, the Army relied strictly on career programs to chart the training path of civilian employees, Warner said. "It turns out, about half of the civilian workforce is not in a career field," Warner said. "We need to do some catch-up."

So some changes are being made. The proponent for civilian leader development used to be in G-1, but the proponent for military leader-development was the G-3. Now the G-3 will be over both civilian and military education, and that will be implemented through the Army Training and Doctrine Command.

TRADOC's Combined Arms Center at Fort Leavenworth already has oversight of AMSC, and in fact has a campus there teaching AMSC courses. A CAC fragmentary order, dated Nov. 26, transferred AMSC to the Army Civilian University.

Warner said he will be looking across the Army for where civilian education can be executed more efficiently.

"My assessment of what we have in the Army: We probably have the best of everything—somewhere," Warner said. "But not everybody's that good," he said. Not all schools have state-of-the-art facilities and technologies available. That's why the ACU will gather the best ideas and technologies and share them, he said. It will also assist in the creation of career-development pathways from federal service recruitment to senior executive service.

It's especially hard for an employee to transition when first promoted to a supervisory position, Warner said. "I need to build a bridge to get [the employee] from subordinate to supervisor," Warner said. "It's a huge jump. This is the training gap that we have to fill."

It's also hard for employees to make the jump from senior civilian to SES, Warner said. That's why the Army Senior Fellows program was established, he said.

"However, front and center, Army Civilian University's mission is about enhancing our Army's ability to accomplish its diverse and demanding missions ..." Warner said."The Army can't do this without a trained and ready civilian workforce."

A news release from the U.S. Army Civilian Senior Leader Development Office contributed to this article.

25th Annual Test & Evaluation National Conference

The 25th Annual Test & Evaluation National Conference will be held March 2-5, 2009, at the Sheraton Atlantic City Convention Center Hotel in Atlantic City, N.J. This national conference is invaluable to those tasked with directing and executing system development programs for the Department of Defense, Department of Homeland Security, Department of Energy, and other government departments tasked with various elements of our nation's security. Test planners, modeling and simulation users and developers, range operators, program managers, military personnel charged with system acquisition responsibilities, industrial professionals, and others under contract with the government to provide support to our nation's defenses will also benefit. Register for the conference at <http://eweb.ndia.org/eweb/dynamicpage.aspx?site=ndia&webcode=eventlist>. For more information, contact Emily Agnew, meeting planner, eagnew@ndia.org or 703-247-2566.

Warfighter's Vision 2009 Conference

Warfighter's Vision 2009, a forum sponsored by the Association for Enterprise Integration, will be held March 5-6, 2009, at the Ronald Reagan building in Washington, D.C. The theme of the 2009 event will be "Global Information Grid 2.0 and Cyber: Creating the Secure, Single Information Environment." The purpose of the conference is to give voice to the warfighter on information and communications capabilities necessary to assure mission performance in both joint and coalition environments. The conference provides opportunities for discussing topics of concern to combatant commands with industry and DoD officials and allows participants to communicate input to DoD policy makers regarding needs and priorities. Register for the conference at <www.afei.org/brochure/9a04/index.cfm>. For more information, contact Betsy Lauer, 703-247-9473.

2009 Joint Undersea Warfare Technology Spring Conference

The 2009 Joint Undersea Warfare Technology Spring Conference will be held March 9-12, 2009, at the Admiral Kidd Catering and Conference Center in San Diego, Calif. Register for the conference at <http://eweb.ndia.org/eweb/dynamicpage.aspx?site=ndia&webcode=eventlist>. For more information, contact Kimberly Williams, meeting planner, kwilliams@ndia.org or 703-247-2578.

Precision Strike Annual Review

The Precision Strike Annual Review will be held March 10-11, 2009, at the Emerald Coast Conference Center in Fort Walton Beach, Fla. This annual review will present and clarify national defense policy and strategies to achieve the goals of precision engagement, afford the precision strike community the latest thoughts from Defense Committee Members of Congress, and highlight major precision strike achievements through presentation of the William J. Perry Award. Participants will also focus on the review and way forward of important precision strike weapons systems and capabilities essential to meet the joint warfighters' needs—particularly those weapons systems in development and procurement. Register for the 2009 event at <www.precisionstrike.org/events.htm>.

2009 Presentation of Aerospace Markets: The Decade Ahead

The American Institute of Aeronautics and Astronautics (AIAA) will sponsor the 2009 Presentation of Aerospace Markets: The Decade Ahead, on March 11, 2009, at the Renaissance Washington Hotel in Washington, D.C. This one-day event is designed for chief executive officers, financial executives, business developers, and strategic planners. Group analysts and guest experts from The Teal Group will deliver their predictions on aerospace market trends for the next 10 years. Register at <www.aiaa.org/events/aeromarkets>.

7th Annual U.S. Missile Defense Conference

The 7th Annual U.S. Missile Defense Conference—hosted by the American Institute of Aeronautics and Astronautics, in cooperation with The Lockheed Martin Corporation, and supported by the U.S. Missile Defense Agency—will be held March 23-26, 2009, at the Ronald Reagan Building and International Trade Center in Washington, D.C. The 2009 conference will provide delegates access to the current state of the worldwide Ballistic Missile Defense System, including a review of national policies, Service priorities, technical advances, and related issues that may support or affect the deployment of the BMDS. Discussions will provide views of the evolutionary development of a worldwide, layered, integrated BMDS; the integration and testing of BMDS capabilities; the status of key BMDS elements; and, the current political/policy environment, including the status of allied programs in support of BMDS forward deployed elements. Conference participation will be restricted to delegates from the U.S. government and industry who have demonstrated a valid need to know and who have a valid SECRET or higher security clearance. Register at <www.aiaa.org/content.cfm?pageid=230&lumeetingid=1961>.

2009 Ground Robotics Capabilities Conference & Exhibition

The 2009 Ground Robotics Capabilities Conference & Exhibition will be held March 24-26, 2009, at the InterContinental Dallas in Dallas, Texas. The purpose of this conference is to bring together warfighters and homeland security users,

technology developers (government, industry, and academia), and acquisition professionals to address increased responsiveness to user needs. This conference will also provide a forum for the exchange of information, ideas, and methodologies to provide U.S. forces with unmanned ground technologies. The conference is intended to foster creative "out-of-the-box" thinking. A series of panels and speakers will present a wide array of thought-provoking insights from diverse perspectives. Multiple focused breakout sessions will afford participants the opportunity to identify critical issues and needs, and develop practical steps for a path forward to resolve these issues. For more information, contact Jennifer Hoechst at jhoechst@ndia.org or 703-247-2568.

Defense Procurement eBusiness Conference

The Defense Procurement eBusiness Conference will be held April 6-8, 2009, at the Hyatt Regency Denver in Denver, Colo. Procurement eBusiness systems are used by all DoD contractors and most of those in the acquisition and procurement arena. This conference is designed to communicate strategic direction in acquisition and procurement, share latest policy and guidance, and provide practical information to help educate DoD contracting professionals, program managers, and DoD contractors in maximizing their use of the eBusiness systems and preparing for upcoming requirements. Attendees will have hands-on access to all the required technologies presented by the top solutions providers in the interactive exhibits area. Register at <www.ebizprocurement.com/reg.html>.

2009 Defense Industrial Base Critical Infrastructure Protection Conference and Technology Exhibition

The 2009 Defense Industrial Base Critical Infrastructure Protection Conference and Technical Exhibition will be held March 31 through April 3, 2009, at The St. Anthony in San Antonio, Texas. The theme for the 2009 conference is "Defense Industrial Base Resiliency through Protection, Response, and Recovery." This theme will provide defense industrial base critical infrastructure and key resources owners/operators (small business through major corporations), their subcontractors, vendors, and other security partners with insightful information for implementing the critical infrastructure and national preparedness-resiliency concept with sustainable results. The conference will bring together national and local experts and practitioners to discuss the full spectrum of natural and man-made events and the impact those events have on the government and commercial communities.

Attendees can expect to learn about new techniques and actions related to the restoration of economic, infrastructure, material, and institutional processes following an event. Speakers will provide an overall picture of the state of defense industrial base security. That picture will include cyber and supply chain infrastructure threats and security, business continuity and risk management practices, as well as opportunities for effective information sharing. The intent is to ensure the operational resilience of the infrastructure services that defense industry businesses, communities, states, regions, and ultimately the nation and our warfighters rely upon. For more information, contact Meredith Geary, mgeary@ndia.org or 703-247-9476.

44th Annual Gun and Missile Systems Conference & Exhibition

The 44th Annual Gun and Missile Systems Conference & Exhibition will be held April 6-9, 2009, at the Hyatt Regency Crown Center in Kansas City, Mo. The theme of the 2009 conference will be "Shaping the Future in Weapon System Development, Deployment, and Reset." This event will provide a forum for discussing methods to enhance defense-related capabilities—not only through available technology, but also through development of personnel. A broad range of topics related to design and development of technology and training, and development of people in the gun and missile systems industry will be presented. For more information, contact Kelly A. Seymour at kseymour@ndia.org or 703-247-2583.

UID Forum

The Unique Identification (UID) Forum will be held April 6-8, 2009, at the Hyatt Regency Denver in Denver, Colo. The theme for the 2009 event is "Implementation Strategies for Programs and Suppliers." Current UID policy impacts all acquisition programs and suppliers, including small- to mid-sized businesses. This forum is designed to provide practical guidance to help educate military program managers and DoD contractors on how to move forward with successful UID implementation. Participants will learn about:

- Standards & Marking Guidelines
- Wide Area Work Flow (WAWF) & Electronic Document Access (EDA)
- Economics of IUID & RFID Integration
- Government-Furnished Property
- Contract Reporting
- IUID Registry & Unique-Item Identifiers (UII)
- Supplier Flowdown
- Materiel Visibility.

Attendees will have hands-on access to all the required technologies presented by the top solutions providers in the interactive exhibits area. Register at <www.uidforum.com/>.

DTIC to Host 35th Annual Conference

Sandy Schwalb

"Defense Science & Technical Information: From Discovery to Access," is the theme for the Defense Technical Information Center's Annual Conference, which will be held April 6-8, 2009, at the Hilton Alexandria Old Town, in Alexandria, Va.

DTIC's annual conference brings together more than 300 information professionals from the science, technology, research and development, and acquisition communities who create, disseminate, and use DoD scientific, research, and engineering information. Maximizing research productivity, preventing unnecessary or redundant research, and networking among peers are just some of the benefits gained by attending the conference. Speakers from government, private industry, and DTIC will address evolving information technologies. The first two days will feature a number of government and commercial exhibitors demonstrating and discussing the latest information services and technology.

Hands-on training will be offered at DTIC's Headquarters, Fort Belvoir, Va., Thursday-Friday, April 9-10. Complimentary shuttle service between the conference hotel and the training site will be available both days.

For more information contact DTIC's conference coordinator at 703-767-8236/DSN 427-8236, confinfo@dtic.mil. For conference updates ,bookmark <www.dtic.mil/dtic/announcements/conference.html>.

Schwalb is the public affairs officer, DTIC.

AIAA Infotech@Aerospace Conference & Exhibit & AIAA Unmanned...Unlimited Conference & Exhibit

The American Institute for Aeronautics and Astronautics (AIAA) will sponsor two events: the Infotech@Aerospace (I@A) Conference & Exhibit and the Unmanned...Unlimited (UU) Conference & Exhibit April 6-9, 2009, at the Sheraton Seattle Hotel in Seattle, Wash. I@A is the AIAA's premier forum addressing information-enabled technologies, systems, and capabilities shaping the aerospace systems of the 21st century. I@A serves as the institute's main interface between the aerospace and information technology communities, providing a unique opportunity for interaction among a broad range of disciplines. UU is the AIAA's principal venue for advancing the state of the art in unmanned vehicles, systems, and their integration. UU will feature experts in all areas of unmanned systems, vehicles (with special emphasis on unmanned aerial vehicles), subsystems, payloads, and their applications to current and future missions. Register for both events at <www.aiaa.org/content.cfm?pageid=230&lumeetingid=2070>.

25th Annual National Logistics Conference & Exhibition

The 25th Annual National Logistics Conference & Exhibition will be held April 6-9, 2009, at the Hyatt Regency Miami in Miami, Fla. The theme of the 2009 conference is "21st Century Logistics: Vision and Strategies for the 2nd Decade." Keynote defense leaders and panels will address the following daily themes:

- Vision and Strategies
- Partnerships and Performance
- People: Human Capital Initiatives and Education.

For more information, contact Suzanne Havelis at shavelis@ndia.org or 703-247-2570.

Defense Acquisition University Acquisition Community Symposium

The annual Defense Acquisition University Acquisition Community Symposium will be held at the Fort Belvoir campus on April 14, 2009. The 2009 symposium will focus on "The Acquisition Workforce Challenge: Winning the War for Talent." Watch the Defense Acquisition University Alumni Association Web site at <www.dauaa.org/symposium2009/index.htm> for conference updates and registration information.

10th Annual Science & Engineering Technology Conference/DoD Technical Exposition

The 10th Annual Science & Engineering Technology Conference/DoD Technical Exposition will be held April 21-23, 2009, at the Embassy Suites Hotel at Charleston Convention Center, Charleston, S.C. The theme of this year's event is "Creating Capability Surprise through Innovative S&T and Operational Prototyping." Speakers from government, industry, and universities will present their views on accomplishments and successes in applying innovative technology across the life cycle of DoD systems. There also will be opportunities for industry and academia to present ideas to Service representatives in one-on-one sessions. For more information, contact Christy J. Goehner, cgoehner@ndia.org or 703-247-2586.

Environment, Energy, and Sustainability Symposium & Exhibition

The National Environment, Energy, and Sustainability Symposium and Exhibition (E2S2) will be held May 4-7, 2009, at the Colorado Convention Center in Denver, Colo. This event represents a continuing evolution of the National Defense Industrial Association's role to support the consideration of environmental, energy, and sustainability challenges facing

the federal government. Expanding from the Joint Services Environmental Management conferences of the past, the symposium and exhibition recognizes the convergence of the three title topics. Expected this year is the participation of all defense agencies/Services as well as other federal, state, and international government organizations through general, plenary, and technical session content. For more information, contact Kari King at kking@ndia.org or 703-247-2588.

Over 500 Senior Acquisition Managers Convene to Deliberate Affordable Capabilities

Collie Johnson

"We begin and end with the warfighter," said under secretary of defense for acquisition, technology and logistics John Young, setting the tone for the fall 2008 Program Executive Officer/Systems Command Commanders' Conference.

The 2008 PEO/SYSCOM conference was held Nov. 4-5 at the Defense Acquisition University, Fort Belvoir, Va. Panels, workshops, forums, roundtable discussions, networking, and exhibits all helped participants establish a clear understanding of the best practices associated with acquiring and delivering affordable capabilities, the theme of this year's event.

Candid exchange and communication of best practices among those program and product managers, program executive officers, systems command commanders, defense industry representatives, and other acquisition professionals led to increased understanding of the best practices that allow the nation's warfighters, as expressed by Young, "to defeat any adversary on any battlefield, anywhere."

Young told those assembled—over 500 participants—that the defense acquisition community does indeed "have the talent and the people to make these programs run well if we execute with discipline."

Strategic Thrusts

Focusing his remarks on four strategic thrusts derived from his AT&L Strategic Goals Implementation Plan, Young identified the first thrust as *defining effective and affordable tools for the joint warfighter.*

"We have ... a unique and privileged role in being the team that delivers that effective and affordable capability for the warfighter," Young said, "in accordance with our understanding of what they need and what technology can do for them."

Young said the second strategic thrust—to *responsibly spend every single tax dollar*—gets to issues like accurately pricing programs, valuing competition, valuing the use of mature technology to deliver affordable capability, and how "we [AT&L] need to, as a team, engage the requirements process in ways that make sure requirements, schedule, and resources reasonably align so we can succeed."

The third strategic thrust Young defined as *taking care of our people*—the need to continuously and constantly develop the AT&L workforce through training and experience.

"As you know, the acquisition workforce is aging and changing. We need to bring new people in. We need to take advantage of the people who have experience in different ways."

The fourth strategic thrust—Deputy Secretary of Defense Gordon England's *transformation priorities*—consists of 25 goals and metrics that Young called important for AT&L to accomplish in moving forward the department's acquisition transformation.

"We've made great progress against the goals and the metrics," he said. "... We all have to keep running the business as effectively and efficiently as possible ... The military leadership changes over time also. The key is for all of us is to continue to execute the business efficiently."

Best Business Practices

Young devoted the rest of his remarks to specific best practices that he said will help restore the credibility of DoD's acquisition process by "showing the enterprise that we will work hard to save money in running the acquisition business."

Competitive prototyping, he said, embodies this strategy and is embraced and understood by the acquisition community. However, prototyping in and of itself, he cautioned, is not magic.

Configuration steering boards was another best practice cited by Young as a "valuable tool to empower the program manager."

Young stated unequivocally that programs will not move forward without full funding. "I'm adamant," he said, "that that's a condition for program stability."

On incentive policies, Young emphasized that program planners must tie award fee and incentive fee to objective criteria and set standards for awarding it.

2008 USD(AT&L) Workforce Development Award

On Nov. 4, eight winning organizations received the 2008 Under Secretary of Defense for Acquisition, Technology and Logistics Workforce Development Award in recognition of their accomplishments in developing innovative, comprehensive learning and development programs for their workforces. Deputy Under Secretary of Defense for Acquisition and Technology James I. Finley presented the awards to the winners at a luncheon held in conjunction with the Program Executive Officers/Systems Command (PEO/SYSCOM) Commanders' Conference at Fort Belvoir, Va. The winners are:

Large Organization Category (More Than 500 Employees)

Gold Award—Warner Robins Air Logistics Center
Silver Award—Naval Surface Warfare Center, Corona Division
Bronze Award—Marine Corps Systems Command

Small Organization Category (Less Than 500 Employees)

Gold Award—Fleet and Industrial Supply Center Norfolk Contracting Department, Naval Supply Systems Command
Silver Award—Warner Robins Air Logistics Center, Directorate of Contracting
Silver Award—PEO Command, Control, Communications, Computers and Intelligence (C4I)
Bronze Award—PEO Missiles & Space
Bronze Award—Cost and Systems Analysis Office, U.S. Army TACOM Life Cycle Management Command

An expert panel of seven judges from academia, industry, and corporate learning institutions independently conducted the award evaluation process and recommended the winners to Under Secretary of Defense for Acquisition, Technology and Logistics John J. Young Jr. A record 41 nominations were received, and the judges reported the quality of submissions was outstanding and competition for the awards was fierce.

Organizations reported establishing numerous effective best practices in areas including recruiting, internships, retention, performance management, partnerships, organization-unique training, leadership development, succession planning, executive coaching, mentoring, job rotation, job shadowing, and knowledge sharing. Outcomes from these programs included greater organizational and individual performance, increased workforce expertise, higher employee satisfaction, and significant cost savings.

Applicants spanned the entire country, the Services and defense agencies, and many different areas of mission. Organizations ranged from as few as four people to more than 20,000 employees.

The USD(AT&L) Workforce Development Award program was established in 2004 to recognize organizations that are achieving excellence in learning and development for their employees. Additionally, the award program identifies best practices for other USD(AT&L) organizations to adopt. It helps promote the objectives of USD(AT&L) Strategic Thrust No. 3—Take Care of Our People.

Young also touched on Joint Analysis Teams and Defense Support Teams. He lauded JATs as an excellent tool to gather stakeholders and subject matter experts for planning a program for execution. On Defense Support Teams, he said they were a chance to borrow talent that is outside the enterprise as well as use talent inside the enterprise—a gathering of experts to go and solve particular problems.

He commended the Defense Acquisition University, the director of defense research and engineering, and the Defense Technical Information Center for their hard work and involvement in developing Web tools for acquisition practitioners like the AT&L Living Library <www.dau.mil> and DoD Techipedia < https://www.dodtechipedia.mil/index.html>.

He appealed to all conference participants to populate the two Web tools and use them.

Young also views Lean Six Sigma as an important business practice and DoD transformation priority: "The truth is that Lean Six Sigma is a true best business practice that can change the potential for your program to succeed."

Economic order quantity, Young noted, is another business practice that produces savings and gives program managers a chance to efficiently execute their programs. He added that it was troubling to him when an acquisition team takes criticism for the cost of systems largely driven by the fact that

the enterprise will refuse to buy in economic order quantities, inherently driving that cost up.

He urged conferees to engage the requirements community in the budget process. It ought to be the job of some of the corporate leadership, he stressed, to "try to help make sure the budget is right for acquisition programs to succeed and deliver."

Mandatory technology readiness assessments also are a critical tool and best practice Young supports. "Frankly, they're the right thing to do," he stated. "The even more right thing to do is do them early as quick-look efforts so that a program can plan."

Young reiterated his commitment to save taxpayer dollars. One of the goals in the AT&L strategic thrusts, he said, is to save $15 billion—real dollars, not cost avoidance, not projected savings.

Concluding his remarks, Young told those assembled that improving the acquisition system is about a lot of fundamental, back-to-basics hard work.

"I still think it comes back to running the business with discipline and using some basic tools like prototyping and working together as a team with stakeholders to get the job done right ... I want to convey my thanks for the opportunity to work with all of you, and encourage you to continue to push these practices forward."

To review other conference presentations delivered at the fall 2008 PEO/SYSCOM Commanders' Conference, visit DAU's Video Services Web site at <http://view.dau.mil/dauvideo/view/channel.jhtml?stationID=1138688104&c=3>.

Johnson, a retired federal civilian, is currently a Defense AT&L *contributing editor.*

Integrated Process Team Addresses Logistics Issues

Air Force Materiel Command Public Affairs
AIR FORCE MATERIEL COMMAND NEWS RELEASE (DEC. 15, 2008)

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—The consolidation of supply chain activities into the Air Force Global Logistics Support Center presented a fresh opportunity to address some systemic issues in how the Defense Logistics Agency supports the Air Force.

Leaders representing both organizations received an update on these issues along with recommendations during a Dec. 12 close-out briefing at Scott Air Force Base, Ill.

Maj. Gen. Gary McCoy, AFGLSC commander, along with Brig. Gen. Andrew Busch, the commander of Defense Supply Center Richmond, the aviation supply and demand chain manager for DLA, were among those who attended the briefing from a joint integrated process team. Busch, along with AFGLSC vice commander Col. Brent Baker Sr., signed the charter for the integrated process team in March. The team was tasked with identifying critical supply chain issues and providing solutions.

Among the integrated process team's goals were:

- Determining roles and responsibilities for AFGLSC and DLA, strategically and at the process task level
- Presenting recommendations on how to best develop a true collaborative partnership
- Developing interim and long-term processes to address ERP-related issues
- Determining how to integrate DLA into the AFGLSC Fusion Center concept
- Providing a timeline and way ahead to implement the team's recommendations
- Developing a plan for integrating DLA and AFGLSC Fusion Center concepts
- Defining the issues between DLA and AFGLSC, including:
  —Incorporating AF weapon system-specific availability targets into DLA processes in a meaningful way
  —Developing standardized processes to deal with customer support issues ranging from the tactical (stock-outs) to the strategic (business planning, transformation).
  —DLA and AFGLSC working together on collaborative planning, sourcing strategies, distribution planning, and other methods of optimizing the supply chain for consumable items and sourcing strategies for DLRs
  —Developing a comprehensive communications plan
  —Determining the need for one or more embedded DLA representatives/analysts at AFGLSC facilities, to include customer support representatives with the authority to resolve issues. If this position is recommended, determine/define roles and responsibilities
  —DLA and AFGLSC Supply Chain Strategy and Integration working to determine enterprise-level metrics and performance indicators that can be drilled down to provide real-time issue identification/resolution
  —DLA and AFGLSC Supply Chain Operations working together to determine release sequences for items.

Outcomes for some sub-integrated process team topics (in bold) include:

- Updating Performance Based Agreement Annex 7 that includes documented target setting process with

Maj. Gen. Gary McCoy, Air Force Global Logistics Support Center commander (left), along with Brig. Gen. Andrew Busch, the commander of Defense Supply Center Richmond, were among those receiving updates on critical supply chain issues and proposed solutions during a Dec. 12 briefing at Scott Air Force Base, Ill. Air Force photo by Airman 1st Class Wesley Farnsworth

defined roles and responsibilities for weapons system specific availability targets
- Updating Performance Based Agreement Annex 7 with current metrics and performance indicators, roles, and responsibilities, as well as an annex revision schedule for enterprise-level metrics
- Developing and documenting sourcing process models including roles, responsibilities, accountabilities, and governance for sourcing strategies
- Defining future state distribution process, roles, and responsibilities for distribution planning
- Develop and document a repeatable process, roles and responsibilities, and definitions to reduce inventory for inventory reduction.

McCoy said he was impressed with the scope and depth of issues tackled by the integrated process team.

"In addition to providing recommendations for immediate implementation, this effort has laid a foundation for a productive relationship between the AFGLSC and a major partner," McCoy said. "The team is wrapping up, but our efforts to work with the supply chain professionals in DLA to improve warfighter support have only begun."

Busch also praised the work done by the integrated process team.

"Noteworthy was the building of relationships to sustain the AFGLSC and DLA engagement over the long term," Busch said. "Logistics is a complex and detailed business, and when we work through the issues addressed today we'll definitely have a more efficient supply chain and improved support to the warfighter."

NAVFAC Employee Receives National Acquisition Award

Don Rochon
NAVY NEWSSTAND (NOV. 7, 2008)

WASHINGTON—A contracting officer for the Naval Facilities Engineering Command Marianas received the General Services Administration's prestigious 2008 Ida Ustad Award for Excellence in Acquisition in a ceremony at the Washington Navy Yard Oct. 27.

Eugene Diaz received the $5,000 award. The annual award is sponsored by the GSA and recognizes an individual government employee whose actions demonstrate or embody the concept of a contract specialist as business leader-advisor and have a major impact on improving the acquisition process.

"This comes as a surprise, but it is truly an honor to receive this recognition," said Diaz, who joined NAVFAC Marianas as an intern in 2002. "More so, it's an honor to have been surrounded by such a professional acquisition workforce in the different assignments that I supported. I extend this recognition to all of them."

Diaz is an acquisition professional working for NAVFAC Marianas in Guam. While forward-deployed to the Philippines, he served as the administrative contracting officer providing oversight of the operations support contract for Joint Special Operations Task Force–Philippines. This major contract, an annual value of approximately $30 million, encompasses 15 functional areas, ranging from air operations; morale, welfare, and recreation ; facilities management; utilities; and galley services.

Rear Adm. Wayne G. Shear, Jr., commander, Naval Facilities Engineering Command and chief of Civil Engineers, presents Eugene Diaz the prestigious 2008 Ida Ustad Award for Excellence in Acquisition at the Washington Navy Yard Oct. 27.
NAVFAC photo by Don Rochon

Bob Griffin, NAVFAC assistant commander for acquisition, praised Diaz for his commitment to NAVFAC and his dedication to the principles embodied in the award.

"His oversight and attention to detail are directly responsible for this award. He truly embodies excellence in acquisition for NAVFAC."

As the ACO, Diaz was the on-site agent for NAVFAC and served as an advisor to the JSOTF-P, ensuring the contractor understood the command's multi-Service requirements.

Diaz was the liaison between the different military services in Hawaii and the Philippines involved in the contract. He was the driving force in facilitating communications between all stakeholders and in resolving any contract interpretation issues. In addition, he was the main influence in promoting the best practices of NAVFAC operations support contracting to this remote and challenging location.

Diaz joined NAVFAC Marianas after graduating from the University of Guam with a degree in accounting. He was selected as the NAVFAC Marianas Employee of the Year in 2005, and in 2007 was assigned to temporary duty with the Marine Corps at Quantico, Va., to support the high-profile Mine Resistant Ambush Protected Systems program.

Media contact: Don Rochon, Naval Facilities Engineering Command Pacific Public Affairs, don.rochon@navy.mil or 808- 472-1008.

DoD Announces $400 Million Investment in Basic Research

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 7, 2008)

The Department of Defense announced plans to invest an additional $400 million over the next five years to support basic research at academic institutions.

Secretary of Defense Robert Gates secured the additional funding in the fiscal 2009 President's budget request to Congress to expand research into new and emerging scientific areas and to foster fundamental discoveries related to the DoD's most challenging technical problems. The DoD published a 'Strategic Plan For Basic Research' last summer, which built the case for this effort. Acknowledging this need, Congress authorized and appropriated funds to support these significant increases in basic research investment.

By making these additional investments, the DoD aims to "sustain and strengthen the nation's commitment to long-term basic research," as recommended by the National Research Council's 'Rising Above the Gathering Storm' report and to address similar recommendations from numerous other independent national security and scientific advisory groups.

"These new grants will lead to discoveries in fundamental fields which underpin many of the technologically complex systems fielded in today's armed forces," said William Rees Jr., the deputy under secretary of defense for laboratories and basic sciences.

The anticipated awards will be intended for individual investigators and provide sufficient funding to support a cadre of graduate students working with the faculty member to make substantial and sustained progress in research areas of importance to the DoD. Merit-based awards, based on peer review, will support projects beginning in fiscal 2009 that will be funded for five years. Exceptionally meritorious projects that can be completed in less time will also be considered for funding.

Projects will be based on numerous academic disciplines, including: physics, ocean science, chemistry, electrical engineering, materials science, environmental engineering, mechanical engineering, information sciences, civil engineering, mathematics, chemical engineering, geosciences, atmospheric science, and aeronautical engineering.

Topics for the initial funding will focus on the following areas of technical challenge: counter weapons of mass destruction, network sciences, energy and power management, quantum information sciences, human sciences, science of autonomy, information assurance, biosensors and bio-inspired systems, information fusion and decision science, and energy and power management.

DoD research offices that will make the awards, contingent upon the receipt and evaluation of sufficiently high quality proposals, include the Army Research Office <www.aro.army.mil>, the Office of Naval Research <www.onr.navy.mil>, and the Air Force Office of Scientific Research <www.afosr.af.mil>.

Information on specific program announcements and solicitations supported by this funding can be found at <www.grants.gov>, as well as at the respective research office Web sites.

DoD Names Two Additional 2008 National Security Science and Engineering Fellows

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 7, 2008)

The Department of Defense today announced two additional National Security Science and Engineering Faculty Fellows (NSSEFF), bringing the total number of distinguished scientists and engineers in the inaugural round of this prestigious program to eight.

Professor Constance Chang-Hasnain, University of California, Berkeley, and Professor Margaret Murnane, University of Colorado at Boulder, join the other notable university faculty announced by the DoD in June 2008.

"Every NSSEFF award—up to $3 million in total direct research support for up to five years—provides DoD with top-tier researchers from U.S. universities, each conducting long-term, unclassified, basic research on challenging technical problems of strategic national security importance," said William Rees Jr., deputy under secretary of defense for laboratories and basic sciences. "It also affords significant opportunities for Fellows to contribute to research programs within the DoD laboratories."

Selected from over 350 applicants to the fiscal 08 round, the eight researchers from the first NSSEFF competition "are expected to make considerable discoveries in the core science and engineering disciplines underpinning the technology of future DoD systems," said Rees. Rees also noted that the fiscal 09 NSSEFF competition is well underway and that selectees are anticipated to be announced by year's end.

Additional information on the NSSEFF is available online at <www.defenselink.mil/releases/release.aspx?releaseid=11964>.

FCS Active Protection System in "Top 50" Inventions

John R. Guardiano

ARMY NEWS SERVICE (NOV. 17, 2008)

WASHINGTON—The Army's new Active Protection System, which is designed to safeguard soldiers and vehicles from incoming fire, has been named one of the best inventions of 2008 by *Time* magazine.

"Think of [it] as Star Wars for Soldiers," said *Time* magazine in its Nov. 10 edition. The APS "will automatically detect an incoming round and then launch a missile to destroy it, all within a split second."

The Army is developing APS as part of its Future Combat Systems ground-force modernization program. FCS is designed to bring soldiers into the 21st century by equipping

them with state-of-the-art vehicles, communication capabilities, sensors, and protective systems.

The APS is actually part of a more comprehensive "hit-avoidance system" that the Army is building into a suite of eight new FCS Manned Ground Vehicle types. This more comprehensive hit-avoidance system will give the soldiers in the MGVs "full-scale 360-degree hemispherical protection," said FCS Program Manager Maj. Gen. Charles A. Cartwright.

Current Army vehicles lack this level of protection, he said, because they were designed more than a generation ago, before the information technology revolution of the past quarter century.

Metastasizing Threats

According to the Army's Training and Doctrine Command, American servicemen and women face a proliferating array of new and more sophisticated threats, which, if not addressed, will jeopardize American lives and mission success.

"The threats are getting more dangerous," said TRADOC's Deputy Commanding General Lt. Gen. Michael A. Vane. "Technology proliferation is creating a dangerous mix of state-of-the-art technology, radical extremists, and irregular tactics.

"Future Combat Systems, the MGVs, the hit-avoidance system, APS," he added, "these all will protect our soldiers against a variety of changing threats and address current force limitations."

The Army's Active Protection System is still in development, but has proven itself in live-fire testing. Hit-avoidance prototypes, moreover, are scheduled for delivery in 2011, said Maj. Lewis Phillips, assistant product manager.

Current Force Limitations

In the meantime, elements of the FCS survivability system are being incorporated into current Army vehicles on a limited basis. Because of inherent design limitations due to their age, current Army vehicles cannot accommodate a comprehensive hit-avoidance system, officials said.

In addition to being equipped with active protection, the new Army vehicles, or MGVs, also are being designed with an independent hull structure, in which armor is bolted onto the vehicle. This allows for frequent armor upgrades to accommodate technological advances.

The armor on current force vehicles, by contrast, is integrated throughout the structure of the vehicle. Current force vehicles, consequently, have a very limited ability to accommodate better and more modern armor protection, officials said.

IED Protection

Current force vehicles—the Abrams Tank, Bradley Fighting Vehicle, and Stryker Interim Armored Vehicle—also were not specifically designed to withstand attack from Improvised Explosive Devices.

The new FCS vehicles, by contrast, are being designed with a V-shaped hull, specifically to help diffuse IED blasts. And the seating inside the MGVs will be suspended from the ceiling of the vehicle to further reduce the shock and trauma of an IED blast.

Army officials said this is significant because, for many of America's enemies, IEDs have become the weapon of choice.

IED attacks, in fact, account for the majority of U.S. casualties in Iraq and Afghanistan and are a leading cause of brain injury to American servicemen and women. By separating occupants from the floor of the vehicle, which absorbs the blast, soldiers will suffer much less trauma and injury, Army officials said.

Quick Kill

The FCS Active Protection System is being developed by Raytheon. Raytheon won the contract from the FCS program after participating in an open competition that involved other key competitors and competitor systems.

A team of 21 technical experts from various U.S. government agencies, the Army, and private-sector industry evaluated competing Active Protection Systems. According to the Government Accountability Office, the team reached "a clear consensus... [that] Raytheon's Quick-Kill system was the best alternative."

Army officials said that one key advantage of the Raytheon APS is its vertical launch system, which protects against top-attack rounds. They said this gives soldiers true 360-degree hemispherical protection.

The FCS Active Protection System "is the only available vertical launch system that I'm aware of," Lewis said. Other Active Protection Systems out on the market employ horizontal launch systems and thus do not provide total vehicular protection.

The rocket-propelled grenade defeat test of the FCS Active Protection System for Manned Ground Vehicles was the first time that any vertical launch APS defeated an incoming RPG while mounted on a moving vehicle.
Photo courtesy FCS Program Management Office

A vertical launch system, Phillips said, allows for redundant protection from all sides of the vehicle. One countermeasure situated anywhere on the vehicle can defeat any incoming round. Horizontal launch systems lack this capability, Phillips said.

Guardiano serves in the plans division of Army Public Affairs and is a frequent contributor to the Army News Service.

DoD Names 2009 National Security Science and Engineering Fellows

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 21, 2008)

The Department of Defense announced today the selection of six distinguished university faculty scientists and engineers forming the 2009 class of its National Security Science and Engineering Faculty Fellows (NSSEFF) Program. NSSEFF provides grants to top-tier researchers from U.S. universities to conduct long-term, unclassified, basic research involving the most challenging technical issues facing the DoD.

A list of the fellows, their home institutions, and their research topics follows:

- Dr. Graham Candler, University of Minnesota, Multi-Physics Simulations of Hypersonic Flow
- Dr. Sharon Glotzer University of Michigan, Smart, Autonomous, Adaptive Phenomena in Self-Organizing, Reconfigurable Materials
- Dr. Naomi Halas, Rice University, 3D Nanophotonics: Bending Light in New Directions
- Dr. Mark Kasevich, Stanford University, Atomic de Broglie Wave Navigation Sensors and Applications of Ultra-fast Electron Sources
- Dr. Christine Ortiz, Massachusetts Institute of Technology, Natural Armor: An Untapped Encyclopedia of Engineering Designs for Protective Defense
- Dr. John Rogers, University of Illinois, Materials and Mechanics for Stretchable Electronics/Optoelectronics.

"These individuals are some of the top academics in fields of strategic importance to the DoD, and we congratulate each of these remarkable scientists and engineers on their selection," said William Rees Jr., deputy under secretary of defense for laboratories and basic sciences.

The fellows conduct basic research in core science and engineering disciplines that underpin future DoD technology development. This basic research is crucial to enabling future applications in sensors, functional materials, surveillance, near-shore navigation, communications and information security, energy independence, and force protection. In addition to conducting this unclassified research, Rees noted another important benefit of the NSSEFF Program. "These are leaders in their research areas, and NSSEFF will engage them with senior DoD officials, as well as scientists and engineers in DoD laboratories, in sharing their knowledge and insight on technological challenges facing the department."

In response to the NSSEFF broad agency announcement, 156 academic institutions submitted 659 nomination letters. A rigorous technical review of 468 white papers resulted in 17 semifinalists being invited to submit full proposals outlining their research plans. Each of the semifinalists was interviewed by a panel of scientists and engineers representing a broad segment of national security. The DoD may elect to announce additional winners of the 2009 NSSEFF awards at a later date.

Upon successful completion of negotiations between their home academic institutions and DoD research offices, grant

awards will be made to the faculty members' universities for support of their research.

Small Business Specialist Recognized with DoD Award

Annette Crawford
AIR FORCE NEWS SERVICE (NOV. 21, 2008)

WASHINGTON—The small business specialist for the 6th Air Mobility Wing at MacDill Air Force Base, Fla., was one of six individuals recognized in the Department of Defense for his efforts in going beyond goals to advance the objectives of the Service-Disabled Veteran-Owned Small Business, or SDVOSB program.

Nelson Escribano received the Golden Talon Award Nov. 17 at the 2nd SDVOSB Program Awards Ceremony at the Pentagon. Gordon England, deputy secretary of defense, was the keynote speaker at the ceremony. Other speakers included James I. Finley, deputy under secretary of defense for acquisition and technology.

"My congratulations and thanks [go] to all the honorees for your service to our country," England said. "Our veterans have contributed greatly to the defense of our nation, and many are continuing to do so as owners and employees of small businesses. We're pleased by the success of the Service-Disabled Veteran-Owned Small Businesses. They're making a positive impact, and we want to see these businesses continue to do well. It's good for them, it's good for us, and it's good for America."

Escribano more than doubled the assigned goal of 3 percent by obligating $6.91 million, or 6.44 percent of contract dollars, to SDVOSBs. It was the third year in a row that Escribano exceeded the category goal.

Some of his other achievements include hosting a one-day SDVOSB conference in 2007, which increased to two days and doubled to more than 400 participants in 2008; partnering with industry and professional organizations to develop and provide workshops; developing and performing squadron training and assistance on the SDVOSB program; and directly collaborating with other federal agencies to identify new sources in government procurements.

"Winning this award is a significant honor because of the sacrifices that have been made by these Service-disabled veterans," Escribano said. "This is just the beginning of something bigger in purpose and better in quality for the Air Force."

Ronald A. Poussard, the director of the Secretary of the Air Force Small Business Programs, said he was proud of Escribano's efforts on behalf of small-business specialists throughout the Air Force and of his role in helping the Air Force "Beyond Goals" campaign.

"There is no other group of individuals that understands the mission of the Department of Defense like Service-disabled veterans do," Poussard said. "Mr. Escribano's supreme accomplishments in opening up opportunities to Service-Disabled Veteran-Owned Businesses ensured the 6th Air Mobility Wing went 'beyond goals' to bring the innovation, agility, and efficiency of small businesses in support of the Air Force mission to fly, fight, and win in air, space, and cyberspace."

Also recognized at the ceremony were six SDVOSBs that excelled during the previous fiscal year in three areas: innovative technologies for the warfighter; impact on the veteran and Service-disabled veteran community; growth of the SDVOSB; and five prime contractors that significantly exceeded the 3 percent annual goal for prime contractors providing subcontracting opportunities to SDVOSBs.

Crawford is with Secretary of the Air Force Small Business Programs.

AFMC Announces Organizational Excellence, Outstanding Unit Awards

Air Force Materiel Command Public Affairs
AIR FORCE MATERIEL COMMAND NEWS RELEASE (NOV. 26, 2008)

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—Six Air Force Materiel Command agencies have earned the Air Force Organizational Excellence Award while another 13 earned the Air Force Outstanding Unit Award, according to information released by AFMC's Manpower and Personnel Directorate Nov. 25.

Officials will forward a certificate of achievement or service to each awarded unit. All assigned or attached personnel who served with a unit during the indicated period for the award are authorized the appropriate ribbon if they directly contributed to the mission and accomplishments of the unit.

Air Force Organizational Excellence Award recipients are:

- Oklahoma City Air Logistics Center at Tinker AFB, Okla., covering the period from April 1, 2006, to March 31, 2008.
- Air Armament Center at Eglin AFB, Fla., covering the period from Aug. 1, 2006, to May 31, 2008.
- Arnold Engineering Development Center at Arnold AFB, Tenn., covering the period from June 1, 2006, to May 31, 2008.

- Air Force Research Laboratory headquartered at Wright-Patterson AFB, covering the period from March 1, 2006, to Feb. 29, 2008.
- The U.S. Air Force Band of Liberty at Hanscom AFB, Mass., covering the period from April 11, 2006, to April 10, 2008.
- The Airborne Laser Systems Program Office at Kirtland AFB, N.M., covering the period from Jan. 1, 2006, to Dec. 31, 2007.

Air Force Outstanding Unit Award recipients are:

- 78th Air Base Wing at Robins AFB, Ga., covering the period from May 1, 2006, to April 30, 2008.
- 330th Aircraft Sustainment Wing at Robins AFB, covering the period from May 2, 2006, to May 1, 2008.
- 542nd Combat Sustainment Wing at Robins AFB, covering the period from May 1, 2006, to April 30, 2008.
- 303rd Aeronautical Systems Wing at Wright-Patterson AFB, covering the period from July 1, 2006, to Feb. 29, 2008.
- 311th Human Systems Wing at Brooks City-Base, Texas, covering the period from Jan. 1, 2007, to Dec. 31, 2007.
- 653rd Electronic Systems Wing at Hanscom AFB, covering the period from Jan. 1, 2006, to Dec. 31, 2007.
- 308th Armament Systems Wing at Eglin AFB, covering the period from March 20, 2007, to March 19, 2008.
- 76th Maintenance Wing at Tinker AFB, covering the period from Jan. 1, 2006, to Dec. 31, 2007.
- 46th Test Wing at Eglin AFB, covering the period from Jan. 1, 2007, to Dec. 31, 2007.
- 784th Combat Sustainment Group at Hill AFB, Utah, covering the period from April 1, 2006, to March 31, 2008.
- 356th Aeronautical Systems Group at Wright-Patterson AFB, covering the period from July 1, 2006, to Feb. 29, 2008.
- 950th Electronic Systems Group at Hanscom AFB, covering the period from April 1, 2006, to March 31, 2008.
- 653rd Combat Logistics Support Squadron at Robins AFB, covering the period from Jan. 1, 2007, to Dec. 31, 2007.

Picatinny Mortar Fire Control System Team Wins Top Department of Defense Award

PICATINNY ARSENAL PUBLIC AFFAIRS NEWS RELEASE
(DEC. 4, 2008)

PICATINNY ARSENAL, N.J.—A Picatinny weapons development team was recently awarded the prestigious "Top Five Department of Defense Program Award" for its work on the 120mm Dismounted Mortar Fire Control System, or MFCS-D, during the National Defense Industrial Association's Systems Engineering Conference in San Diego Oct. 23.

The award is given to technology programs that best exemplify system engineering and program management principles, practices, and results.

The programs recognized are considered models for meeting cost, schedule, and performance requirements.

During the ceremony, Gordon M. Kranz, director of systems and software engineering for the Office of the Secretary of Defense for Acquisition, Technology and Logistics, presented the award to representatives of the MFCS-D development team.

The MFCS-D is a new fire control system that will be integrated into the 120mm mortar to make the weapon fire more easily and accurately, said Ron Tatusch, Dismounted Mortar System team lead.

It combines a highly accurate weapon pointing device, inertial navigation and position system, and digital communications capability, all embedded in the fire control computer.

The MFCS-D will make the weapon system three times more accurate and allow mortar crews to send and receive digital

The towed Dismounted Mortar Fire Control System contains a fire control computer, portable battery supply, electronics rack, and other equipment that make it easier and more accurate to fire. The MFCS-D team recently won a Top Five Department of Defense Program Award for system engineering and program management principles, practices, and results. U.S. Army Photo

call-for-fire messages, calculate ballistic solutions, determine the position of the gun, and accurately point the weapon.

It also will provide a link to other digital fire control network assets and allow the gun to operate as a fire direction center, which will allow the mortar section to execute dispersed operations, he explained.

All these advantages increase the survivability and responsiveness for towed 120mm mortars on the future battlefield, Tatusch said.

Tatusch said the success of the program results from the employment of well-defined, proven processes to develop, manage, and integrate the MFCS-D hardware and software with the dismounted 120mm mortar system.

The Armament Research, Development, and Engineering Center's in-house software development and system integration was executed through an empowered integrated product team approach, he said.

In less than two years, the integrated product team took the program from an idea concept to "Type Classification Standard" in August 2008. Type classification signifies the successful transition of a weapon system's research and development efforts into production. The IPT is comprised of product manager for mortars and ARDEC employees, as well as other government and contractor workers.

Using tools such as Capability Maturity Model Integrated Level 5 software development processes for software quality enhancement, user verification and validation, and stress testing, the MFCS-D and other current software-intensive system developments undertaken at ARDEC are providing soldiers critically needed, well-engineered, and well-tested products developed in a short amount of time.

The Top 5 program award was created in 2004. Since its creation, ARDEC's fire control systems and technology directorate teams have won the award three times.

Previous winners include the M32 Lightweight Handheld Mortar Ballistic Computer and the M152 Portable Excalibur Fire Control System.

Hard Work Pays Off for LOGSA Employee—Industrial Engineer Inducted Into Hall of Fame

Anthony Ricchiazzi
ARMY NEWS SERVICE (DEC. 17, 2008)

TOBYHANNA ARMY DEPOT, Pa.—An industrial engineer here, who started as an analyst, has been inducted into the Military Packaging Hall of Fame. Charlotte Lent works in the Packaging, Storage, and Containerization Center, which is part of the U.S. Army Materiel Command's Logistics Support Activity. She is the 12th PSCC person to enter the hall.

Lent was inducted at a ceremony earlier this year by John Antal, acting dean of the School of Military Technology, for her accomplishments in the military packaging career field over the last 30 years. The honor is recommended by fellow packaging professionals in recognition of her outstanding duty performance.

Lent also earned the 2008 Handling Achievement Award from the National Institute of Packaging, Handling, and Logistics Engineers.

Lent began working at PSCC in 1978 as an operations research analyst. She switched to the industrial engineer field in 1988.

Noteworthy accomplishments include:

- Developing new hazardous materials testing protocols to comply with United Nations' regulations

Richard Owen presents Charlotte Lent with the 2008 Handling Achievement Award from the National Institute of Packaging, Handling, and Logistics Engineers. Owen is the executive director of NIPHLE. The award coincides with Lent being inducted into the Military Packaging Hall of Fame. Photo by Rosy Poole

- Key player in the design and testing of a Frozen Specimen Shipping Unit for infectious and other substances for the National Institutes of Health
- Preparing the PSCC Lab to become the Department of Transportation's compliance testing source for containers such as 55-gallon drums to make sure they meet specifications for shipping hazardous and other substances.

Tobyhanna Army Depot is the largest full-service command, control, communications, computers, intelligence, surveillance, and reconnaissance maintenance and logistics support facility in the Department of Defense. Employees repair, overhaul, and fabricate electronics systems and components, from tactical field radios to the ground terminals for the defense satellite communications network.

Defense Department Agencies Recognized for Cutting Costs

Army Staff Sgt. Michael J. Carden
AMERICAN FORCES PRESS SERVICE (DEC. 18, 2008)

WASHINGTON—After more than two years of promoting the idea that "What gets checked gets done," the Defense Department's "Check It" campaign came to an end Dec. 18 with an awards ceremony at the National Defense University on Fort McNair.

The campaign was launched in July 2006 to raise awareness about the department's internal management controls program by Deputy Defense Secretary Gordon England, who called it "a simple concept that will have very, very powerful results here in the department."

Those results have reached every corner of the defense community, Douglas A. Brook, the Pentagon's acting comptroller and chief financial officer, said.

Management and internal controls are "light years" ahead of what they were during his first Pentagon job more than 16 years ago as the Army's assistant secretary for financial management, Brook said.

"My managers' internal control programs during my first round in the Pentagon really consisted of checklists that literally included things like, 'Are there enough paper towels in the restroom and restaurants?'" he said.

The difference today is evident in changes in internal auditing, accounting, and controls, he said, by simply reminding everyone throughout the Defense Department of the importance of their jobs and of double-checking themselves to ensure they're doing their jobs right.

"We've come to the point now where we're applying managers' internal controls to ... do things better, save money, add metrics, and measure our results, [which] are significantly different from the first time I encountered this kind of activity," he said.

During the campaign, 24 Defense Department components reported 40 process improvements that have produced nearly $4 billion in savings or cost avoidances, he said.

U.S. Transportation Command won a first-place award, he said, for saving $1.88 billion with improvements to the department's passenger and equipment distribution system for war and peacetime missions by taking over more influence and controls of the process.

TRANSCOM shared first place with the Marine Corps Logistics Command, which improved controls over small arms in-transit shipments and strengthened public safety. The command led a worldwide inventory that resulted in 194 weapons recovered and $1.4 billion in cost avoidances, Brook said.

Other agencies and organizations recognized were:
- The Air Force's 82nd Training Wing pharmacy
- The Air Force's 71st Flying Training Wing
- The Defense Information Systems Agency
- DLA's Defense Reutilization and Marketing Service
- The Defense Finance and Accounting Service.

Raising awareness for individuals and agencies throughout the Defense Department has been the cornerstone of the campaign, and though the campaign is officially finished, the message and processes it promoted are not, Brook said.

15 DoD Early Career Scientists and Engineers Win Presidential Award

DEPARTMENT OF DEFENSE NEWS RELEASE (DEC. 19, 2008)

The White House recognized 15 scholars nominated by the Department of Defense (DoD) as winners of the 2007 Presidential Early Career Award for Scientists and Engineers (PECASE). The awards are the nation's highest honor for faculty members that are beginning their independent research careers.

DoD's selections for this prestigious award included submissions from the three Services that were based on the individual's innovative research at the frontiers of science, engineering, and education.

"The PECASE recognizes promising young faculty at universities involved in basic research of importance to DoD,"

said William Rees Jr., deputy under secretary of defense for laboratories and basic sciences. "It, together with the DoD National Security Science and Engineering Faculty Fellowships program and Young Investigation Programs, build the core science and engineering competencies that underpin current and future national security systems."

To support their basic research, DoD 2007 PECASE recipients will receive $200,000 a year for five years.

A list of the DoD awardees and their home institutions follows.

- Chad Fertig, University of Georgia, Army
- Enrique Vivoni, New Mexico Institute of Mining and Technology, Army
- Krista S. Walton, Kansas State University, Army
- Mung Chiang, Princeton University, Navy
- Stefano Curtarolo, Duke University, Navy
- Maya Gupta, University of Washington, Navy
- Brian Lail, Florida Institute of Technology, Navy
- Ravi Ramamoorthi, Columbia University, Navy
- Purnima Ratilal, Northeastern University, Navy
- Tim Roughgarden, Stanford University, Navy
- Rachel Segalman, University of California at Berkeley, Navy
- Shengli Zhou, University of Connecticut, Navy
- Zhenqiang Ma, University of Wisconsin-Madison, Air Force
- Max Shtein, University of Michigan, Air Force
- Haiyan Wang, Texas A&M University, Air Force

Supply Technician Claims AMC Employee of Year Award

Tony Medici
ARMY NEWS SERVICE (DEC. 17, 2008)

TOBYHANNA ARMY DEPOT, Pa.—For 26 years, Laura Dumback has worked around, over, and under a wall of silence. Her perseverance has earned the profoundly deaf employee two promotions, and now the Army Materiel Command's 2008 Outstanding Disabled Employee of the Year award.

Prior to being named, she was also named the Tobyhanna Army Depot and Communications and Electronics Command—Life Cycle Management Command 2008 Outstanding Disabled Employee of the Year.

A Six-pack of Tips for Defense AT&L Authors

1 Look at back issues of the magazine. If we printed an article on a particular topic a couple of issues ago, we're unlikely to print another for a while—unless it offers brand new information or a different point of view.

2 We look on articles much more favorably if they follow our author guidelines on format, length, and presentation. You'll find them at <**www.dau.mil/pubs/dam/DAT&L%20author%20guidelines.pdf**>.

3 Number the pages in your manuscript and put your name on every page. It makes our life so much easier if we happen to drop a stack of papers and your article's among them.

4 Do avoid acronyms as far as possible, but if you must use them, define them—every single one, however obvious you think it is. We get testy if we have to keep going to **acronym finder.com**, especially when we discover 10 equally applicable possibilities for one acronym.

5 Fax the *Certification as a Work of the U.S. Government* form when you e-mail your article because we can't review your manuscript until we have the release. Download it at <**www.dau.mil/pubs/dam/DAT&L%20certification.pdf**>. Please don't make us chase you down for it. And please fill it out completely, even if you've written for us before.

6 We'll acknowledge receipt of your submission within three or four days and e-mail you a publication decision in four to five weeks. No need to remind us. We really will. Scout's honor.

Col. Stephen Christian, Fort Monmouth Garrison commander, presented the CECOM–level award to Dumback on Nov. 13 at Fort Monmouth, N.J., on behalf of Maj. Gen. Dennis L. Via, CECOM commander.

Dumback's supervisor, Yvette Pollack, said her determination and initiative have allowed her to perform well in a job that depends on communications skills. Dumback works in the requisitioning branch of the production management directorate's materiel management division. She is the wife of Chris Dumback, a deaf employee who works in the systems integration and support directorate. They have four children and one grandchild, all hearing.

"Laura requisitions large amounts of equipment, which is quickly shipped to forward support locations such as Korea, Iraq, and Afghanistan," Pollack said. "Also, she has expedited test equipment for our engineering personnel and consistently exceeds credit card program standards."

Pollack emphasized that Dumback must be effective in communicating technical information with people from different organizations, most of whom are not deaf.

"It is noteworthy that these employees have little, if any, knowledge of sign language," she said. "Laura uses writing, faxing, and e-mail to get around this. However, her language is American Sign Language, which is a visual language and is not equivalent to English grammar. She has become so adept at applying the basic concepts of English grammar that she communicates effectively with her co-workers using those methods."

Pollack noted that she has also helped some deaf employees understand written English since American Sign Language is the primary language of the deaf community.

Dumback said her job involves research to find the best price to save the depot money, and that e-mails work the best for her.

"We write back and forth to each other and they will answer my questions in this way. If I have a problem, I will call Tamara and she will help me to straighten it out, including talking to them directly if necessary," Dumback said.

Tamara Marinaro is the depot's interpreter for the deaf and works in the EEO Office.

As a result of her outstanding work performance throughout her entire career, Dumback has received numerous awards, including an Army commendation for service and support provided to the presidential inauguration of George W. Bush in 1989.

She has also earned on-the-spot and time-off awards. Dumback earned an exceptional performance rating in 2007.

Dumback also participates in special projects that help people with disabilities, such as Telecommunication Device for the Deaf inventory controller for the depot. In addition to working with Scranton State School for the Deaf, Dumback is a 20-year, active member of the Pennsylvania Society for the Advancement of the Deaf.

Dumback says she likes working and plans to spend her entire career at Tobyhanna. She noted that co-workers throughout her career have always joked, gossiped, and teased her as if she were not deaf, which she appreciates.

"It's very nice that some of them have learned, or at least tried to learn, sign language to communicate with me," Dumback said. "It's hard for people with disabilities to find work, and it can be frustrating working in an environment where most people can hear. But [at Tobyhanna], that's not so. I enjoy working here, so I'm not afraid to try new things."

Tobyhanna Army Depot is the largest full-service Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance maintenance and logistics support facility in the Department of Defense.

Gen McCoy Assumes Command of AF Global Logistics Support Center

JoAnne Rumple
AIR FORCE MATERIEL COMMAND NEWS RELEASE (NOV. 13, 2008)

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—The commander of Air Force Materiel Command installed a new commander for the Air Force Global Logistics Support Center Nov. 13 in ceremonies at Scott Air Force Base, Ill.

During those ceremonies Gen. Bruce Carlson, who leads AFMC, AFGLSC's parent unit, awarded command of the center to Maj. Gen. Gary T. McCoy. McCoy replaces Col. H. Brent Baker Sr., who had commanded the center since its inception as a provisional headquarters in May 2007.

AFGLSC is the Air Force hub for supply chain management. Personnel there network logistics experts from around the Air Force to link wholesale and retail logistics and to integrate and oversee all logistic processes, technology, and resources.

The center commander, whose goal is to deliver end-to-end warfighter support more rapidly and at reduced cost, oversees an organization that includes two wings, a group, and other units located at Scott AFB; Tinker AFB, Okla.; Wright-Patterson AFB; Hill AFB, Utah; Robins AFB, Ga.; Gunter AFS, Ala.; and Langley AFB, Va.

McCoy comes to the center from Headquarters Air Force, where he had served as director of logistics readiness in the office of the deputy chief of staff for logistics, installations, and mission support.

Baker, who helped develop the center from concept to reality, is staying on as the vice commander.

"We've been working toward the day when our plans for a two-star general officer as commander could come to fruition," Baker said. "We're really excited that we're going to be led by the senior logistics readiness officer in the Air Force. He's been involved with the Air Force Global Logistics Support Center since the beginning and is the perfect individual to lead us as we move forward.

"I really want to thank my team for all their support during the last 18 months," Baker added. "Without that dedication and hard work, we'd never have finished melding this organization together."

About his new command, McCoy said, "The last couple of years at the Pentagon have been challenging, exciting, and productive. I leave behind a great team of logistics readiness airmen who are leaning forward to support the greatest Air Force in the world.

"At the same time, I really look forward to leading the center," he said. "I'm extremely proud of all the hard work and progress made by Colonel Baker and his team and will continue to build on the progress they've made. I am truly honored to join the outstanding men and women of AFGLSC and feel especially privileged to command the Air Force's premier global supply chain management activity."

Rumple writes for Air Force Materiel Command Public Affairs.

Dunwoody Becomes First Female Four-Star General

Fred W. Baker III
AMERICAN FORCES PRESS SERVICE (NOV. 14, 2008)

WASHINGTON—For the first time in U.S. history, a female military officer pinned on the rank of four-star general.

Army Gen. Ann E. Dunwoody was promoted just hours before taking the helm of the Army Materiel Command, a Fortune 100-sized organization with nearly 130,000 servicemembers at 150 locations worldwide charged with equipping, outfitting, and arming the Service's soldiers.

The promotion ceremony was a veritable "Who's Who" within the Defense Department, as the defense secretary, the Army secretary, the chairman and all of the Joint Chiefs of Staff, two former Army chiefs of staff, and other senior military officials attended.

The Pentagon auditorium was standing-room-only, leaving even a three-star general to fend for himself and stand in the back.

"We invited everyone but the fire marshal," Defense Secretary Robert M. Gates quipped as he took the podium.

Speaking briefly, Gates heralded Dunwoody's 33-year career, calling her one of the foremost military logisticians of her generation who's known among senior officials as a proven, albeit humble, leader.

"History will no doubt take note of her achievement in breaking through this final brass ceiling to pin on a fourth star," Gates said. "But she would rather be known and remembered, first and foremost, as a U.S. Army soldier."

Dunwoody's career as a soldier began, Gates pointed out, in the Women's Army Corps and at a time when women were not allowed to attend the U.S. Military Academy at West

Point. Her father and brother, both West Point graduates, sat in the front row of her promotion ceremony.

The general's father graduated from the academy in 1943, following in the steps of his father, who graduated in 1905. Dunwoody's great-grandfather graduated from West Point in 1866.

"Now you understand why people think I have olive-drab blood," Dunwoody joked later.

In fact, Dunwoody's father is a combat veteran of three wars and received Purple Heart medals for wounds suffered in the Korean and Vietnam conflicts. He wears the Army's Distinguished Service Cross for valor. Dunwoody credited her successes to her father's teachings and the family's strong military values.

Dunwoody said she has been fortunate to live a lifetime of firsts, and that the Army gave her those opportunities. The Army has mentored her, she said, and now she has been given the opportunity to return the favor.

Army Chief of Staff Gen. George W. Casey Jr. pointed out that, as Dunwoody was receiving her commission, the Army was finishing a study on what those serving thought were appropriate jobs for women in the Army.

The top job appropriate for women, according to officers and enlisted soldiers in 1975, was that of a cook. Dunwoody joined the Army's quartermaster branch.

"That's the Army that Ann Dunwoody entered—an institution just figuring out how to deal with the full potential of an all-volunteer Army, and not yet ready to leverage the strengths of each individual soldier in its ranks," Casey said. "And Ann's career has mirrored our progress."

In 1970, the Army promoted its first female officer to brigadier general. Three years after Dunwoody was commissioned, the Army promoted its first female soldier to major general, and at the same time disbanded the Women's Army Corps, which had its roots steeped in World War II. A year later, Dunwoody took command of a mixed-gender company, a relatively new concept in the Army. The first female lieutenant general was promoted in 1997.

The Army now has 21 female general officers, and just more than 100 have served within the Defense Department.

U.S. Army General Ann E. Dunwoody speaks to the audience during her historic promotion ceremony at the Pentagon, Nov. 14, 2008, where she became the nation's first four-star female officer. Behind her sits (l. to r.) Secretary of Defense Robert M. Gates, Chief of Staff of the Army Gen. George W. Casey, and Dunwoody's husband, Craig Brotchie.
DoD photo by Navy Petty Officer 2nd Class Molly A. Burgess

Dunwoody first joined the Army intent on serving only two years, she said. Her success, she admitted, comes to her as a surprise.

"There is no one more surprised than I, except of course my husband. You know what they say—behind every successful woman, there's an astonished man," she joked.

Her husband, Craig, who sat beside her on stage during the ceremony, is a retired Air Force colonel. They met while attending a military school together.

"It's as overwhelming as it is humbling, especially for somebody who thought fifth grade was the best three years of her life," she joked.

The general said at first she didn't appreciate the enormity of the event. She has previously refused all requests for media interviews. Pentagon officials said Dunwoody was uncomfortable with the attention garnered when she was nominated to be the first female four-star general.

Since then, Dunwoody said, she has received cards, letters, e-mails, and encouragement from men and women serving in all branches of the military around the world—many offering congratulations, others thanking her for her service.

In a briefing at the Pentagon later, Dunwoody said she never grew up believing any limitations were set for her career.

"I never grew up in an environment where I never even heard of the words 'glass ceiling,'" she said. "You could always be anything you wanted to be if you worked hard, and so I never felt constrained. I never felt like there were limitations on what I could do."

And, because much of her career has been forged on relatively new paths cut by a handful of women having gone before her, Dunwoody at first saw this latest accomplishment as simply more of the same, she said.

"My whole career was kind of the first of my generation, because women had not been down those roads before," she said. "And so you go, 'Why is this first any different than the other first?' But it is different, because it is a bigger first."

Still, Dunwoody was quick to deflect the attention her accomplishments were receiving.

"While ... I may be the first woman to achieve this honor, I know with certainty that I won't be the last," she said.

Now, at age 55 and with this promotion, Dunwoody said, she has finally realized her purpose.

"Even though I thought I was only coming in the Army for two years, I now know from the day I first donned my uniform, soldiering is all I ever wanted to do," she said.

New Director Calls DLA "National Asset"

Kathleen T. Rhem
DEFENSE LOGISTICS AGENCY PRESS RELEASE (NOV. 19, 2008)

Calling the Defense Logistics Agency a "national asset," Navy Vice Adm. Alan S. Thompson officially assumed responsibilities as the agency's 16th director Nov. 19.

Thompson called DLA "a vital enabler to the readiness of our armed forces, manned by the world's finest military and civilian personnel."

"When we talk about the forward defense of freedom, DLA is laser-focused on our mission of providing everything that is needed to those deployed and sustaining the finest combat forces in the world around the clock around the world," he added.

During the ceremony, Deputy Under Secretary of Defense for Logistics and Materiel Readiness Jack Bell noted that Thompson is no stranger to DLA. Before becoming director, Thompson served in various positions in the agency and as a customer.

Most recently, Thompson was commander of Naval Supply Systems Command. He also previously was commander of the Fleet and Industrial Supply Center, in Norfolk, Va., and of the Defense Supply Center Columbus, Ohio.

During his remarks, Thompson said he believes strongly in DLA's mission and looks forward to the Agency's continued success.

"The sun truly never sets on DLA," he said. "You see the DLA logo on nearly every military base around the world, and we are forward-deployed everywhere our forward-deployed soldiers, sailors, airmen, and Marines serve. And in every case, I believe we're providing exceptional logistics support."

The admiral outlined four guiding principles for DLA employees.

- "That we exist to support our nation's warfighters. It's about focusing everything we do on providing everything that is needed to accomplish their mission;
- "That we must always seek the best solution for the armed forces and the Department of Defense and never worry about protecting our own turf;
- "That we should argue passionately about what is good and effective but not allow that to blind us to needed change; and
- "That the well-being and effective replenishment of our ever more diverse workforce, both military and civilian, is the foundation on which all of our efforts must be based."

He also introduced DLA employees to five strategic focus areas that will guide the agency's efforts under his leadership.

- Warfighter support enhancement. He said this area is "always our top priority."
- A mission area assessment to assess current and future roles.
- Workforce development. This is important "to ensure that we have the right skills and a plan to continue to replenish our aging workforce," Thompson said.

- Stewardship improvements. "We must always expect the very highest standards when managing the tax dollars of our nation's citizens," he stressed.
- Business process refinement. This will maximize DLA's performance using the Enterprise Business System, the agency's primary supply chain and financial business process system.

Thompson also stressed that he is proud of the accomplishments of DLA's workforce.

"As Theodore Roosevelt said, 'Far and away the best prize this life offers is the chance to work hard at work that is worth doing.'

"And I think when you look at what has happened in our nation and in our Department of Defense and our armed forces since 9/11, this is a particularly significant and important time to serve," Thompson said.

General Officer Announcement

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 18, 2008)

Secretary of Defense Robert M. Gates announced today that the President has made the following nomination: Air Force Maj. Gen. Loren M. Reno has been nominated for appointment to the grade of lieutenant general with assignment as deputy chief of staff, Logistics, Installations and Mission Support, Headquarters U.S. Air Force, Pentagon, Washington, D.C. Reno is currently serving as commander, Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker Air Force Base, Okla.

Flag Officer Assignments

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 20, 2008)

Chief of Naval Operations Adm. Gary Roughead announced today the following assignments:

Rear Adm. John W. Goodwin is being assigned as assistant chief of Naval Operations for Next Generation Enterprise Network System Program, Washington, D.C. Goodwin is currently serving as commander, Naval Air Force, U.S. Atlantic Fleet, Norfolk, Va.

Rear Adm. (lower half) David A. Dunaway is being assigned as commander, Operational Test and Evaluation Force, Norfolk, Va. Dunaway is currently serving as commander, Naval Air Warfare Center, Weapon Division, China Lake, Calif.

General Officer Assignments

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 21, 2008)

The Air Force chief of staff announces the assignments of the following general officers:

Maj. Gen. Patrick D. Gillett Jr., director, logistics, Headquarters Air Combat Command, Langley Air Force Base, Va., to commander, Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker Air Force Base, Okla.

Brig. Gen. Judith A. Fedder, commander, 76th Maintenance Wing, Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker Air Force Base, Okla., to director, logistics, Headquarters Air Combat Command, Langley Air Force Base, Va.

Brig. Gen. Bruce A. Litchfield, director, logistics, Headquarters Pacific Air Forces, Hickam Air Force Base, Hawaii, to commander, 76th Maintenance Wing, Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker Air Force Base, Okla.

Gen. Hoffman Assumes Leadership of Air Force Materiel Command

John Scaggs
AIR FORCE NEWS SERVICE (NOV. 21, 2008)

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—Gen. Donald J. Hoffman assumed command of the organization responsible for the technology, acquisition, test, and sustainment of the Service's current and future weapon systems during a ceremony Nov. 21.

Hoffman took the reins of Air Force Materiel Command from Gen. Bruce Carlson during a change of command held at the National Museum of the U.S. Air Force. Carlson, who had served as the commander of AFMC since August 2005, is retiring after 37 years of service.

Air Force Chief of Staff Gen. Norton Schwartz presided over the change of command and began by highlighting Carlson's unwavering leadership in establishing a vision known to everyone in AFMC: war-winning capabilities—on time, on cost.

"Bruce, you can be confident that AFMC successfully delivers war-winning expeditionary capabilities to the warfighter," Schwartz said. "Your work is going to pay wonderful dividends for years to come.

"You leave a legacy of excellence, and you were a friend to all airmen," Schwartz continued. "We wish you and Vicki the very best."

Carlson, who has led AFMC since August 2005, told the crowd that he considered it an honor to serve and learn from such a diverse and talented group of people.

Air Force Chief of Staff Gen. Norton Schwartz (left) and Gen. Bruce Carlson (right) congratulate Gen. Donald Hoffman, who became the seventh commander of Air Force Materiel Command during a change-of-command ceremony Nov. 21. General Hoffman succeeds Carlson, who is retiring after almost 38 years of service. The event took place inside the National Museum of the United States Air Force at Wright-Patterson Air Force Base, Ohio. U.S. Air Force photo by Ben Strasser

"During my tenure as AFMC commander, it was a privilege to serve alongside people who were unified in purpose and in decision," he said. "It's a remarkable opportunity for a commander when you have a group of people like that around you. The men and women of AFMC understand the mission, comprehend the goals, and work hard to ensure they are accomplished. God bless each of you for your service and God bless the U.S. Air Force."

Schwartz emphasized AFMC's vital role in the Air Force's national security capability and added that he is confident Hoffman will lead the command to acquisition and sustainment excellence.

"So much of the Air Force's success hinges on leadership," Schwartz said. "General Hoffman will lead a command whose work will be critically important to our Air Force and this nation in the years ahead."

Hoffman thanked Schwartz and Air Force Secretary Michael Donley for their faith in his ability to lead AFMC and then stated he was looking forward to working alongside AFMC's airmen, civilians, and contractors.

"I'm honored to join this team," Hoffman said. "Together, we will continue to produce a product and provide services for our warfighters that will dissuade and deter those who wish us harm. Your efforts help keep this nation safe."

Prior to the change of command, Hoffman received his fourth star during a brief promotion ceremony. After serving as the military deputy, Office of the Assistant Secretary of the Air Force for Acquisition at the Pentagon for the past three years, Hoffman becomes the seventh AFMC commander since AFMC stood up on July 1, 1992. He will now lead a

workforce currently numbering about 74,000 people and manage an annual budget of about $59 billion.

Scaggs writes for Air Force Materiel Command Public Affairs.

Pillsbury Confirmed for 3rd Star

Skip Vaughn
ARMY MATERIEL COMMAND NEWS RELEASE (DEC. 11, 2008)
Maj. Gen. Jim Pillsbury's nomination for his third star was confirmed Dec. 8. The president had nominated him for appointment to the rank of lieutenant general and assignment as deputy commanding general/chief of staff for Army Materiel Command, Fort Belvoir, Va.

He is currently serving as deputy chief of staff for logistics and operations at AMC.

"Becky and I are humbled by this nomination, confirmation, and promotion to lieutenant general," said Pillsbury, former commander, Redstone Arsenal, Ala. "We are proud to continue serving soldiers and their families. Our nation is at war, and I can think of nowhere else I would rather be than serving in the United States Army and, more specifically, here in the Army Materiel Command."

Vaughn writes for the Redstone Rocket.

Senior Leader Assignments, Retirement Impact AFMC

Air Force Materiel Command Public Affairs
AIR FORCE MATERIEL COMMAND NEWS RELEASE (DEC. 12, 2008)
WRIGHT-PATTERSON AIR FORCE BASE, Ohio —Two generals within Air Force Materiel Command are on the move, a third is retiring, while a fourth general is inbound, according to a Dec. 12 senior leader announcement.

Maj. Gen. David Eidsaune will become the Air, Space, and Information Operations director at Headquarters AFMC, located at Wright-Patterson AFB. Currently, Eidsaune is the commander, Air Armament Center and the Air Force Program Executive Officer for Weapons, located at Eglin AFB, Fla.

Maj Gen Charles Davis will become the commander, Air Armament Center and the Air Force Program Executive Officer for Weapons at Eglin AFB. Currently, Davis is the director, Joint Strike Fighter Program Office, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics in Arlington, Va.

Brig. Gen. Joseph Lanni will become commander of the Air Force Security Assistance Center, or AFSAC, at Wright-Patterson AFB. Currently, Lanni is the Air, Space, and Information Operations director at Headquarters AFMC.

Lanni will succeed Brig. Gen. Joseph Reheiser, the current AFSAC commander, who is retiring.

General Officer Assignments

DEPARTMENT OF DEFENSE NEWS RELEASE (DEC. 15, 2008)
The Air Force chief of staff announced the assignments of the following general officers:

Brig. Gen. Joseph A. Lanni, director, Air, Space, and Information Operations, Headquarters Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio, to commander, Air Force Security Assistance Center, Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio.

Maj. Gen. David W. Eidsaune, commander, Air Armament Center and program executive officer, weapons, Air Force Materiel Command, Eglin Air Force Base, Fla., to director, Air, Space, and Information Operations, Headquarters Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio.

Maj. Gen. Charles R. Davis, director, Joint Strike Fighter Program Office, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Arlington, Va., to commander, Air Armament Center and program executive officer, weapons, Air Force Materiel Command, Eglin Air Force Base, Fla.

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Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

Acquisition Central
http://acquisition.gov
Shared systems and tools to support the federal acquisition community and business partners.

Acquisition Community Connection
http://acc.dau.mil
Policies, procedures, tools, references, publications, Web links, and lessons learned for risk management, contracting, system engineering, TOC.

Air Force (Acquisition)
ww3.safaq.hq.af.mil
Policy; career development and training opportunities; reducing TOC; library; links.

Air Force Institute of Technology
www.afit.edu
Graduate degree programs and certificates in engineering and management; Civilian Institution; Center for Systems Engineering; Centers of Excellence; distance learning.

Air Force Materiel Command Contracting Laboratory's FAR Site
http://farsite.hill.af.mil
FAR search tool; *Commerce Business Daily* announcements (CBDNet); *Federal Register*, electronic forms library.

Army Acquisition Support Center
http://asc.army.mil
News; policy; *Army AL&T* Magazine; programs; career information; events; training opportunities.

Army Training Requirements and Resources System
https://www.atrrs.army.mil
Army system of record for managing training requirements.

Assistant Secretary of the Army (Acquisition, Logistics & Technology)
www.alt.army.mil
ACAT Listing; ASA(ALT) Bulletin; digital documents library; links to other Army acquisition sites.

Association for the Advancement of Cost Engineering International
www.aacei.org
Planning and management of cost and schedules; online technical library; bookstore; technical development; distance learning.

Association of Procurement Technical Assistance Centers
www.aptac-us.org
PTACs nationwide assist businesses with government contracting issues.

Association of Proposal Management Professionals
http://www.apmp.org/
Supports capture and proposal managers on defense acquisitions; government-industry acquisition liaison; proposal professional accreditation program.

AT&L Knowledge Sharing System
http://akss.dau.mil
Automated acquisition reference tool covering mandatory and discretionary practices.

Best Manufacturing Practices Center of Excellence
www.bmpcoe.org
National resource to identify and share best manufacturing and business practices in use throughout industry, government, academia.

Central Contractor Registry
http://www.ccr.gov
Registration for businesses wishing to do business with the federal government under a FAR-based contract.

Committee for Purchase from People Who are Blind or Severely Disabled
www.abilityone.gov
Information and guidance to federal customers on the requirements of the Javits-Wagner-O'Day (JWOD) Act.

Defense Acquisition University and Defense Systems Management College
www.dau.mil
DAU Course Catalog; *Defense AT&L* magazine and *Defense Acquisition Review Journal*; DAU/DSMC course schedules; educational resources.

DAU Alumni Association
www.dauaa.org
Acquisition tools and resources; links; career opportunities; member forums.

Defense Advanced Research Projects Agency
www.darpa.mil
News releases; current solicitations; *Doing Business with DARPA*.

Defense Business Transformation Agency
www.bta.mil
Policy; newsletters; Central Contractor Registration (CCR); assistance centers; DoD EC partners.

Defense Information Systems Agency
www.disa.mil
Defense Information System Network; Defense Message System; Global Command and Control System.

Defense Modeling and Simulation Office
www.dmso.mil
DoD modeling and simulation master plan; document library; events; services.

Defense Technical Information Center
www.dtic.mil
DTIC's scientific and technical information network (STINET) is one of DoD's largest available repositories of scientific, research, and engineering information. Hosts over 100 DoD Web sites.

Deputy Under Secretary of Defense for Acquisition, Technology and Logistics
www.acq.osd.mil/at/
Acquisition and technology organization, goals, initiatives, and upcoming events.

Director, Defense Procurement and Acquisition Policy
www.acq.osd.mil/dpap
Procurement and acquisition policy news and events; reference library; acquisition education and training policy, guidance.

DoD Acquisition Best Practices Clearinghouse
https://bpch.dau.mil
The authoritative source for acquisition best practices in DoD and industry. Connects communities of practice, centers of excellence, academic and industry sources, and practitioners.

DoD Defense Standardization Program
www.dsp.dla.mil
DoD standardization; points of contact; FAQs; military specifications and standards reform; newsletters; training; nongovernment standards; links.

DoD Enterprise Software Initiative
www.esi.mil
Joint project to implement true software enterprise management process within DoD.

DoD Inspector General Publications
www.dodig.osd.mil/pubs/
Audit and evaluation reports; IG testimony; planned and ongoing audit projects of interest to the AT&L community.

DoD Office of Technology Transition
www.acq.osd.mil/ott
Information about and links to OTT's programs.

DoD Systems Engineering
www.acq.osd.mil/sse
Policies, guides and information on SE and related topics, including developmental T&E and acquisition program support.

Earned Value Management
www.acq.osd.mil/pm
Implementation of EVM; latest policy changes; standards; international developments.

Electronic Industries Alliance
www.eia.org
Government relations department; links to issues councils; market research assistance.

Electronic Warfare and Information Operations Association
www.myaoc.org
News; conventions, courses; *Journal of Electronic Defense*.

Federal Acquisition Institute
www.fai.gov
Virtual campus for learning opportunities; information access and performance support.

Federal Acquisition Jumpstation
http://prod.nais.nasa.gov/pub/fedproc/home.html
Procurement and acquisition servers by contracting activity; CBDNet; reference library.

Federal Aviation Administration
http://fast.faa.gov
Online policy and guidance for all aspects of the acquisition process.

Federal Business Opportunities
www.fedbizopps.gov
Single government point-of-entry for federal government procurement opportunities over $25,000.

Federal R&D Project Summaries
www.osti.gov/fedrnd/about
Portal to information on federal research projects; search databases at different agencies.

Federal Research in Progress
http://grc.ntis.gov/fedrip.htm
Information on federally funded projects in the physical sciences, engineering, life sciences.

Fedworld Information
www.fedworld.gov
Central access point for searching, locating, ordering, and acquiring government and business information.

Government Accountability Office
http://gao.gov
GAO reports; policies and guidance; FAQs.

General Services Administration
www.gsa.gov
Online shopping for commercial items to support government interests.

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Government-Industry Data Exchange Program
www.gidep.org
Federally funded co-op of government-industry participants, providing electronic forum to exchange technical information essential to research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.

GOV.Research_Center
http://grc.ntis.gov
U.S. Dept. of Commerce, National Technical Information Service, and National Information Services Corporation joint venture, single-point access to government information.

Integrated Dual-Use Commercial Companies
www.idcc.org
Information for technology-rich commercial companies on doing business with the federal government.

International Society of Logistics
www.sole.org
Online desk references that link to logistics problem-solving advice; Certified Professional Logistician certification.

International Test & Evaluation Association
www.itea.org
Professional association to further development and application of T&E policy and techniques to assess effectiveness, reliability, and safety of new and existing systems and products.

Joint Capability Technology Demonstrations
www.acq.osd.mil/jctd
JCTD's accomplishments, articles, speeches, guidelines, and POCs.

U.S. Joint Forces Command
www.jfcom.mil
"Transformation laboratory" that develops and tests future concepts for warfighting.

Joint Fires Integration and Interoperability Team
http://www.jfcom.mil/about/com_jfiit.htm
USJFCOM lead agency to investigate, assess, and improve integration, interoperability, and operational effectiveness of Joint Fires and Combat Identification across the Joint warfighting spectrum. (Accessible from .gov and .mil domains only.)

Joint Interoperability Test Command
http://jitc.fhu.disa.mil
Policies and procedures for interoperability certification; lessons learned; support.

Joint Spectrum Center (JSC)
www.jsc.mil
Operational spectrum management support to the Joint Staff and COCOMs; conducts R&D into spectrum-efficient technologies.

Library of Congress
www.loc.gov
Research services; Copyright Office; FAQs.

MANPRINT (Manpower and Personnel Integration)
www.manprint.army.mil
Points of contact for program managers; relevant regulations; policy letters from the Army Acquisition Executive; briefings on the MANPRINT program.

National Aeronautics and Space Administration's Technology Transfer and Partnership Office
http://technology.grc.nasa.gov/
Promotes competitiveness of U.S. industry through commercial use of NASA technologies and expertise.

National Contract Management Association
www.ncmahq.org
Educational products catalog; publications; career center.

National Defense Industrial Association
www.ndia.org
Association news; events; government policy; *National Defense* magazine.

National Geospatial-Intelligence Agency
www1.nga.mil
Imagery; maps and geodata; Freedom of Information Act resources; publications.

National Institute of Standards and Technology
www.nist.gov
Information about NIST technology, measurements, and standards programs, products, and services.

National Technical Information Service
www.ntis.gov
Online service for purchasing technical reports, computer products, videotapes, audiocassettes.

Naval Sea Systems Command
www.navsea.navy.mil
TOC; documentation and policy; reduction plan; implementation timeline; TOC reporting templates; FAQs.

Navy Acquisition and Business Management
www.abm.rda.hq.navy.mil
Policy documents; training opportunities; guides on risk management, acquisition environmental issues, past performance; news and assistance for the Standardized Procurement System (SPS) community; notices of upcoming events.

Navy Acquisition, Research and Development Information Center
www.onr.navy.mil/sci_tech
News and announcements; publications and regulations; technical reports; doing business with the Navy.

Naval Air Systems Command
www.navair.navy.mil
Provides advanced warfare technology through the efforts of a seamless, integrated, worldwide network of aviation technology experts.

Office of Force Transformation
www.oft.osd.mil
News on transformation policies, programs, and projects throughout DoD and the Services.

Open Systems Joint Task Force
www.acq.osd.mil/osjtf
Open systems education and training opportunities; studies and assessments; projects, initiatives and plans; library.

Parts Standardization and Management Committee
www.dscc.dla.mil/programs/psmc
Collaborative effort between government and industry for parts management and standardization through commonality of parts and processes.

Performance-Based Logistics Toolkit
https://acc.dau.mil/pbltoolkit
Web-based 12-step process model for development, implementation, and management of PBL strategies.

Project Management Institute
www.pmi.org
Program management publications; information resources; professional practices; career certification.

Small Business Administration (SBA)
www.sba.gov
Communications network for small businesses.

DoD Office of Small Business Programs
www.acq.osd.mil/osbp
Program and process information; current solicitations; Help Desk information.

Software Program Managers Network
www.spmn.com
Supports project managers, software practitioners, and government contractors. Contains publications on highly effective software development best practices.

Space and Naval Warfare Systems Command
https://e-commerce.spawar.navy.mil
SPAWAR business opportunities; acquisition news; solicitations; small business information.

System of Systems Engineering Center of Excellence
www.sosece.org
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Under Secretary of Defense for Acquisition, Technology and Logistics
www.acq.osd.mil
USD(AT&L) documents; streaming videos; links.

U.S. Coast Guard
www.uscg.mil
News and current events; services; points of contact; FAQs.

U.S. Department of Transportation Maritime Administration
www.marad.dot.gov
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Defense AT&L Writer's Guidelines in Brief

Purpose

Defense AT&L is a bi-monthly magazine published by DAU Press, Defense Acquisition University, for senior military personnel, civilians, defense contractors, and defense industry professionals in program management and the acquisition, technology, and logistics workforce. The magazine provides information on policies, trends, events, and current thinking regarding program management and the acquisition, technology, and logistics workforce.

Submission Procedures

Submit articles by e-mail to datl(at)dau.mil or on disk to: DAU Press, ATTN: Carol Scheina, 9820 Belvoir Rd., Suite 3, Fort Belvoir VA 22060-5565. Submissions must include the author's name, mailing address, office phone number, e-mail address, and fax number.

Receipt of your submission will be acknowledged in five working days. You will be notified of our publication decision in two to three weeks.

Deadlines

Issue	**Author Deadline**
January-February	1 October
March-April	1 December
May-June	1 February
July-August	1 April
September-October	1 June
November-December	1 August

If the magazine fills before the author deadline, submissions are considered for the following issue.

Audience

Defense AT&L readers are mainly acquisition professionals serving in career positions covered by the Defense Acquisition Workforce Improvement Act (DAWIA) or industry equivalent.

Style

Defense AT&L prints feature stories focusing on real people and events. The magazine also seeks articles that reflect your experiences and observations rather than pages of researched information.

The magazine does not print academic papers; fact sheets; technical papers; white papers; or articles with footnotes, endnotes, or references. Manuscripts meeting any of those criteria are more suited to DAU's journal, *Acquisition Review Journal (ARJ)*.

Defense AT&L does not reprint from other publications. Please do not submit manuscripts that have appeared in print elsewhere. *Defense AT&L* does not publish endorsements of products for sale.

Length

Articles should be 1,500 – 2,500 words.

Format

Submissions should be sent via e-mail as a Microsoft® Word attachment.

Graphics

Do not embed photographs or charts in the manuscript. Digital files of photos or graphics should be sent as e-mail attachments or mailed on zip disks or CDs (see address above). Each figure or chart must be saved as a separate file in the original software format in which it was created.

TIF or JPEG files must have a resolution of 300 pixels per inch; enhanced resolutions are not acceptable; images downloaded from the Web are not of adequate quality for reproduction. Detailed tables and charts are not accepted for publication because they will be illegible when reduced to fit at most one-third of a magazine page.

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Author Information

Contact and biographical information will be included with each article selected for publication in *Defense AT&L*. Please include the following information with your submission: name, position title, department, institution, address, phone number, and e-mail address. Also, please supply a short biographical statement, not to exceed 25 words, in a separate file. We do not print author bio photographs.

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