



# **Defense** AT&L

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## **Ensuring the Navy's Present and Future Technological Edge**

*Defense AT&L Interviews*

**Dr. Delores M. Etter, Assistant Secretary of the Navy for Research, Development and Acquisition**

Also

**Transitioning an ACTD to an Acquisition Program**

**Insider's Guide to Military Equipment Audits**

**Freeze-dried Plasma: The Trail Back to the Battlefield**

**Defense Supply Center Richmond Develops Supply Chain Alliances**

**Four Rs: Basic Training for Success**

**Using Incentives to Reduce Overtime Expenditures**

**Commodity Approach to Aircraft Protection Systems**

**Interrelated Approach to Requirements Management**

**Teamwork Tells**

**We've Come a Long, Long Way**



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# Ensuring the Navy's Present and Future Technological Edge

**Dr. Delores M. Etter, Assistant Secretary of the Navy for Research, Development and Acquisition**

**D**r. Delores M. Etter was sworn in as assistant secretary of the Navy for research, development and acquisition in November 2005. As the Navy's senior acquisition executive, Etter is responsible for research, development, and acquisition directed at maintaining the Department of the Navy's technical advantage. In June, Etter talked with *Defense AT&L* about her vision for the Navy and Marine Corps. She stressed, among other issues, her concern for the decline in funding for science and technology programs; the need for more rigorous and consistent software reviews; and the reality of working with a Navy acquisition workforce that is half the size it was 18 years ago.

**Q:** *Dr. Etter, you've served for just over six months as the Navy's senior acquisition executive. As such, you have*

*taken on a role of maintaining our technical advantage over all adversaries, developing affordable systems and platforms, and maintaining a viable technological and industrial base. What do you see are your most critical duties and roles?*

**A:** Everything we do, really, is pointed toward one vision, and that is to provide our Navy and Marine Corps men and women with weapons, systems, and platforms that support their missions and give them a technological edge over the enemy. To that end, I've established four goals to help us attain that vision.

First, we have to expedite our global war on terror programs as much as possible without compromising safety.



*Everything we do is pointed towards one vision, and that is to provide our Navy and Marine Corps men and women with weapons, systems, and platforms that support their missions and give them a technological edge over the enemy.*

Anything we can do to help our sailors and Marines who are in the field today is critical.

Second, we need to reduce volatility in our acquisition programs. I define volatility as tending to vary often or widely and it is this volatility that really affects our programs over the long term.

Third, we must develop an investment and transition strategy for science & technology to ensure our future technological edge. I'm concerned that S&T funding has declined over the years, while the demand for technology to meet requirements has increased dramatically.

And finally, I want to lead the acquisition enterprise component of the overall naval enterprise. We all need to be at the table to determine the best way to meet the requirements of the future Navy and Marine Corps.

**Q:**

*You've been quoted as saying that "software is the new physical infrastructure of the information age." How is developing and acquiring software different from more traditional procurement of hardware? What changes do you see resulting from this shift in focus?*

**A:**

I think procuring software is really one of our most important challenges, and I'm taking steps to improve the way we do business. Our program software is among the most complex in the world, and that has made it more difficult than ever to accurately measure progress. We must take the same disciplined approach we apply to developing hardware systems; and in addition, we must set achievable requirements, use spiral development where it makes sense, and use proven developmental techniques and practices.

Back in 2000, a Defense Science Board task force found that DoD software development needed more rigor, and it made several recommendations to re-establish disciplined execution in software procurement. I won't go into detail on all the recommendations, but I believe the DSB's approach will provide significant improvement in the performance of software-intensive programs. Therefore I recently initiated a Navy enterprise review of software acquisitions in my Software Process Improvement Initiative to implement a set of policies and procedures to improve software intensive systems. Parallel Navy efforts, such as the policy to incorporate software procurement requirements described under Public Law 107-314 Section 804 and the Navy open architecture initiative, will be consolidated under my program.

**Q:**

*You've suggested adding software reviews to each of our major reviews on acquisition programs. Is that happen-*



Mobile, Ala., Jan. 19, 2006. Assistant Secretary of the Navy for Research, Development and Acquisition Delores M. Etter shakes hands with executive chairman of Austal Ltd., John Rothwell, after her initials were inscribed onto a piece of Littoral Combat Ship Two during the ship's keel laying ceremony. The Navy's second Littoral Combat Ship is scheduled for commissioning in 2008. U.S. Navy photograph.

*ing now? What kind of impact might that have on ensuring the success of programs?*

**A:**

Software reviews take place now, but I want to improve the process. One of the goals of my software process improvement initiative is to establish a consistent, effective, and accountable means of review; and I have assigned a team of subject matter experts to help accomplish that.

Software reviews are a part of all of our major reviews on acquisition programs. We also monitor software metrics monthly. In addition, I am incorporating software "deep dives" into my visits to production facilities to understand the status and issues of software in key programs. For example, I have included these software discussions in recent visits to Boeing-Seattle (multi-mission aircraft), Lockheed Martin-Fort Worth (joint strike fighter), and Lockheed Martin-Owego (presidential helicopter).

**Q:**

*An ongoing concern is the size and composition of the DoD acquisition workforce. A variety of factors have reduced the Navy acquisition workforce to half its size since 1989. What steps are being taken to address this problem?*

## Dr. Delores M. Etter

### *Assistant Secretary of the Navy for Research, Development and Acquisition*



**D**r. Delores M. Etter was nominated on Sept. 6, 2005 by President George W. Bush to serve as the assistant secretary of the Navy for research, development and acquisition. Etter was then sworn in on Nov. 7, 2005. As the Navy's senior acquisition executive, Etter is responsible for research, development, and acquisition within the Department of the Navy. From August 2001 to November 2005, Etter was a member of the electrical engineering faculty at the United States Naval Academy. She was also the first recipient of the Office of Naval Research Distinguished Chair in Science and Technology. Her academic interests were in digital signal processing and communications. Her research interests included biometric signal processing, with an emphasis on identification using iris recognition. She has also written several textbooks on computer languages and software engineering.

From June 1998 through July 2001, Etter served as the deputy under secretary of defense for science and technology. In that position, she was responsible for defense science and technology strategic planning, budget allocation, and program execution and evaluation for the DoD Science and Technology Program. Etter was the principal U.S. representative to the NATO Research and Technology Board. She was also responsible for the Defense Modeling and Simulation Organization, the High Performance Computing Modernization Office, and for technical oversight of the Software Engineering Institute. Etter was also the senior civilian in charge of the DoD high-energy laser research program.

From 1990 to 1998, Etter was a professor of electrical and computer engineering at the University of Colorado, Boulder. During 1979 through 1989, she was a faculty member in electrical and computer engineering at the University of New Mexico. She served as associate vice president for academic affairs in 1989. During the 1983-84 academic year, she was a National Science Foundation visiting professor in the Information Systems Laboratory in the electrical engineering department at Stanford University.

Etter is a member of the National Academy of Engineering. She is also a former member of the National Science Board and the Defense Science Board. She is a Fellow of the Institute of Electrical and Electronic Engineers (IEEE), the American Association for the Advancement of Science, and the American Society for Engineering Education. She served as president of the IEEE Acoustics, Speech, and Signal Processing Society from 1988 to 1989, and was editor-in-chief of the IEEE Transactions on Signal Processing from 1993 to 1995.

Etter was a member of the Naval Research Advisory Committee from 1991 to 1997 and chaired the committee from 1995 to 1997. She has received the Department of the Navy Distinguished Public Service Award, the Secretary of Defense Outstanding Public Service Medal, and the Department of Defense Distinguished Public Service Medal.

**A:**

As we look to the future, the Naval Acquisition Intern Program continues to recruit 250 to 300 interns a year for our three-year developmental acquisition program. We have over 700 interns on board who will be our future acquisition leaders. While the Department of the Navy intern program has always been among the best, we are working closely with the Office of Personnel Management and Department of the Navy Human Resources communities to use all available human resource flexibilities available to us to create a state-of-the-art intern program.

**Q:**

*What are you doing to ensure that you are cultivating and maintaining an adequate supply of Navy and Marine Corps experts in critical disciplines in the Department's research and development commands?*

**A:**

The Navy recognizes that a well-educated and skilled workforce is essential to the ability to conduct our naval mission to defend our citizens against foreign attack. The declining numbers of U.S. graduates with advanced degrees, as compared to other countries and past trends within this country, has created a challenging environment within which we recruit new talent to our naval research enterprise.

We have a cross-agency initiative with the National Science Foundation that links their academic talent pool with our civilian researchers within the Naval Research Enterprise, at the Naval Research Lab here in Washington, D.C., and with our Systems Command Warfare Centers. We also are taking advantage of some congressionally funded scholarship programs for students in technological fields that offer students full scholarships and an early career opportunity as a government scientist.

But you know, in the end, I think it is the challenges and opportunities the Navy provides that really attract students and new people to our organization. In my travels I get to meet a lot of our new hires and interns and when I ask them why they came to work for us, the challenge and importance of the job is almost always the determining factor in their career choice. They

get to take on significant responsibility at an early point in their careers, and this is very motivating to them.

**Q:**

*How does your office manage and encourage innovative defense science in meeting Navy and Marine Corps missions?*

**A:**

The president's fiscal year 2007 budget requests \$1.599 billion for the Department of the Navy's S&T portfolio. Those funds are focused in 18 core areas that include counter IEDs [*improvised explosive devices*], anti-submarine warfare, battle space environments (particularly the ocean), expeditionary operations, force protection, sea and ground vehicles, marine life sciences, mine warfare and sensors, electronics and electronic warfare.

We execute our basic research, applied research, and advanced technology development funds as a continuum of S&T development, breaking them into three key areas: D&I [*discovery and invention*], INP [*innovative naval prototypes*], and FNC [*future naval capabilities*].

D&I is our basic research, and early applied research work focuses on areas in which we have unique naval needs or support capabilities that we consider to be essential to the naval mission. We believe that a strong investment in this area is necessary to ensure we maintain our technical advantages in the Navy after next.

INPs are disruptive technologies that, because of high risk or radical departure from established requirements and concepts of operation, are unlikely to survive without top leadership endorsement. INP programs invest in S&T projects intended to achieve a level of maturity suitable for transition to an acquisition program within four to eight years. INPs make significant investment in projects with high technological risks but that offer the prospect, if we are successful, of being revolutionary "game changers" in Navy and Marine Corps warfighting capabilities.

Our current INPs are the electronic railgun, persistent littoral undersea surveillance, enhanced capability for joint sea basing and ship-to-objective maneuver, and improving naval tactical use of space.

FNC focuses on requirements-driven, transition-oriented thrust areas. FNC objectives are to provide enabling capabilities to fill gaps in Naval Power 21 warfighting and enterprise capabilities identified by the chief of naval operations and the commandant of the Marine Corps. The FNC program provides technology solutions by developing S&T products that deliver measurable warfighting improvements to acquisition programs within a three- to five-year window. There are currently 142 FNC projects addressing 34 capability gaps.

One of the most difficult challenges of any research organization is to efficiently transition the most effective science and technology efforts from D&I into advanced development, through the acquisition process, and into the hands of the customers—in our case the fleet operators. One of our highest priorities is to open that spigot so that deployable S&T products transition more frequently, more rapidly, and with less risk.

**Q:**

*You've expressed a concern that the Navy keep an adequate budget for basic research and long-term research—the kind of research for which results might not be tangible for 10 or more years. How can you support retaining the capability for this kind of research?*

**A:**

Success in the global war on terrorism, naval transformation, and Navy and Marine Corps after next, depends on a balanced, long-term, stable, and sustained investment in science and technology, validated through a cycle of ongoing experimentation so we can transition new capability to the warfighter.

**Q:**

*Cost analysts outside the Pentagon consistently forecast higher numbers than Navy estimates. For example, the Congressional Budget Office had a much higher estimate for new ship construction programs than the Navy. Why do you think there are such discrepancies between Navy and CBO estimates?*

**A:**

CBO uses a traditional cost-per-ton metric as an accurate costing methodology; but cost per ton fails to address shipyard-specific impacts; doesn't take into account the electronic-intensive nature of Navy warships; doesn't address the effect of detail design being done in a 3D computer-aided design environment; does not take into account capital expenditures/process improvements at the shipyards; and doesn't address learning curves.

**Q:**

*You've said that one of your top goals is to reduce volatility in acquisition programs. What are you doing to make sure you have manageable risks and realistic expectations?*

**A:**

I've identified several characteristics of volatility that affect programs and are places we can look to help programs improve or avoid problems in the future.

These characteristics include program complexity, requirements fluctuation, budget instability, schedule demands, and contractor/program manager optimism. Any combination of these traits can result in overruns and de-

livery delays that cost us money and destroy our credibility with Congress regarding our ability to run these programs.

But it's important to note that I don't want to eliminate volatility entirely. If our programs have no risk and no volatility, then we're not meeting the needs of our customers. Making progress requires some risk. We need to balance risk and volatility to get new capabilities for our warfighters.

**Q:** One of your research interests is biometric signal processing, with an emphasis on identification using iris recognition. Can you talk about how this technology might someday benefit the warfighter, or how DoD can employ it?

**A:** The Navy is currently conducting several rapid technology transition efforts that include biometric signal processing. Some applications we are looking at include using biometric data to support maritime interdiction operations and roadside checkpoints. Another application could use fingerprints to facilitate access to Navy enterprise information systems instead of common access cards and passwords.

**Q:** How can the Defense Acquisition University improve or enhance the curriculum to better support the AT&L workforce? What would you like to see added to the current curriculum to better prepare people for the realities of the workplace and the current tempo?

**A:** The Department of the Navy acquisition workforce is lean and must be multi-functional to meet changing demands. Strong program management skills across the acquisition workforce are a must-have because the program executive offices depend on program managers, engineers, and logisticians to lead integrated product teams. DAU can play a vital role in preparing these fu-



*Making progress requires some risk. We need to balance risk and volatility to get new capabilities for our warfighters.*

ture leaders by increasing access to program management Level 200 and 300 training. The PMT 250 [Program Management Tools] and PMT 352 [Program Management Office] courses provide PMs with tools and hone their critical thinking skills—key enablers for a high-performing, agile, and ethical workforce to meet changing requirements.

To address some of the software development concerns I cited earlier, we are working with DAU to improve courses in the areas of software development and management. As an example, we have developed a training module on open architecture that will be included in the DAU continuous learning section of the Acquisition Community Connection at <<https://acc.dau.mil>>. We expect this module to become operational by the July 1. We are also looking at education and training as part of the software process improvement initiative and intend to share what we discover with our DoD counterparts and DAU. I've asked that all ACAT I and II program managers with software-intensive systems take the SAM 101 [Basic Software Acquisition Management] course as well as a course on capability maturity modeling.

**Q:** Dr. Etter, thank you for your time and for sharing your vision with the Defense AT&L readership.

# Transitioning an ACTD to an Acquisition Program

## Lessons Learned from Global Hawk

Col. G. Scott Coale, USAF ■ George Guerra

**E**arlier this year, the Air Force deployed two production Global Hawk aircraft in support of the global war on terror. These air vehicles replaced Advanced Concept Technology Demonstration (ACTD) prototype aircraft that had deployed three different times to Southwest Asia in the last five years. Production Global Hawks and associated support elements were available to support today's urgent global war on terror needs, less than five years after the start of the acquisition program, because the Department of Defense made the decision in 2001 to transition the program directly from the ACTD phase into simultaneous development and production.

The positive reports on the performance and contribution of the production hardware validate the decision to rapidly transition the program into production. In executing this nontraditional acquisition model, we've learned a number of lessons that should be applied to future programs following a similar path.

### Early Days of the Global Hawk Program

The Defense Advanced Research Projects Agency (DARPA) initiated the Global Hawk ACTD program in 1995. The objective was to rapidly develop a high-altitude, long-endurance unmanned aerial vehicle system capable of providing broad-area surveillance. The contractor team, led by Teledyne Ryan, developed the concept of a Global Hawk system consisting of three primary hardware elements: the Global Hawk air vehicle, the mission control element, and the launch and recovery element. The sys-



tem architecture provided for command and control and transmission of surveillance information via a line-of-site data link or a satellite communication link. After a successful first flight in 1998, DARPA transferred program management responsibility to the Air Force. Over the next two years, the Air Force employed Global Hawk in a series of exercises, demonstrations, and deployments, culminating in a military utility assessment (MUA) report that recommended expeditious fielding of an operationalized version of the ACTD hardware. This resulted in DoD's establishing an acquisition category (ACAT) ID program and approving the simultaneous start of engineering and manufacturing development (EMD) and low rate initial production (LRIP) in March 2001.

In November 2001, the Air Force deployed Global Hawk ACTD hardware to Southwest Asia to meet an urgent Cen-

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**Coale** is the commander of the Reconnaissance Systems Wing, responsible for managing the development, production, and fielding of Air Force airborne reconnaissance systems. **Guerra** is the Northrop Grumman program manager for the Air Force Global Hawk program.

tral Command request for persistent, broad-area reconnaissance and surveillance for Operation Enduring Freedom. The system deployed two subsequent times over the next four years and received rave reviews for its role in CENTCOM operations. Global Hawk proved especially effective during the Iraq invasion (see imagery on page 11). With just one air vehicle deployed, the system was credited with identifying 38 percent of Iraq's armor and 55 percent of the time-sensitive air defense targets using electro-optical (EO), infrared (IR), and synthetic aperture radar (SAR) images to target Iraqi forces. These early combat deployments demonstrated the effectiveness of carrying multiple sensor capabilities on the same platform.

When the production air vehicles deployed earlier this year, the ACTD hardware had accumulated more than 5,000 hours of combat time and had built a reputation for effectively meeting unique global war on terror challenges. The capability of the air vehicle to fly unrefueled for more than 30 hours allowed it to remain airborne for extended periods and eliminate sanctuary for terrorists attempting to rapidly blend in with the local population. The ability of the system to operate at 65,000 feet along with its long-range sensors allowed a single air vehicle to provide surveillance over a wide area. These system attributes convinced leadership to divert the first production hardware from a training unit to replace the ACTD hardware that was approaching the end of its useful life. The production hardware has already accumulated more than 1,000 hours of successful combat time.

### **Lessons Learned**

While supporting three combat deployments with ACTD hardware, we have now accumulated more than five years' experience executing the formal acquisition program. The nontraditional acquisition strategy that resulted from transitioning an ACTD into combined EMD/LRIP has created several challenges for the government/contractor team. Our hope is that future programs will benefit from what we've learned the hard way.

### **Revise Operational Test Approach and Definitions**

Current Title 10 requirements and guidelines don't align well with the Global Hawk acquisition strategy. Traditional guidelines call for remaining in an LRIP status and recommend limiting quantities to 10 percent of the planned production buy until completion of initial operational test and evaluation (IOT&E). This approach works reasonably well for a sequential acquisition strategy, but becomes problematic when EMD and LRIP run simultaneously. With Global Hawk, this dilemma is further aggravated by the relatively small production run. In the first two production lots, the Air Force committed to six air vehicles, already exceeding 10 percent of the planned buy of 54. The current program plan projects an IOT&E event in 2008 – 2009 when the Air Force will have already committed to more than 50 percent of production. The criti-



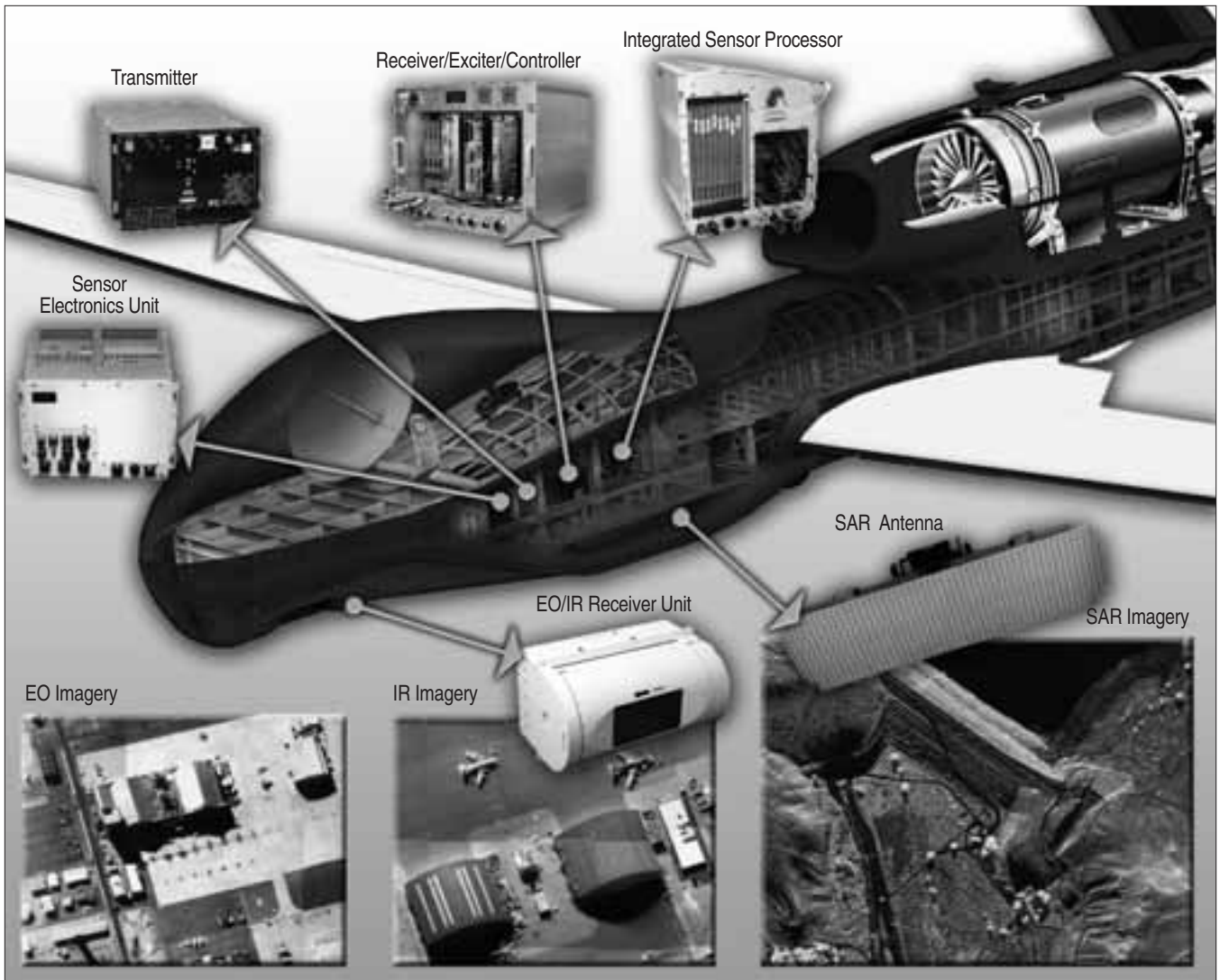
cal path elements driving the IOT&E schedule are not production hardware deliveries, but the process of putting in place the support elements intended for long-term system operation.

The Global Hawk acquisition strategy calls for a different approach to execute the important role of operational test. Programs like Global Hawk need to place greater reliance on "seamless verification," the term coined to describe the merging of developmental and operational test (DT and OT) requirements. We need to leverage each test event to accomplish both DT and OT objectives, while protecting the right of operational testers to report independently. These combined test activities could be supplemented with small, dedicated OT events as meaningful increments of technology are spiraled into production hardware. In the case of deployed systems like Global Hawk, these dedicated OT events should leverage deployed activity as much as possible. Why try to simulate the combat environment if we can assess the system in actual combat?

Finally, this revised OT concept must accommodate a build-up approach to the mature support concept. In a traditional program, the support concept is defined during the development phase. With simultaneous development and production, the support concept will mature as the system is fielded. As technology is spiraled into the production hardware, we must spiral the support concept and not wait until the desired end state to conduct operational testing.

### **Accelerate Logistics Planning**

During the Global Hawk ACTD phase, neither DARPA nor the Air Force made significant investments in logistics planning. This corresponded with the ACTD philosophy of rapidly developing prototype hardware and putting it in the hands of operators to assess the system's military utility. Program investment was intentionally limited until the system's value had been assessed. This was a rea-



Cutaway of Global Hawk RQ-4 showing Integrated Sensor Suite locations.

Graphic courtesy Northrop Grumman.

sonable approach but created logistics challenges when the program quickly transitioned into production.

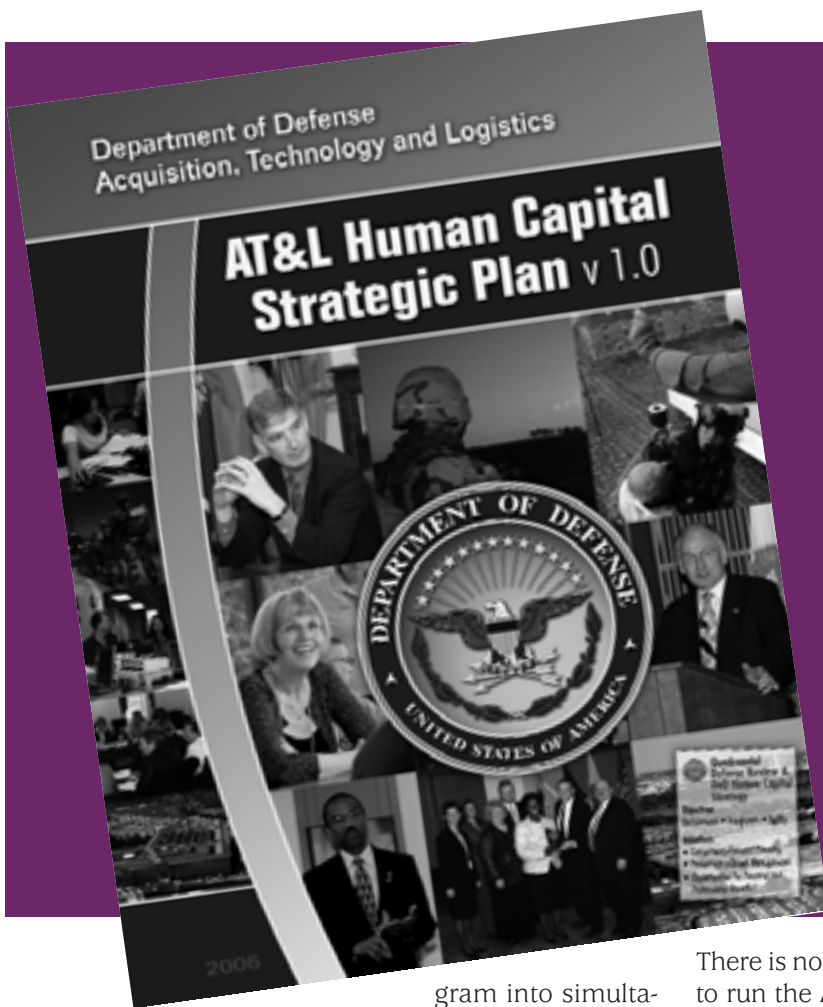
In a more traditional acquisition strategy, logistics planning occurs during the EMD phase, typically in a logistics support analysis that provides the basis for making strategic logistics decisions, including defining requirements for spares, support equipment, training, and technical data. In the case of Global Hawk, we didn't have good information to make provisioning decisions when we negotiated the first production lots. Eventually the program invested in a limited logistics support analysis, but we're still catching up from this late start.

In retrospect, we should have started logistics planning much sooner. In fact, we missed a great opportunity to jump-start the process in 1999. When initial MUA results made it clear that DoD would be transitioning the ACTD into an acquisition program, the Air Force awarded a "pre-EMD" contract. This was a bridge contract to resolve limited technical issues while we completed the MUA and

the milestone decision process. The pre-EMD contract would have been a useful mechanism to start logistics planning that would include defining support equipment requirements and using ACTD test data to populate a spares planning model. This approach would have provided a basis for defining early logistics strategies and applying them to the first production lot contracts.

### Assess ACTD Contractor Ability to Execute Large Acquisition Program

DARPA awarded the original Global Hawk ACTD contract in 1995 to a contractor team led by Teledyne Ryan, who had a rich history with unmanned aerial vehicles dating back to the 1950s and a reputation as an excellent prototyping house. This reputation proved to be well-deserved, with Ryan leading the team to a successful first flight in just 2½ years and winning the prestigious Collier Trophy. [Established in 1911, the Robert J. Collier Trophy is a national award honoring significant achievements in the advancement of aviation.] The initial success convinced the Office of the Secretary of Defense to transition the pro-



## The *AT&L Human Capital Strategic Plan*

is now available at:

<http://www.dau.mil/workforce/hcsp.pdf>

gram into simultaneous EMD/LRIP. In just three years, annual funding increased from \$80 million per year to more than \$300 million. To accommodate this increased investment, prime contractor employment increased from 200 people to more than 800. The lead contractor also changed during this period when Northrop Grumman acquired Teledyne Ryan.

The program management tools and personnel skills sufficient to manage a smaller effort were not adequate to run a large ACAT ID program. One example is the lack of an overarching integrated master schedule (IMS) that linked all aspects of the program, including the different EMD spirals, production lots, and deployment activities. An ad hoc process of individual IMSs for distinct program elements was sufficient to execute the smaller ACTD program but was not adequate to identify bottlenecks in the more complex program. Two other important processes that were not sufficiently mature were the risk management process and the earned value management system. Northrop Grumman has now tapped expertise from across the corporation and put more robust processes in place, but the transition did not occur fast enough to prevent program perturbations. In fact, the program is currently completing a Nunn-McCurdy certification process for breaching program cost targets, in part because we did not have the proper tools in place early in the program.

There is no doubt Teledyne Ryan was an excellent choice to run the ACTD program. However, the Air Force faced a crossroad when transitioning the program into EMD/LRIP. We should have considered two options: first, re-competing the program to select a team better equipped to manage a larger effort; or second, working aggressively with the existing contractor team to put the proper tools and skills in place. In reality, we didn't execute either option. The Air Force awarded the follow-on contract to Northrop Grumman to keep the program moving forward, but we didn't adequately evaluate the contractor team's readiness to handle the larger program. At this point we have conducted a government-contractor assessment and corrected most of the identified tools/skills deficiencies. In retrospect we should have completed this step much earlier, as we were transitioning the program out of the ACTD phase.

### **Pursue More Measured Approach to Capability Improvements**

In transitioning the program into EMD/LRIP, DoD's goal was to field an operationalized version of the ACTD hardware while using spiral development to add incremental capability enhancements. One of our major challenges was defining which enhancements were absolutely required to achieve an operationalized system, and which could be deferred for later delivery. Our extensive deployment and combat experience with ACTD hardware added fuel to the debate. To reflect many of the lessons

learned in combat, we modified existing contracts and incorporated enhancements into the first production hardware as it was being built. There has been a cost and schedule impact, but most of these capabilities are essential for mission accomplishment.

In some cases we should have deferred desired enhancements through a more measured development process. One example is a capability known as automatic contingency generation (ACG). In an in-flight emergency, ACG enables an air vehicle to autonomously determine the optimum flight path to divert to an alternative airfield while avoiding predetermined no-fly zones. The current approach is to rely on manual re-routing by the pilot during a mission. ACG would eliminate multiple steps in building a mission plan and shrink mission-planning cycle time below the requirement threshold. This requirement was documented after we negotiated early production lots, but we decided to add it to the first production baseline. In retrospect, we did not fully understand the complexity of ACG, and it quickly became the critical-path item in fielding the first production hardware. We have now deferred this capability to a future software release, but the time spent trying to field ACG in the first baseline delayed delivery of the first production hardware and training courses. While fielding production hardware in combat within five years of program start is noteworthy, we could have achieved this milestone even earlier had we tackled only those capability enhancements absolutely required for the first production baseline.

### Accelerate Manufacturing Planning

In a traditional acquisition strategy, manufacturing planning and process development are important elements of EMD, representing the “M” in EMD. When we launched



Global Hawk Electro-optical Imagery reveals suspected SA-2 launchers and missiles north of Baghdad. U.S. Air Force imagery.

Global Hawk into simultaneous EMD/LRIP, we had done little production planning; we simply continued ACTD processes. This worked reasonably well for the first production lot, but we quickly ran into trouble on Lot 2. With the addition of Navy requirements for a maritime demonstration, the second lot grew to six air vehicles and multiple ground stations. This required a production rate the program was not ready to handle.

One pacing item became delivery of the primary air vehicle payload, the Integrated Sensor Suite (ISS) shown on page 9. During the ACTD phase, Raytheon built the ISS in a laboratory using a labor-intensive process. This approach was appropriate for the limited ACTD purchase but was not efficient for a longer production run. In the rapid transition to production, we allocated neither the time nor funding to plan for efficient production. This became painfully obvious as Raytheon struggled to apply ACTD processes and meet the steep ramp-up for Lot 2 ISS deliveries.

We have now recovered from this early challenge. In the case of the ISS, Raytheon has laid out a state-of-the-art, lean manufacturing process made possible by a \$30 million Air Force investment in specialized test equipment (STE). Looking back, we needed to start manufacturing planning much earlier than we did. We could have used the pre-EMD contract described earlier to start planning an ACTD-to-LRIP production transition. In addition the Air Force should have included funding in the first production estimates for STE. In our rush to accelerate Global Hawk into production, we budgeted for hardware but didn't include estimates for STE needed to implement efficient production processes. We now know some amount of STE would have paid for itself with reduced production cost and was essential as we increased quantities.

### Putting It Together

The rapid transition of Global Hawk from the ACTD phase into formal acquisition has achieved its primary objective: breaking the historical paradigm of lengthy acquisition cycle time. The Air Force deployed Global Hawk production hardware to Southwest Asia less than five years into the acquisition program, and the system is making a major contribution in CENTCOM combat operations. We did not have a template to follow in executing the nontraditional acquisition strategy that achieved this milestone, and we have encountered several challenges along the way. With careful planning and early commitment of resources, we believe programs that follow us can overcome these challenges and yield the same cycle time reduction achieved in the Global Hawk experience.

The authors welcome comments and questions. Contact them at [scott.coale@wpafb.af.mil](mailto:scott.coale@wpafb.af.mil) and [george.guerra@ngc.com](mailto:george.guerra@ngc.com).

# An Insider's Guide to Military Equipment Audits in Fiscal Year 2006 and Beyond

*Richard K. Sylvester*

**I**n the July/August issue of *Defense AT&L* (page 48), we warned you that the “Auditors Are Coming!” And they are. Now we’ll give you the inside scoop on how to prepare for the auditors, with a quick look back at why we must.

To respond to emerging national security threats, senior management officials need reliable, accurate data about military equipment—across programs, over time. Using information that has received a “clean” audit opinion from an independent auditor gives leaders confidence in the decisions they make for the warfighter. A clean audit opinion also builds credibility with Congress and the American taxpayer that the Department of Defense is managing its financial resources prudently.

In a team effort between the Property & Equipment (P&E) Policy Office and program management offices across the country, the DoD has established the initial value of every item of military equipment in its inventory after reviewing more than 1,100 military equipment programs. This initial valuation, completed Dec. 31, 2005, is based on such inputs as the average cost of military equipment, total program expenditures, and the useful life of the equipment.

The three-year effort—which is part of the Military Equipment Valuation (MEV) Initiative—marks a change in the way the Department does business. Previously, military equipment was simply expensed when it was acquired. Now it will be treated as a capitalized asset whose value must be tracked over time.

The next step is establishing the military equipment baseline for year-end financial reporting in fiscal year 2006. To make the military equipment program information current as of Sept. 30, 2006, designated component points of contact (POCs) in the acquisition community (mostly program managers) are currently updating the information that was used to complete the initial valuations. Once the updates are completed, the acquisition community (along with the logistics and financial management com-

munities) will validate the numbers, and the baseline will be formed.

## **A Closer Look at the Update Process**

POCs are currently updating program data (budgeted cost, useful life, etc.); asset status (additions, transfers, and disposals); and program expenditures from the initial valuation. Here’s a description of each of the required updates.

### **Updates to Program Data**

Representatives of the P&E Policy Office have been working closely with component POCs to identify changes to the program data, which likely will include changes to program funding and updated linkages to the accounting system. P&E Policy Office personnel will be responsible for ensuring that this updated information is considered as the military equipment baseline is developed.

### **Updates to Asset Status**

By Oct. 5, 2006, component POCs—typically program managers, item managers, or other individuals in the logistics chain who have the most reliable information concerning asset quantity—will have primary responsibility for updating the asset status information. That is, they will identify and record changes in asset quantities, by specific asset.

This asset status update process is no small task, but it’s necessary because of the limitations of the component accountability systems. Until these systems are capable of capturing and reporting accurate, real-time asset status information, the Department will have to rely on these data calls.

### **Updates to Program Expenditures**

Updating the expenditure information is being accomplished through an automated interface to the supporting accounting transactions. As noted above, during the program data update, component POCs were asked to identify the accounting system linkages that relate to their program expenditures. For purposes of the MEV initiative, these accounting linkages are referred to as finan-

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*Sylvester is deputy director, acquisition resources and analysis (property & equipment policy) in the Office of the Under Secretary of Defense (Acquisition, Technology and Logistics).*

**To respond to emerging national security threats, senior management officials need reliable, accurate data about military equipment—across programs, over time.**

formation they provided during the initial valuation is accurate and make the relative assertions discussed later in this article.

The management assertion process is mandated by Section 1008 of the 2002 National Defense Authorization Act, which directs government agencies to ensure that the resources expended on financial statement preparation are minimized until the reporting entity can demonstrate that it is ready for audit.

Because the law is recent, automated systems of internal controls have not yet been created. In the future, CAMS-ME will calculate military equipment values in an automated way, based on transactional data from DoD receipt, acceptance, and payment systems. But before that happens, the P&E Policy Office had to devise a short-term solution to make sure that the value reported for FY 2006 stands up to the scrutiny of an independent audit.

It is understood that the auditors will test five assertions relative to military equipment, so the management assertion process addresses each:

- **Valuation.** Auditors will test all contributing factors (useful life, acceptance date, program value, etc.) to ensure that military equipment is reported at appropriate amounts and in accordance with federal accounting standards and generally accepted accounting principles.
- **Completeness.** Auditors will test to ensure that all military equipment programs have been identified and that all military equipment is included in the amounts reported.
- **Rights and Obligations.** Auditors will test to ensure that reported military equipment assets belong to the entity and the entity has the rights to their use.
- **Existence.** Auditors will test to ensure that all assets identified and reported in the financial statements as military equipment actually exist.
- **Presentation and Disclosure.** Auditors will test the footnotes related to military equipment for compliance with accounting standards requirements and will trace the amounts disclosed to general ledger and detailed supporting records.

The key players in the management assertion process include everyone involved with military equipment in the acquisition, logistics, and financial management communities of DoD and applicable defense agencies, including the U.S. Special Operations Command (USSOCOM) and the Defense Threat Reduction Agency (DTRA). Here's how it'll work chronologically.

**By Oct. 16, 2006,** the P&E Policy Office will provide each component financial management office with a report that summarizes the following information:

cial account codes. The FAC is a combination of fields from the accounting line that can be used to associate expenditures with a program.

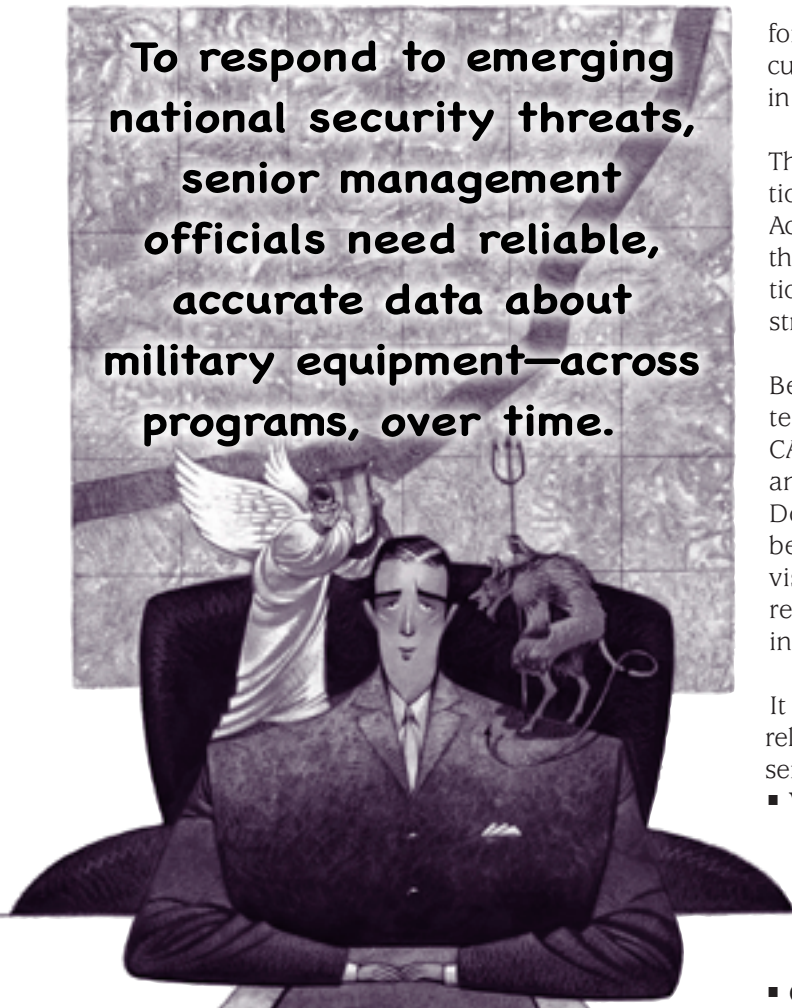
### **Capital Asset Management System—Military Equipment (CAMS-ME)**

Component POCs are making asset status updates in CAMS-ME—a system that the P&E Policy Office has developed to consolidate the average cost of assets, update total program expenditures, depreciate assets over their useful life, and record asset status.

Training on CAMS-ME for POCs is now being offered online, accessible from the Quick Links menu on the P&E Policy Office's new Military Equipment Valuation & Accountability Web site < [www.acq.osd.mil/me](http://www.acq.osd.mil/me) >. The training will remain accessible online because designated component POCs will be required to make updates on a quarterly basis from here on out.

### **A Closer Look at the Validation Process (Management Assertion)**

Once the update process has been completed, the validation, or "management assertion" process begins. In this process, components attest to the fact that the in-



For the Valuation Assertion—Budget authority through FY 2006; projected number of end items associated with this budget authority; program useful life; program FACs; and, if applicable, waiver category (military equipment programs that are not subject to military equipment valuation at this time).

For the Completeness Assertion—List of programs by program manager.

For the Existence Assertion—List of assets by program, along with their acquisition and disposal dates.

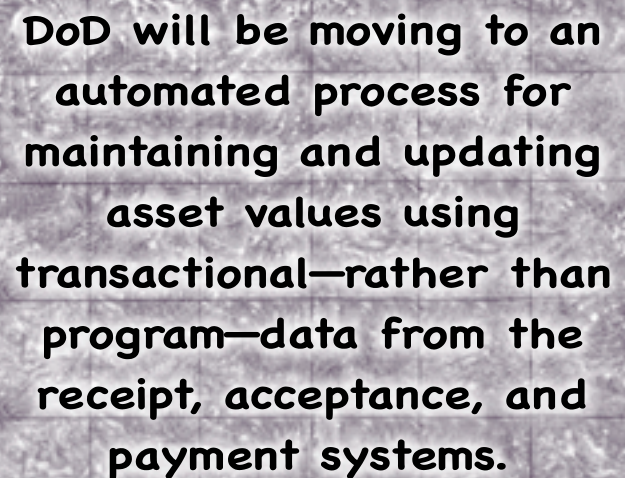
**By Nov. 10, 2006**, the components will provide the P&E Policy Office with an attestation as to the accuracy of the information in the report that was received on or after Oct. 16, 2006.

To complete the attestation, the components will have a process in place to validate the information or identify required changes. In a joint memo, the under secretary of defense (comptroller) and the under secretary of defense (acquisition, technology and logistics) recommend a process that puts the onus of the attestation on the people who are closest to the data—program managers in the acquisition community and item managers in the logistics community. These individuals should be asked to identify required adjustments and to attest that to the best of their knowledge, the information (revised as needed) is accurate. The program managers and item managers then complete the five relative assertions and forward the assertion packages up the chain of command for validation, until ultimately the component acquisition executives validate the information and forward it to their respective component assistant secretaries for financial management and comptroller.

**By Dec. 1, 2006**, the P&E Policy Office will recompute the program values based on the components' attestations. Using the recomputed values, the deputy director of the P&E Policy Office will assert to the military department assistant secretaries for financial management and comptroller; the director of management, special operations acquisition and logistics center for USSOCOM; and the director of DTRA that the military equipment reported for their respective component was valued properly.

The components are responsible for the other four assertions the auditors will be testing: completeness, ownership and rights, existence, and presentation and disclosure. At the same time, they are also responsible for validating their own accounting and payment systems.

**By Dec. 31, 2006**, the military department assistant secretaries for financial management and comptroller, or the comptroller for affected defense agencies, will represent that the values for military equipment are auditable, that



**DoD will be moving to an automated process for maintaining and updating asset values using transactional—rather than program—data from the receipt, acceptance, and payment systems.**

the military equipment exists, that all military equipment assets owned by the components have been included, and that the military equipment has been reported in accordance with applicable accounting standards. The representation will be based on input from the internal auditors in each component, who will have conducted a review to assess the work that was completed and the documentation that was compiled to support the military equipment valuations.

The under secretary of defense (comptroller) will then make a representation to the DoD inspector general that military equipment is ready for audit. Based on the assertions, the DoD inspector general will award a contract to an independent public accounting firm for the audit of the military equipment baseline value.

The independent public accounting firm or the DoD inspector general will make an independent assessment of the available information to determine whether it appears likely that the component will receive an unqualified audit opinion on the military equipment balance. If so, the audit will be initiated. If not, a report will be written that describes what has prevented the audit and what needs to be done to remedy the problems.

### **Changes Afoot**

As stated earlier, the DoD will be moving to an automated process for maintaining and updating asset values using transactional—rather than program—data from the receipt, acceptance, and payment systems. The P&E Policy Office has already identified and is implementing the needed process and policy changes. These changes will require significant alterations to existing acquisition business processes, as well as improvements to financial systems, including the way assets are associated with programs, contracts are written, individual items are identified, items are classified, and expenditure information is captured. Here's a description of each change.

### Changes to Contract Structuring

Contract line items must be structured so that the cost for items that should be capitalized (e.g., planes) can easily be segregated from the cost of items that should not be capitalized (e.g., spare parts). We will soon be offering training on contract restructuring to ensure that those who are responsible for formulating and executing contracts clearly understand the objective of these changes and the related contract writing requirements.

### Changes to Item Identification

The Department now requires the use of the item unique identifiers (IUID) for items that meet established criteria, such as those having a unit cost in excess of \$5,000 and those requiring serialized item management. The IUIDs, which associate a unique number with these military equipment assets, will make it easier to track and account for items as they move between programs and reporting organizations.

### Changes to the Association of Assets with Programs

For associating assets and related expenditures with individual programs, the Department plans to establish individual acquisition program unique identifiers (APUID). These program identifiers already exist for major acquisition programs, while current plans call for extending this requirement to all acquisition programs, thereby improving the Department's ability to link assets and related expenditures with every acquisition program.

### Changes to Item Classification

The Department plans to develop a new demand unique identifier (DUID), which will be used to distinguish how an item will be classified for financial reporting purposes. Given that some contract expenditures should be capi-

talized as military equipment, some should be reported as operating material and supplies, and some should be expensed, this identifier will provide the visibility to distinguish the appropriate classification and accounting treatment in an automated way.

### Changes to the Capture of Expenditure Information

The Department is establishing an automated receipt, acceptance, and entitlement tracking system known as Wide Area Work Flow (WAWF), which will help in associating expenditure information with programs.

Some of these process changes, such as IUID and WAWF, are already in the process of being implemented; others, such as the APUID and the DUID, should be established within the next two years.

Once all of the process changes have been fully implemented—which is estimated to take from five to seven years—the Department will have the tools it needs to implement a fully automated military equipment valuation approach.

### Keeping the Momentum Strong—You Are Key

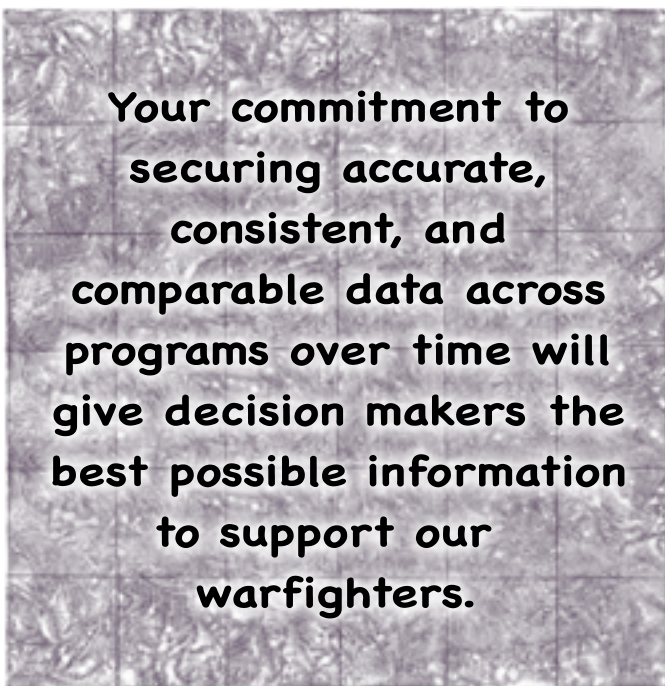
With the help of program management offices, the DoD has already accomplished a great deal. Together we've completed an initial valuation of all military equipment programs; we've begun updating and asserting to these values; and we've mapped out a feasible long-term plan for refining the values in the future.

Now we need your help in keeping the momentum of this initiative strong. Your commitment to securing accurate, consistent, and comparable data across programs over time will give decision makers the best possible information to support our warfighters. It will also move the Department forward in its effort to obtain a clean audit opinion and secure the trust of Congress and the American taxpayer.

Assistance and training are available. The P&E Policy Office has launched the Military Equipment Valuation & Accountability Web site at <[www.acq.osd.mil/me/](http://www.acq.osd.mil/me/)>. The site features an overview video presentation for those new to MEV; help-desk assistance; a resource library; and online training, including MEV Basics, Management Assertion for Military Equipment, and CAMS-ME Portal.

The auditors are coming, so be prepared!

The author welcomes comments and questions. Contact him at [richard.sylvester@osd.mil](mailto:richard.sylvester@osd.mil).



# Freeze-dried Plasma

## The Trail Back to the Battlefield

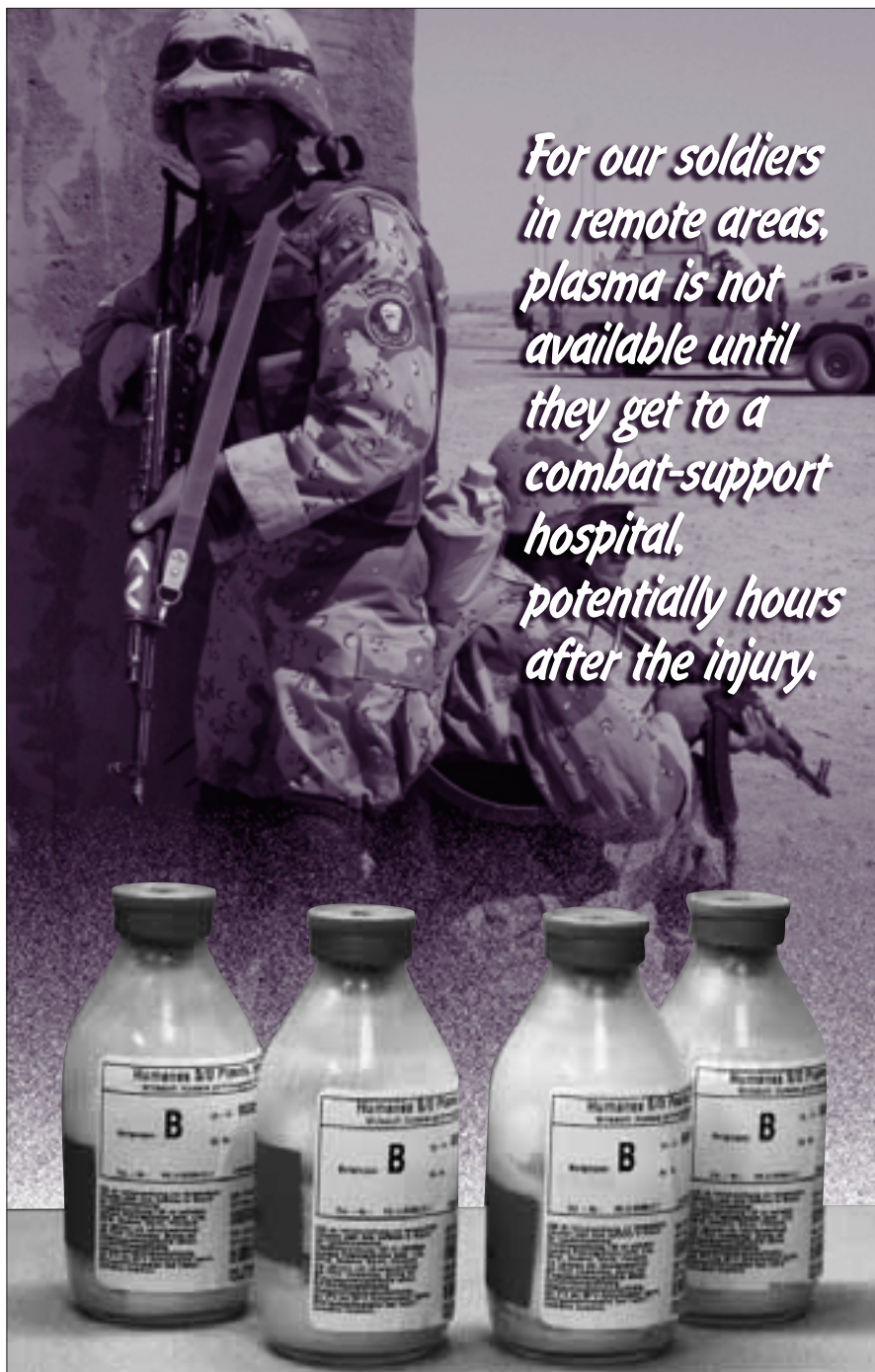
*Elizabeth Barrows*

I would like to share with you my current view of the path traveled by a product with a long history within the U.S. armed forces: freeze-dried human plasma. I have joined this path in the recent history of the product, and I hope to be part of the team that once again brings freeze-dried plasma to the aid of wounded soldiers.

Whole blood donations are divided into component products to allow more effective storage and more efficient use. Plasma, a clear yellow liquid that contains the clotting proteins needed to stop bleeding in the injured, is a component of blood; in modern hospitals, it is stored frozen at a temperature no higher than -18 degrees Celsius for up to one year before thawing and use. In civilian trauma centers, plasma is often available in the emergency room, but for our soldiers in remote areas, plasma is not available until they get to a combat-support hospital, potentially hours after the injury.

### Early Issues with Freeze-dried Plasma

Ironically, freeze-dried plasma was one of the first blood components identified, separated, and stored for shipment into war zones. That was back in the 1940s, before physicians and scientists understood that within the life-saving fluid, there lurked deadly viruses. To efficiently freeze-dry large quantities of plasma, the individual units were poured into a large pool often containing the plasma from more than a thousand donors. If even



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a small fraction of these units contained active viruses, they could easily be transmitted to the entire pool, subsequently infecting hundreds of recipients. The distribution of pooled whole plasma in the United States was stopped in 1968.

When faced with a barrier, humans simply try to overcome it, which is what they did in the late 1980s, when a number of methods for inactivating the viruses in blood products were developed. In 1989, virally inactivated plasma products were brought to the European market; and in 1998, a product was approved for marketing by the U.S. Food and Drug Administration (FDA). The Army saw the opportunity to bring freeze-dried plasma safely back to the marketplace, and initiated a research program in 2000.

I was introduced to the Army's freeze-dried plasma research program when I joined the Army's Combat Casualty Care Research Program as a contracted project coordinator in 2004. At that time, researchers in the Department of Blood Research at Walter Reed Army Institute of Research had already freeze dried the American solvent/detergent-treated product, but that product was no longer in production. They were also working on stabilizing the proteins in single-donor, untreated units of plasma; however, there were significant manufacturing problems that would be difficult, if not impossible, to overcome. Though the researchers in the Department of Blood Research had expanded the science of freeze drying human proteins, there appeared to be no commercially viable way forward for American freeze-dried plasma.

Then suddenly, everything changed—with one e-mail.

## **New Developments**

The major supplier of solvent/detergent-treated plasma in Europe, Octapharma, produces and sells their product as frozen bags, similar to the traditional product. However, the German Red Cross – Blood Service West, Octapharma's development partner, has maintained a license and production facility in Germany for both frozen and freeze-dried solvent/detergent-treated plasma since May 2004.

The medical director for the German Red Cross – Blood Service West contacted the Walter Reed Department of Blood Research by e-mail, describing manufacturing facility upgrades and offering either processing of American plasma or sale of German plasma. Discussions ensued, and in the spring of 2005, the Blood Research Department chief invited Dr. Albrecht Hoburg, the director of blood safety for the German Red Cross Blood Service West, to visit the Walter Reed Army Institute of Research, where he presented the German Red Cross' product, LyoPlas.

## **The Potential of LyoPlas**

Over the following summer, there was much discussion within the Department of Blood Research over the desire to purchase some of the LyoPlas and test its properties in house. Unfortunately, the budgets had already been set, and there was no way to incorporate LyoPlas testing without cutting some portion of the existing research program. It looked as if that path was going to remain unexplored, until I read about the Foreign Technology and Science Assessment Support Program, a small program run by the U.S. Army Research, Development and Engineering Command with the goal of supporting foreign technology testing for transition into U.S. Army projects—exactly what we wanted to do with LyoPlas. With support from the Blood Research Department chief and the research area director for the Combat Casualty Care Research Program, I drafted the Foreign Technology and Science Assessment Support Program application package. After a number of reviews and a presentation by the department chief to the U.S. Army Research, Development and Engineering Command review board, we were awarded \$75,000 to purchase and test LyoPlas.

I started to plan a way forward through advanced development for LyoPlas, assuming that the product is of the quality we believe it to be. The only way for it to enter advanced development without a needless time lag would be to find outside funding to support the transition. I had missed the deadline for the Defense and Foreign Acquisition Challenge Programs, but the Technology Transition Initiative was still a possibility. When the call came for applications, we had been in discussions with the German Red Cross, but we still had not received the LyoPlas and really had no data on the product. I recognized that any application I filed would be essentially six months too early, but maybe some good could come simply from the application process.

With approval from the department chief, I decided it was worth the risk to put this product forward for Technology Transition Initiative funding. It was a mature product produced on a mature product line. The only hurdle from a scientific standpoint would be to complete any additional testing required for FDA approval. This is not a small hurdle but one that is well within the scope of the Technology Transition Initiative program. I figured that putting LyoPlas forward a little early would, at worst, draw attention within the U.S. Army Medical Research and Materiel Command, and perhaps increase the chance of receiving core funding for product development in the next budget cycle.

Projects submitted to the Technology Transition Initiative program have to go through a number of gates, starting at the command level and progressing up to the Office of the Secretary of Defense. The LyoPlas proposal progressed through the U.S. Army Medical Research and Ma-

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## Defense AT&L eLetter

Defense AT&L  
eLetter

Acquisition Today for Tomorrow's Transformation



Jim King  
Under Secretary of Defense (AT&L)

January 2006

### Message from the USD(AT&L)

Welcome to the first edition of the AT&L eLetter. This monthly, electronic publication will keep you up on the latest news to help you do your job — supporting the warfighter. I appreciate your hard work and the ethical, professional way you meet the challenges you face every day.

Recently, we announced some stellar performers who have made significant contributions to our mission. I extend my hearty congratulations to the winners of the 2005 Packard Award and the AT&L Workforce Development Awards for their contributions.

I am proud to join you all in providing our warfighters with the best possible care and support. Many of you are working hard to ensure that our warfighters have the best possible care and support. I am proud to join you all in providing our warfighters with the best possible care and support.

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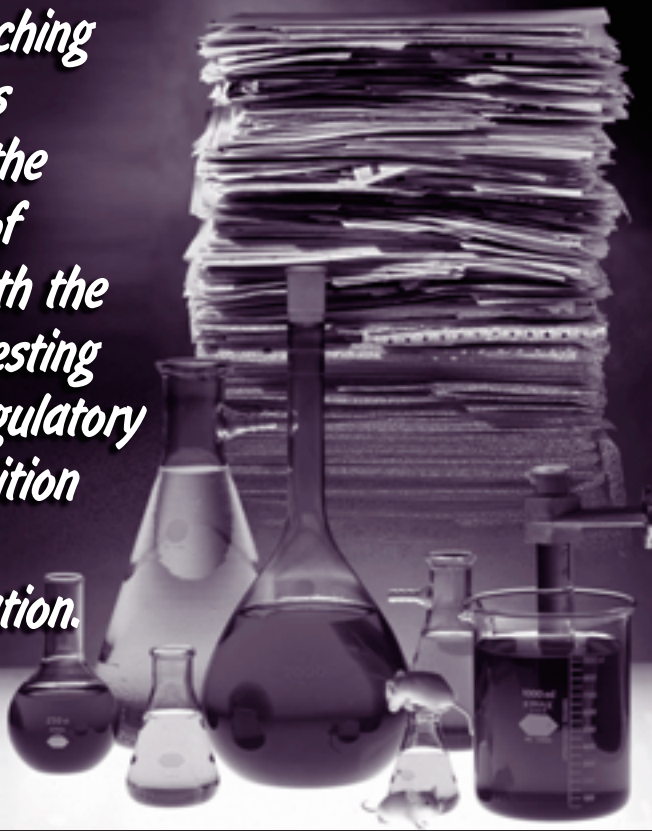
teriel Command meeting surprisingly little resistance. I was pleasantly surprised when the U.S. Army Medical Research and Materiel Command included it as one of the three proposals put forward to the Army Technology Transition Office. Over the next few weeks, the department chief and I fielded numerous questions regarding the application. Through hard work, frantic phone calls, and a bit of luck, we were able to augment and polish the proposal enough that it was the only medical proposal to be forwarded from the Army to the Office of the Secretary of Defense for funding review. At press, I am still awaiting the expected briefing call, and can only hope that this proposal will be successful.

As I mentioned, my main goal in putting this project forward for the Technology Transition Initiative was to gain some attention within the Army Medical Research and Materiel Command. In short, it worked. Planned fiscal year 2006 research budget cuts were recently revised, freeing up a fair amount of FY2006 dollars that needed to be obligated by Sept. 30, 2006. The research area director for the Combat Casualty Care Research Program recommended that the LyoPlas project receive funding to accelerate the transition to advanced development. The commanding general of the U.S. Army Medical Research and Materiel Command concurred and earmarked \$300,000 for the LyoPlas project; the money will be used to evaluate the existing body of data and start preparation of an investigational new drug application, a necessary step in the Food and Drug Administration licensing process.

### Scientific and Financial Challenges

There are many scientific, acquisition process, and financial challenges ahead on the path to return freeze-dried plasma to the battlefield. The scientific challenges are the least predictable because they are the most difficult for the Army to control. The Army does not control the manufacturing line for LyoPlas, so either it must meet the Army's needs and the Food and Drug Administration's requirements without any modifications, or the German Red Cross must be willing and able to make any required modifications. Additionally, the regulatory hurdles will be a reflection of the climate within the FDA at the specific time that this product enters their regulatory review system. The prior solvent/detergent-treated plasma licensed for sale in the United States had a tendency to cause fatal clotting problems when used in large volumes in patients with severe liver dysfunction, leading the FDA to put a black box warning on the label. Though the license was never revoked and the product ceased production for other reasons, there is going to be a burden on the LyoPlas application to demonstrate safety or to drive the decision that use of this product is not appropriate in that situation. The first step in demonstrating that LyoPlas is appropriate for use as plasma is to demonstrate the inherent differences between LyoPlas and the

*The overarching challenge is financial—the challenge of funding both the scientific testing and the regulatory and acquisition process documentation.*



older American solvent/detergent-treated product with laboratory testing. Then the Army and the German Red Cross will need to work with the FDA to design and conduct clinical trials that are appropriate to the indications planned for LyoPlas in the American market.

Compiling acquisition documents, like performing scientific experiments, requires a commitment from a varied team of people. As a contract project coordinator, my ability to garner support rests entirely on my salesmanship and communication skills. I am lucky that this product is already strongly supported by a group of subject matter experts who have been very vocal about the potential benefits access to LyoPlas might bring. The research area director for combat casualty care has also actively supported the return to freeze-dried plasma research by supporting both a science and technology objective in 2000 and an Army technology objective in 2006, and by actively supporting the transition from research to advanced development. Representatives from the U.S. Army Medical Materiel Development Activity have offered support in the form of objective technical reviews, integrated product team support, and expertise in medical product development. As our knowledge of the product grows, I plan to continue to introduce it to other members of the Army and Department of Defense, whose input is required or beneficial within the acquisition chain, including the combat developer and other official user representatives. Navigating the Army medical materiel

development process successfully is contingent on all of their support.

The overarching challenge is financial—the challenge of funding both the scientific testing and the regulatory and acquisition process documentation. For initial funding, I am hoping the Technology Transition Initiative comes through. If not, there are a number of other programs that might be able to assist the transition of this product, though I need to review the program goals to determine which ones, if any, are appropriate for a foreign product produced by a non-profit entity. I am also going to actively work to make sure this product is reviewed on the annual mission area materiel plan, in hopes that it will rank high enough to earn core funding in FY2008, the next available funding year. I have also found that it pays to be ready, so I am planning to continue drafting the acquisition documents and encouraging the development

of the needs and requirements documents that must be staffed in order for freeze-dried plasma to ascend through the acquisition milestones. If money does become available, it usually goes to the one who can make the most rapid use of it. I plan to be ready to make use of any money that falls this way.

At this point I feel that I am standing on the crest of a hill, looking back on freeze-dried plasma's long history and looking forward to what the modern product will look like when I leave this path, after the product has received a marketing license from the FDA and has returned to the battlefield. The initial product purchase funded by the Foreign Technology and Science Technology Assessment Program award is finally in house, and the first set of tests were completed by mid-June.

I am confident that if the briefing call comes for the Technology Transition Initiative program, my department chief will be able to say that this product meets the Army's specifications for freeze-dried plasma, that an investigational new drug application is already under development, and that this project is on track for a Milestone A review in early FY2007. The trail conditions look good from here.

The author welcomes comments and questions. Contact her at [elizabeth.barrows@na.amedd.army.mil](mailto:elizabeth.barrows@na.amedd.army.mil).

# Defense Supply Center Richmond Develops Supply Chain Alliances

Glenn L. Starks

The environments in which defense agencies exist require not only dynamic approaches to enhance operational support of warfighter needs today, but also innovative strategic initiatives to support their strategic missions. The Defense Logistics Agency (DLA) has established strategic supplier alliances (SSAs) with 29 of its major hardware suppliers to meet both of these needs across its aviation, land, maritime, and construction and equipment supply chains. The Defense Supply Center Richmond (DSCR), DLA's aviation supply chain lead, leads the agency in this effort and has successfully established strategic relationships with 18 primary suppliers of aviation items. These SSAs have resulted in substantial benefits to DLA, the suppliers, and—most important—to DLA's aviation customers.

The agency is now expanding its strategic relationships to include "Tier II" suppliers. These supply chain alliances (SCAs), are being established with DLA suppliers that are not original equipment manufacturers (OEMs) but still collectively comprise a substantial portion of DLA's obligation dollars and provide critical items to the agency's customers. SCAs are an example of how DLA is applying the tenets of supply chain management in its supplier operations areas to establish effective approaches to customer support. SSAs and SCAs are particularly innovative because they include both DLA- and Service-managed items (consumables and reparable); require suppliers to adhere to long-term contracting performance metrics; and incorporate best commercial practices to achieve these performance metrics, which require DLA and its suppliers to employ improved business processes to achieve desired performance levels.



**DLA's development of supply chain alliances is the logical evolution of developing strategic partnerships with its suppliers.**

## Strategic Supplier Alliances

SSAs are long-term partnering agreements between DLA and its major suppliers—predominantly OEMs—that leverage DLA's buying power across a very large population of items. They enhance customer support through an agreement to place the sole-source items provided by a vendor under long-term contracts with performance metrics. A competitive long-term contract may also be considered part of the alliance during the life of the contract. Just as is required for SSA sole source contracts, competitive contracts must also contain performance metrics and include items managed across the agency (that is, they include items managed by more than just one DLA inventory control point to be considered a "corporate" contract). A signed charter outlines the overall terms of the relationship and is ratified by senior level officials of each party

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in the relationship. Some of these terms are expressed as strategic qualitative goals: for example, cost management, sharing of resources, streamlining acquisition processes, improving communication among stakeholders, and improving business processes. The corporate contracts contain clauses and terms and conditions that outline the specific performance metrics to be achieved in support of the qualitative goals (for example, achieving 99 percent on-time delivery for all orders, shipping all high priority (Issue Priority Group One) requisitions within 24 hours, and reducing production lead-times by 25 percent). These SSA relationships include DLA and the supplier; some include the Services; and others include the Defense Contract Management Agency.

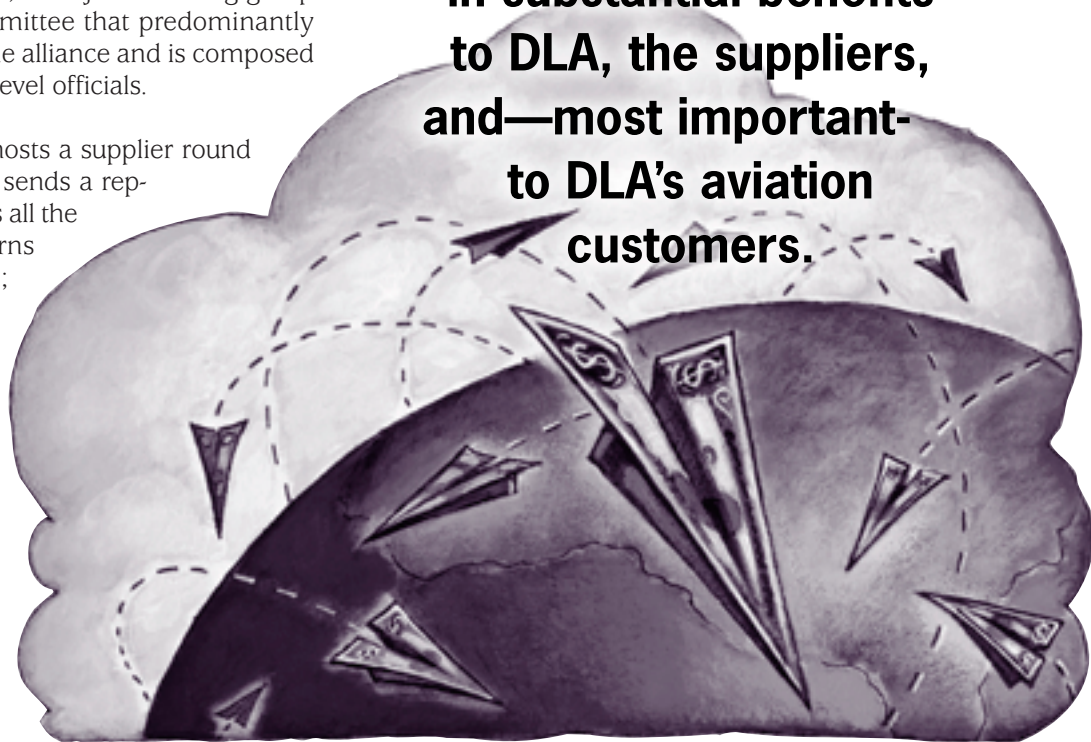
DLA has assigned a supplier relationship manager for each SSA to oversee the operational and strategic progress of the partnership, including monitoring performance and metrics, and to continually develop strategies to expand the relationship by adding more items to existing long-term contracts and awarding new contracts to additional company divisions. A joint steering group oversees each SSA's operational performance and develops improvement plans. The group is co-led by the supplier relationship manager and his or her assigned supplier counterpart. Both are at mid-level management positions and possess the responsibility and authority to make and execute decisions to improve the alliance. The group includes operational and functional members from the government and the supplier's organization who are directly involved in the day-to-day functions of the alliance (such as the post award administrator of each contract and technical specialists), or who provide support (such as a pricing analyst or systems expert). The joint steering group reports to an executive committee that predominantly sets the strategic vision for the alliance and is composed of command- and/or senior-level officials.

At least twice a year, DSCR hosts a supplier round table to which each supplier sends a representative. This forum allows all the SSA partners to share concerns and discuss lessons learned; and most important, it allows the government and suppliers to develop operational and strategic process improvements that benefit all of the alliances. Some round tables are held at DSCR but most are held at varying supplier sites. DSCR also holds separate meetings with each supplier to discuss specific performance metrics, issues, and improvement plans.

### **Alliances Realize Measurable Benefits**

The number of items on DSCR's SSA long-term contracts has substantially increased over the last few years. For example, 11 of the 18 SSAs were completed (i.e., had signed charters and at least one awarded corporate contract with performance metrics) by August 2003. At that time, 19,430 items were on SSA long-term corporate contracts. In May 2006, these same 11 SSAs had 39,480 items on corporate contracts. In total, the 18 SSAs have approximately 41,749 items on contracts. This growth has been achieved by adding additional NSNs (National Stock Numbers) under the same CAGE (Commercial and Government Entity) code to existing contracts and establishing new contracts with additional CAGE codes. The supplier relationship managers and suppliers work closely to prioritize the CAGE codes that will be brought under the alliance and the NSNs that will be added. Strategies are also developed to complete the pricing process as efficiently as possible, as this is often the lengthiest component in adding large numbers of items to long-term

**DSCR has successfully established strategic relationships with 18 primary suppliers of aviation items[resulting] in substantial benefits to DLA, the suppliers, and—most important—to DLA's aviation customers.**



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contracts. Many of the alliances have established forward pricing agreements where DSCR and the supplier develop a prioritization scheme to price items over a specified period of time. This scheme is based upon adding items that are most important to customer support first.

A performance analysis of the items on the SSA contracts shows that substantial quantitative improvements have been achieved. This analysis compared key metrics for these items before they were placed on SSA corporate contracts (pre-SSA) to performance now that the items are on SSA contracts, as of the second quarter of fiscal year 2006 (post-SSA). The pre-SSA period consisted of analyzing contracts awarded up to three years before the items were placed on SSA long-term contracts. The post-SSA analysis looked at the most recent awards for each item on contract. On average, the administrative lead times for the items have decreased by 73.83 percent. This has been achieved by streamlining processes to award purchase requests in a matter of days (one day for items on direct delivery contracts) rather than months. The production lead times have been reduced by 12.72 percent. Because suppliers are provided forecasts for at least 12 months of expected demands and are required to establish surge plans to meet unexpected demand increases, they are better able to stabilize their production lines. The average price of the items has decreased by 4.63 percent (considering an annual inflation rate of 3 percent). Long-term relationships produce price stabilization because suppliers can establish strategic relationships with their own suppliers. Economies of scale are also gained by placing large volumes of items on long-term contracts rather than awarding individual contracts as demands arise. Since July 2002, customer-stocked backorders (awaiting stock to ship to the depot to fill customer order) have been reduced by an average of 72 percent. Customer requisitions are filled more expeditiously because of improved forecasting and long-term relationships. Since 1999, SSA long-term contracts have also resulted in DSCR inventory savings of \$72.9 million. Reduced lead times allow DLA to maintain smaller quantities of stock in storage depots. DLA is also able to obtain materiel in a more just-in-time fashion, rather than having to rely on stockpiles in its depots.

Establishing these relationships has also produced substantial qualitative results. Perhaps the most important of these has been the development of strategic relationships. These relationships have assisted in breaking down barriers of communication, improved business processes for suppliers and the government, and helped eliminate adversarial relationships. It has also educated private and public sector employees on the processes and business practices utilized in each organization. For example, suppliers become better educated on the procurement regulations to which DSCR must adhere. Government employees gain greater insight into a supplier's production

process. It has improved DLA's relationship with the Services as they have become partners on DSCR's SSAs. Another important result has been the adoption of best commercial practices by the government through lessons learned by working closely with suppliers. Suppliers share information on how they interact with their own suppliers and what Lean initiatives they employ to improve their processes, and they provide recommendations on government improvements.

### **Moving Toward Supply Chain Alliances**

DSCR determined its SSA partners by analyzing DLA's obligations for aviation items over a three-year period. Those vendors that represented the majority of spending were considered the prime candidates for aviation SSAs. Other factors included in determining these partners were their support to major aviation weapon systems, how they were organized nationally and internationally, and their willingness and ability to develop strategic relationships across their various divisions. The predominance of the SSAs are with OEMs. Others were developed because a vendor provides parts critical to one or more aviation systems.

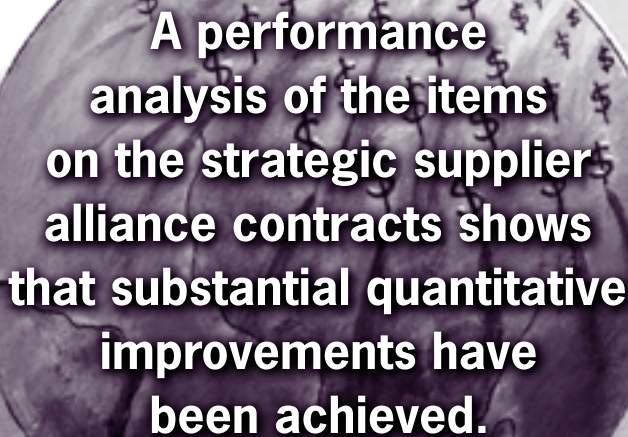
SCAs are now being established with Tier II suppliers. These partners provide a greater percentage of competitive items per vendor than SSA suppliers or are non-OEM sole-source providers of strategically important items. As with SSAs, DSCR is including items managed by all three DLA hardware inventory control points on SCA corporate contracts as well as items managed by the Services (consumables and reparables). Performance metrics are being put in place on these long-term contracts as well. Supplier relationship man-

agers have been assigned to each to oversee the operational process and the achievement of performance metrics and strategic goals. Nine other SCAs have either been put in place or are planned by DLA's other supply chains. DLA's goal is realize the same quantitative and qualitative improvements with SCAs as have been achieved with SSAs.

The following are just some of the steps being taken to improve the alliances (both SSAs and SCAs). Metrics to measure performance are continually being improved to provide better analysis of the results of partnerships. Improving these metrics will enhance DLA and supplier business processes as well as the monitoring of customer support improvement. DLA and its alliance partners are also developing improved processes and automation to enhance joint collaborative forecasting. For example, DLA's business system modernization systems will greatly enhance systematic collaboration. As discussed earlier, the alliances are being expanded by adding new items and new CAGE codes. DSCR is continually analyzing obligation data to identify candidates for new supply chain alliances. Finally, various types of long-term contracts are being added to the alliances, including competitive contracts and performance-based logistics contracts. These alliances were developed to bring all business with each supplier under the umbrella of the charter. One of the strategic goals of each is to expand these relationships by continually developing unique contracts to enhance the partnership and improve support to the weapon systems these Alliances support.

### **A Logical Evolution**

DLA's development of supply chain alliances is the logical evolution of developing strategic partnerships with its suppliers. Since the Services and the Defense Contract Management Agency are also part of most of these alliances, the partnerships are becoming a catalyst for an integrated DoD effort to interface with major suppliers. DLA is also looking at how strategic relationships can be developed with smaller suppliers, including small businesses. The next decade will be challenging for DLA as it faces the major changes involved in completing its business system modernization reengineering effort, reorganizes in response to base realignment and closure decisions, continues to adapt to the ever-evolving missions of the military services, and positions itself to support new weapons that are replacing legacy systems. By developing such innovative initiatives as SSAs and SCAs, the agency will succeed in meeting these challenges and continuing to maintain an agile workforce ready today to meet the challenges of tomorrow.



**A performance analysis of the items on the strategic supplier alliance contracts shows that substantial quantitative improvements have been achieved.**

The author welcomes comments and suggestions. Contact him at [glenn.starks@dla.mil](mailto:glenn.starks@dla.mil).

# Four Rs: Basic Training for Success

Wayne Turk

**W**ay back when—before the time of many readers—there was a kids’ saying: “Readin’ and ’ritin’ and ’rithmetic/Taught to the tune of a hickory stick.” To those three Rs, we add a fourth, and we have these essential skills for program managers: *readin’*, *’ritin’*, *’rithmetic*, and *rhetoric*. You need to bone up on these basic subjects, as well as increase your technical expertise, to help ensure your success as a PM and make sure your contemporaries—or juniors—don’t pass you by.

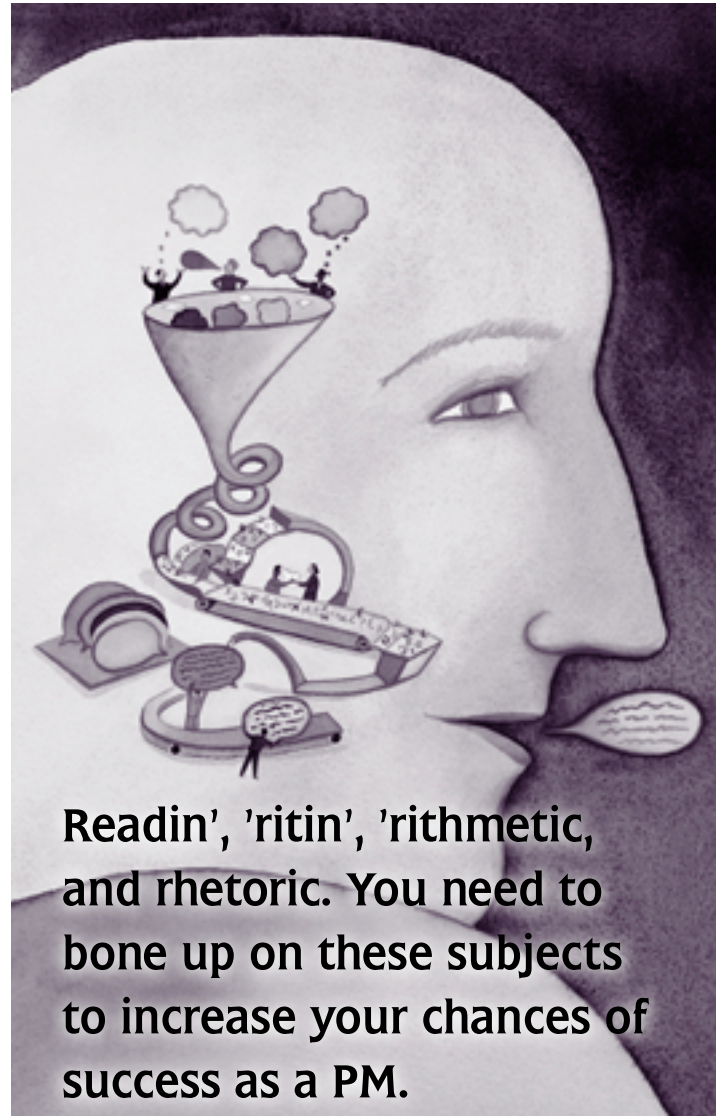
Some of you are not going to like what this article says. That’s because I am going to tell you to take some of your “free time” (as if you had lots of free time) and use it for some work- and education-related activities. All of those activities fall into the category of school or continuous learning. For some readers, continuous learning is a must, but for the rest it is voluntary. We’ll hold off on the “official” continuous learning discussion and focus on the four Rs. This article won’t really delve deeply into technical expertise improvement since that varies by individual and project needs.

## Readin’: A Mind Expander

We’ll start with reading. Even if you have been out of school for a while, it’s to be hoped that you have been reading. If you’ve been working on continuing education, a degree or advanced degree, or certifications, you had no choice. Whether in or out of school, though, professional reading is one key to your success. Technology is changing, and changing quickly. It is escalating at an exponential rate (a hint of ’rithmetic already). You need to know what changes are happening and the best practices in your field, and you need to learn from others’ mistakes.

Don’t just read in your field, though. Other books or articles can change your perspective or give you new ideas. There is a need for people to develop broad effective information literacy skills because of the explosion of available information in the Internet age. Eclectic reading habits widen your horizons and help you to be a better manager.

All of the Services, as well as schools, organizations, and other groups, have professional reading lists. Take the following quote from the professional reading list of Peter J. Schoomaker, the Army chief of staff. Take out the words



**Readin’, ’ritin’, ’rithmetic, and rhetoric. You need to bone up on these subjects to increase your chances of success as a PM.**

“Army” and “war” and you could substitute any Service and almost any field of endeavor. It is very apropos to practitioners in the program management field.

*The Professional Reading List is a way for leaders at all levels to increase their understanding of our Army’s history, the global strategic context, and the enduring lessons of war. The topics and time periods included in the books on this list are expansive and are intended to broaden each leader’s knowledge and confidence. I challenge all leaders to make a focused, personal commitment to read, reflect,*

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and learn about our profession and our world. Through the exercise of our minds, our Army will grow stronger.

### **'Ritin': Making Words Count**

PMs are having to write more and more. For credibility and career progression, you need to do it well. It is a learned skill. As a PM (or in almost any other position), you are going to have to prepare work products: papers, reports, plans, and other deliverables that are prose. They may be technical, but they are prose none the less. Even if you don't write them, you will have to edit them. You are responsible for their content, format, and readability. You get the credit (maybe shared with others) or the boos, depending on their reception.

Learn to write well. Documents that are readable, understandable, and accurate are what's needed. Grammar, spelling, format, and readability are almost as important as, and sometimes more important than, content. (Why more important? Because a poorly written sentence can sometimes say the exact opposite of what you meant.) Accuracy in what you write is crucial to get the right outcomes—a decision, funding, schedule extension, or just acceptance of the document by the powers-that-be. Simpler is better. Don't use buzzwords, jargon, or three long words where one short one will do the same job.

### **'Rithmetic: It All Adds Up**

Many would say that 'rithmetic may be the least important of the four for PMs. Don't be so sure. Mathematics underlies every facet of science, technology, and engineering from computer games, cellular phones, and the Internet to medical diagnostic tests, the design of new products, and the completion of projects. It is not just an academic subject. Math skills are used in the real world. Computer science and engineering are seeping into all aspects of work and life, never more so than today. And project management involves math on a daily basis. Every PM has funding, costs, and other math-related activities to worry about. Most have to worry about math within the project itself, whether it is the engineering, testing, deployment, logistics—or simply figuring out how many people are needed to get the job done on time.

As important as the math itself, there are also the skills associated with it. Attention to detail in every part of your project is necessary. Critical thinking skills associated with math help with planning and problem resolution. Accuracy (already mentioned in association with writing) is very important. Logic, in a mathematical sense, allows you to lay out problems and find solutions, something you do every day. It is all related to math (or 'rithmetic). It may not be necessary to take a math class, but it certainly wouldn't hurt to bone up or take a class in finance, costing, or financial management. Those are areas that can really help you as a PM.

### **Rhetoric: Simply Speaking**

There are classical definitions of rhetoric, and when I say classical, I mean all the way back to the great Greek and Roman philosophers. Plato described rhetoric as "the art of winning the soul by discourse." According to Aristotle, it is "the faculty of discovering in any particular case all of the available means of persuasion." And Cicero said, simply and directly, that rhetoric is "speech designed to persuade."

Briefings happen all the time. PMs have to brief upper management, stakeholders, users, the team, and seemingly the world, on a recurring basis. Briefing skills can be learned. Practice makes perfect. Dry run your briefings—in front of someone if you can. Learn to relax. Be organized. Speak slowly and clearly. Don't read your slides to the audience. (For more detailed pointers, check out "Aristotle and the Art of Successful Presentations," *Defense AT&L*, May-June 2006.)

But we need to expand the rhetoric definition to include all oral communication. PMs have to be able to communicate well one on one as well as to a group. And as well as persuasion, rhetoric covers appraisals, fact-finding, reporting, problem resolution, and so on. Try to get feedback on your oral communication skills—honest feedback with constructive criticism. Ask the people you interact with: your peers, your supervisor, and those who report to you. If you don't know that you aren't communicating well, you can't fix the problem.

### **The Learning Never Stops**

Continuous learning is a requirement in the acquisition field for some people. So you can kill two birds with one stone – learn things that will be helpful to you and meet requirements for continuous learning (if your position demands). Even if you aren't in one of the positions requiring continuous learning, it is worthwhile. That also goes for contractors.

The Continuous Learning Policy says that every two years, acquisition personnel in Defense Acquisition Workforce Improvement Act (DAWIA) billets who are certified to the level of their position, must earn 80 continuous learning points to meet the Continuous Learning Policy requirements issued by the under secretary of defense (acquisition, technology and logistics) on Sept. 13, 2002. Even if your position doesn't require continuous learning points, your success and career progression do require that you continue learning. If you don't take courses, at least do the professional reading and bone up on the four Rs. They're basic training for success.

The author welcomes comments and questions. Reach him at [rwturk@aol.com](mailto:rwturk@aol.com).

# Using Incentives to Reduce Overtime Expenditures

Regan H. Campbell

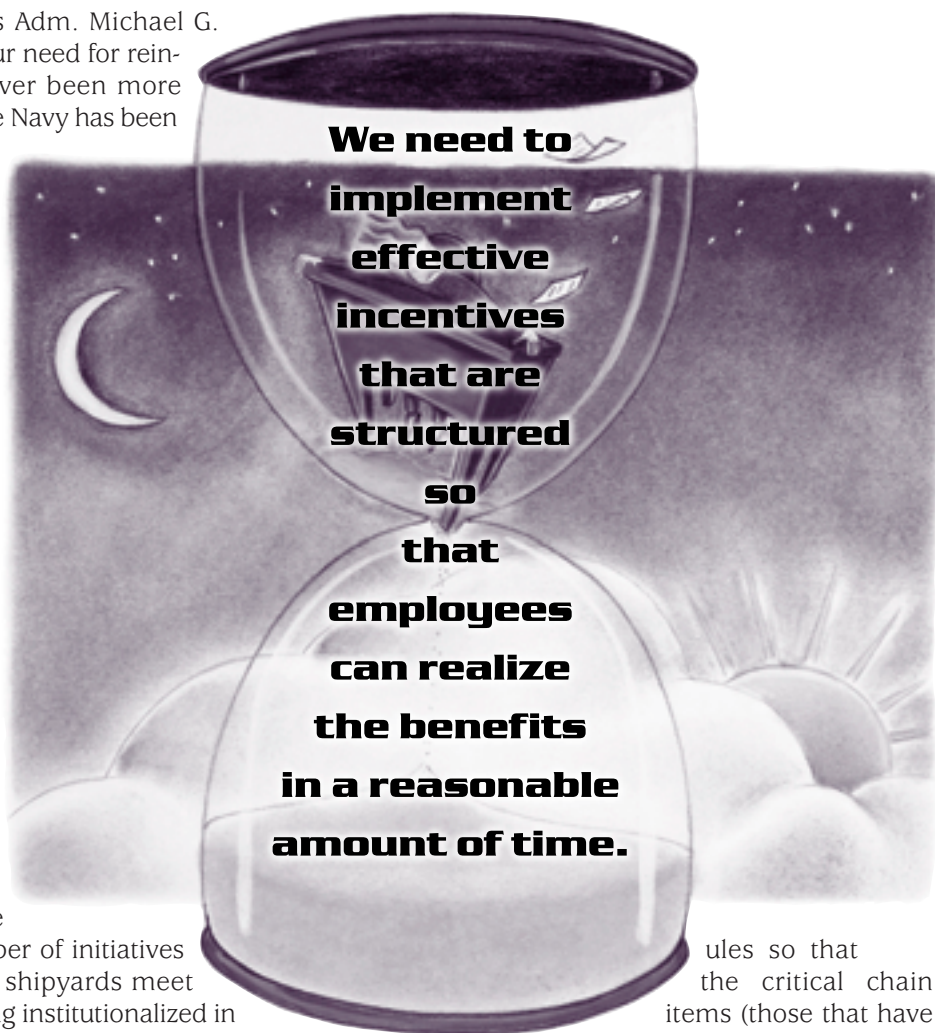
**C**hief of Naval Operations Adm. Michael G. Mullen has stated that “our need for reinvestment dollars has never been more acute.” Because of this, the Navy has been exploring ways to reduce costs. One means is through the implementation of Lean Six Sigma, the Theory of Constraints, and value chain mapping. These concepts, rooted in the Toyota business model, are designed to reduce costs and remove constraints that prevent the completion of work in a timely manner. In implementing these processes, the Navy has identified a number of goals for the various commands and field activities. Specifically for the public naval shipyards, the Navy has mandated three goals:

1. All availabilities on or ahead of schedule
2. All availabilities reduce cost by 25 percent
3. All availabilities reduce overtime to between 5 and 10 percent.

These goals are aggressive relative to the current performance of the public shipyards; however, a number of initiatives have been developed to help the shipyards meet them, and these initiatives are being institutionalized in cooperation with the four public shipyards.

## The Daily Priority List

One of the major initiatives developed to achieve the goals is the daily priority list. The DPL, based on Lean Six Sigma and Theory of Constraints principles, is designed to foster timely completion of events with little multi-tasking (finish what you start) and quick resolution of problems. In this system, the schedule is the key input, so it must be continually updated and refined to reflect an accurate picture of the project. The DPL is designed to identify the shipyard- and project-specific priorities from the sched-



ules so that the critical chain items (those that have the least amount of buffer in the schedule) can be addressed for every project in the shipyard. Prioritizing work will allow the resources to be allocated to the right project(s) for the right task(s) at the right time. It will also reduce the costs, as overtime will be limited to those tasks that impact the critical chain. Clearly, the DPL tool seems appropriate for meeting the goals identified: projects ahead of schedule and under cost with reduced overtime. In fact, several availabilities completed recently that used the DPL were delivered early and below their allocated costs, among them *USS Stennis*, *USS Nimitz*, and *USS Jackson*.

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Although there are merits to using the DPL on projects and within shipyards, there could be a major problem with its long-term implementation: the reduction of overtime at the shipyard. Specifically, the goal is a reduction of overtime from ~ 30 percent to between 5 and 10 percent. The reason for this reduction is that overtime in excess of ~ 10 –15 percent is not budgeted, and there are no funds to be allocated to cover the additional costs associated with increased overtime.

Overtime is sometimes looked upon by industry as a means to avoid the high costs associated with hiring and training new employees, especially for a short-term workload requirement. However, if the workload requirement is long-term, then the use of overtime increases costs, since employees are typically paid at the rate of time-and-a-half instead of straight time.

At naval shipyards, a lack of resources frequently necessitates working overtime for extended periods of time, which defeats the purpose of using overtime as a cost-saver. Portions of this overtime are spent on noncritical jobs that have a great deal of buffer in the schedule. To understand the magnitude of this change, consider a “typical” submarine engineered refueling overhaul, which takes approximately 400,000 worker days to complete. Of those 400,000 days, 120,000 (30 percent) are performed as overtime, with workers receiving time-and-a-half. Reducing the amount of overtime by 80,000 days to 10 percent by hiring more employees and converting the work from overtime to straight time would save \$16 million, which could be considered the cost of avoidable overtime.

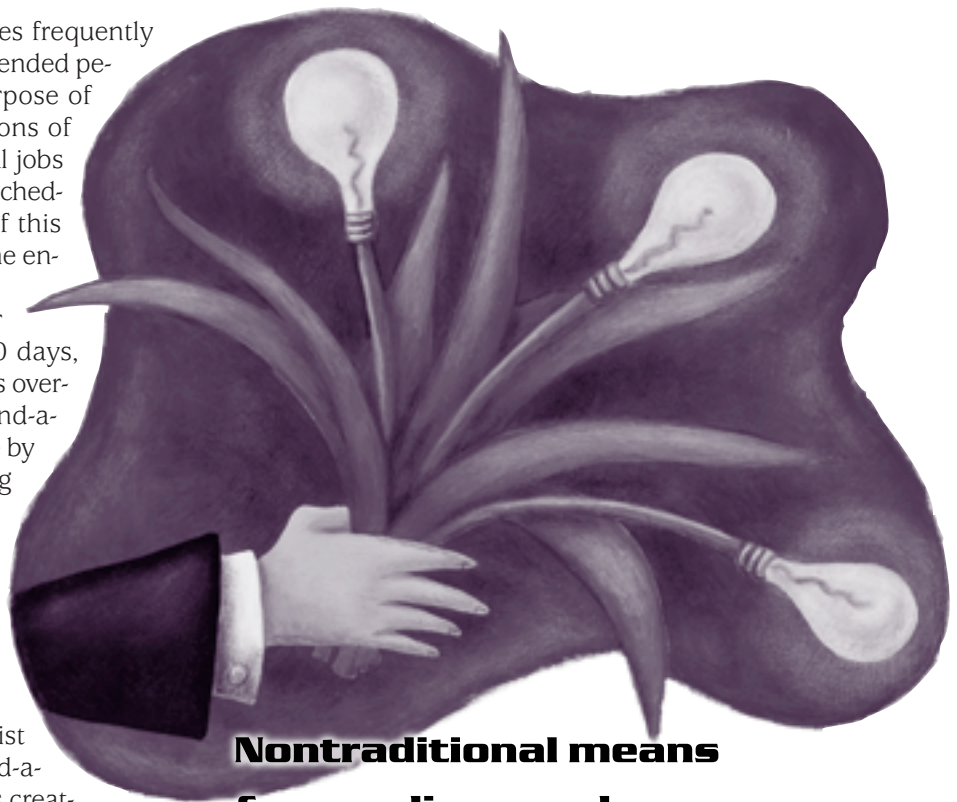
### How to Handle Overtime

From the perspective of an economist or game theorist, providing time-and-a-half for overtime work can be seen as creating a financial incentive for employees to be less productive during regular working hours. This could be an unconscious response or a more formalized response from a union, such as a slowdown (in which work progress is deliberately slowed) or a work-to-rule tactic (in which workers perform their tasks exactly as they are required to but no better).

Some managers state that the workers should be happy with reduced overtime because it provides them with more time with their families. Although this may be an incentive for some, it is not an incentive for all—for one thing, not

everyone has a family. At the Navy’s shipyards, many blue-collar (and some white-collar) workers depend on overtime pay to maintain their quality of life. Many prefer overtime to a second job because it provides them with more competitive pay and does not necessitate their learning new skills. Overtime is a very real part of the blue-collar culture; these employees have expectations about the level of overtime they will work when they take a job. As such, a reduction in overtime is not an incentive to these workers; in fact, it is a disincentive and may actually be seen as punitive.

Some managers believe that overtime is a privilege given by management to meet their needs, not a right. This may be true, but it doesn’t provide employees with the motivation to keep performing at an efficient and effective level. In fact, by not acknowledging the desire for



**Nontraditional means of rewarding employees include providing additional vacation days, parties at milestones, additional training so employees can develop different skills, and educational opportunities such as college classes.**

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overtime, naval shipyards may inadvertently cause employees to work *less* efficiently, so in the long term, the strategy of not acknowledging the desire for overtime may lead to reductions in performance and morale at the naval shipyards.

### Implementing Effective Incentives

Clearly, if we expect the DPL initiative to work, we need to implement effective incentives that are structured so that employees can realize the benefits in a reasonable amount of time because they will benchmark against receiving overtime funds in their paycheck every two weeks. In other words, using an incentive that will reward workers at the end of a two-year project will likely not foster the results the shipyard is looking for, whereas rewarding workers every quarter or every six months may foster positive results. The Navy (and the rest of the DoD) has experience with this, as many contractors who have incentive contracts are rewarded for performance every six months.

There are a number of ways to provide incentives that can promote a strong work ethic by making individuals aware that there are consequences for poor quality and rewards for great work. Incentives can be in the form of major corporate awards (e.g., Navy Superior Achievement Award) or in terms of individual raises and bonuses for early completions. Funds could also be designated to purchase new equipment requested by the shipyard. The Navy often uses these types of awards to promote performance. Financial rewards can be very powerful means to motivate but may put a strain on the Navy's finances, particularly since we are trying to cut costs. However, when compared to the cost of an overrun on schedule (it is estimated that each additional day of work in a naval shipyard costs \$100,000), it may be worthwhile to use bonuses to ensure timely or early completion of projects.

Other nontraditional means of rewarding employees include providing additional vacation days, parties at milestones, additional training so employees can develop different skills, and educational opportunities such as college classes.

Additional vacation or reduced work hours allow employees to spend more time with their families or on hobbies. It would require a financial commitment from the Navy to support this effort, which may be difficult to achieve in a cost-cutting environment. However, as mentioned above, the cost of this expense would be substantially less than the cost of a project overrun.

Low-cost incentives are a party, picnic, or other celebration at the successful achievement of a milestone. This not only recognizes the success of the group, but also provides an opportunity for team building. Team cohesion and team success can be powerful motivators for employees if they believe in the team leadership and the

team mission. Once team cohesion is achieved, employees are willing to work hard for verbal praise or small tokens of recognition.

Providing training to naval shipyard employees to enable them to build upon pre-existing skills or learn new skills can increase workers' promotion potential or marketability. It could also allow employees to switch to different shops or codes that have better conditions or career progressions. Finally, it could afford some employees the opportunity to train for nuclear positions at the naval shipyards, which tend to pay better than non-nuclear positions. These training opportunities could be offered at a relatively low cost through the training commands already located at the shipyards.

Offering new educational opportunities can also increase the promotion potential and marketability of an employee. Educational opportunities could be offered in two ways: providing more college classes at the shipyard or certifying the skills already learned for college credits. Both of these initiatives could be spearheaded by the training commands.

Providing additional college classes at the shipyard should be a relatively low-cost incentive, as the training commands already offer some college classes. In terms of additional college credits, the only cost to the Navy would be the additional paperwork and effort to certify classes as having been satisfied. Thus, both are potentially very good alternatives to consider.

### **Culturally Appropriate Incentives**

Depending upon the naval shipyard and its internal culture, some of the specific incentives listed above are likely



**Depending upon the Naval shipyard and its internal culture, some incentives are likely to be more successful than others.**

**A shipyard should be authorized—within constraints—to determine what motivates its employees.**

to be more successful than others. For instance, employees at Naval Shipyard A may be more concerned about financial rewards because the cost of living in that area is higher than at Naval Shipyard B. Given these local differences, a shipyard should be authorized—within constraints—to determine what motivates its employees. In fact, different projects at a shipyard may need to use different incentives, based on the composition of their respective work forces. Projects should be given the latitude to decide what incentives work best for their employees. It will take some time to formalize these details; however, any start in incentivizing will likely save the naval shipyards time and money in the long run, as employees will maintain their motivation to deliver quality products in a timely manner.

Perhaps incentives will be less of a concern in the future, as new employees in the naval shipyards are not socialized in a culture that requires overtime. At that time, it may be possible to reduce incentives. At present, however, it is crucial to explore options for ensuring continued performance from our existing

employees so that we can maintain the knowledge base and talent at our shipyards. By instituting incentives, the Navy can ensure that the naval shipyards are able to meet the goals outlined by Naval Sea Systems Command: reduced overtime, reduced costs, and successful completion of work in the scheduled time.

The author welcomes comments and questions. Contact her at [regan.ccampbell@navy.mil](mailto:regan.ccampbell@navy.mil).

# The Commodity Approach to Aircraft Protection Systems

*Capt. Bill Chubb, USN*

**I**t is a sobering phenomenon: Despite the best efforts of the U.S. defense industry, the best training, and the most innovative tactics, current U.S. military aircraft are still susceptible to some of the most elementary threats. Over the past three years, rotary-wing forces operating in Operations Iraqi and Enduring Freedom have suffered combat-related losses as a result of unsophisticated air defense systems such as infrared surface-to-air missiles, rocket-propelled grenades, and small arms fire. With advancements by our adversaries in laser and infrared targeting systems, high-speed weaponry, and component miniaturization, our fixed-wing assets are also susceptible to widely proliferated missiles whose size, speed, and signature make them very difficult to detect and avoid.

How does the U.S. Navy create and improve systems to defend against these threats? The Navy's Advanced Tactical Aircraft Protection Systems Program Office (PMA272) was established to do just that. Under the premise that aircraft protection systems are a commodity that should be centrally developed to provide economic and operational advantages, PMA272 manages most of the Navy's aircraft survivability equipment (ASE). The idea has been to have a single acquisition office create a common set of self-defense systems that could be purchased in large quantities, and deployed across many type/model/series of naval aircraft. But have the pressures of new technologies, industry partnering, cost savings, network integration, joint interoperability, and other issues changed the underpinning assumptions of a commodity approach to ASE? While the debate is ongoing, the following will highlight the key points for this question and propose a way ahead.

## **The Roots of Aircraft Survivability Equipment**

During the Vietnam conflict, the North Vietnamese proved to be very adept in their employment and rapid modifi-



Despite the best efforts of the U.S. defense industry, the best training, and the most innovative tactics, current U.S. military aircraft are still susceptible to some of the most elementary threats.

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cation of surface-to-air missiles and anti-aircraft artillery. To counter this threat, Naval Air Systems Command (NAVAIR) took responsibility for aircraft-related electronic warfare (EW) efforts in 1966 and established the Reconnaissance, Electronic Warfare, Special Operations, Navy (REWSON) Office, whose objective was to centrally develop EW systems to counter the threat and then rapidly integrate them on the right platforms. Since the conflict was ongoing, speed was the primary issue. This office was designated as Program Manager, Aircraft (PMA)253 in 1968.

Defeating the North Vietnamese integrated air defense system was addressed through a multi-phase approach that involved developing a dedicated EW aircraft (the EA-6A and later EA-6B), developing tactics, techniques, and procedures at Naval Fighter Weapons School (Topgun) schoolhouse, and commodity-based development of EW systems in PMA253. Through these actions, significant progress was made that radically decreased aircraft attrition.

As EW systems matured, a new PMA was established in 1979 to manage the airborne self-protection jammer program. Designated the Advanced Tactical Aircraft (TACAIR) Protection System Program Office, PMA272 took on the role of developing common, integrated aircraft survivability equipment. By 1991, Operation Desert Storm demonstrated how far we had come in defeating an integrated air defense system and in our ability to enhance the survivability of our aircraft. As a further move toward integration and commonality, in 1993, PMA253 was formally disestablished and all of its TACAIR components were assimilated into PMA272. Then, in 1996, the Training and Expendables Branch of PMA222 (located at Naval Air Station Jacksonville, Fla.) became part of the PMA272 team, creating the current command structure that includes ASE management, advanced technology development, foreign military sales, training, and expendables development. From the rudimentary “fuzzbuster” devices of the 1960s to the three-prong approach of EA-6B, TTPs, and commodity coordination of today, aircraft survivability equipment has come a long way toward insuring our ability to operate safely in an increasingly complex threat environment. Even so, we still have a way to go.

### Operational Environment

Imagine the task of an Al Qaeda terrorist developing weapons in the Al-Anbar province of western Iraq. The goal is to develop systems and tactics to kill Americans, namely man-portable air defense system munitions. His assembly plant is a 20-by-20-foot garage, his materials arrive daily by truck or car, and his test range is somewhere in the open desert. The best part of his operation is quick knowledge of results in the weapon’s operational environment. With every attack on a helicopter or cargo aircraft that he and the other terrorists survive, he receives

## Attributes of Commodity-based ASE

- Speed and agility
- Overall cost savings through commonality
- Integration interoperability
- Configuration management
- Coordinated technology development
- Platform integration cost
- Coordination challenges

feedback of success or failure in aircraft damage and casualties. If necessary, he can quickly make changes to his design and the associated tactics, techniques, and procedures; and within 24 to 48 hours conduct another real-world operational test.

This is an extreme of the enemy’s acquisition environment that our deployed armed forces currently experience on a daily basis, and this is why the January 2006 Defense Acquisition Process Assessment considers re-vamping the DoD’s acquisition system a matter of national security rather than one of trivial expediency. It demonstrates how our enemies are operating inside our decision cycle and fully underscores how agile and adaptable PMA272 must become if it is to fulfill its mission of enhancing aircraft survivability.

### The Commodity-based Approach to EW Self Protection

PMA253 and later PMA272 were envisioned as “commodity PMAs”—organizations that provided an integral capability to the platform PMs who were charged with providing an end-to-end weapons system. In the 1960s the ALQ-100 defensive electronic countermeasures set was developed for the F-4 to deceive and jam Vietnamese radars. It was found to be extremely effective and was subsequently integrated into other platforms (such as the A-4, A-6, A-7, RA-5C, F-8, F-111, F-14A, and EA-6B). The ALE-39 countermeasures dispensing system and its successor the ALE-47 are currently deployed on numerous fixed- and rotary-wing aircraft. Widespread use of these common dispensers has generated benefits in cost savings, interoperability, logistic improvements, and configuration management. There are many other historic examples of successful commodity ASE programs—but have the operational and acquisition environments changed such that the attributes of a commodity approach are no longer as important today? The sidebar above identifies the key attributes of this commodity approach that will be explored in the subsequent paragraphs.

Speed was the primary characteristic in the 1960s. Speed and agility in the ASE acquisition process allowed Viet-

The image shows three overlapping, semi-transparent spheres resting on a textured, light-colored surface. The spheres are arranged in a triangular pattern, with one in the foreground and two behind it. The background is a soft, out-of-focus landscape with a horizon line. The text is overlaid on the right side of the image.

The commodity approach accelerates speed and agility, decreases costs, and offers advantages in integration and configuration management over the traditional platform-centric approach.

nam-era warriors to get inside the OODA (observe, orient, decide, act) Loop of their enemy, not only in the F-4 but also in numerous other aircraft that benefited from the new technology. As more advanced ASE systems were developed, PMA272's commodity approach allowed rapid integration of systems such as the ALE-39, ALE-47, ALQ-165, and advanced chaff and flares into multiple platforms. In recent conflicts, that OODA Loop has been shortened considerably. To address this decision-cycle change, the Defense Acquisition Process Assessment commissioned by then-Acting Deputy Secretary of Defense Gordon England, highlighted numerous problems in the DoD's archaic acquisition systems and made sweeping recommendations for change. The clear theme was that acquisition reform was not just a matter of cost savings, but also a matter of national security as we stand on the brink of allowing our enemies to get inside our OODA Loop. Acquisition speed and agility are vital metrics for warfighting success that are strongly enabled by common, modular systems that a commodity approach to ASE brings.

Cost savings is another key attribute of the commodity approach. It is difficult to document the precise amount of savings, because we would never create two separate platform-centric ASE systems while simultaneously developing a common system against which to compare them. But it is clear that by developing a common system such as the ALE-47 Countermeasures Dispensing System and applying it to numerous platforms, the Navy can avoid the increased development costs of multiple stove-piped systems. Huge savings can also be realized

with common spares in the supply system, storage aboard ship, configuration management and upgrades, non-recurring engineering, repair facilities, flightline interoperability, and so on. But the commodity approach to ASE also demands that platform programs assume the costs of integrating the common ASE system with their unique subsystems. The one-size-fits-all approach can actually add costs and time to an individual platform's development, while creating savings across the Naval Aviation Enterprise (NAE). Thus, cost savings is a positive attribute only when viewed from the broad enterprise perspective.

Another significant attribute of the commodity approach lies in integration interoperability. Rapidly growing in importance, this attribute creates advantages in both the internal integration of ASE into multiple platforms and the external integration of ASE into broader communication networks like the global information grid. The commodity approach inherently drives a certain level of standardization in both of these interfaces. Facing a similar challenge, the air-launched weapons community is developing a universal armament interface. Through standardization of this interface, both weapons and weapons systems will speak the same language, allowing them to be seamlessly integrated on multiple platforms. By applying this approach to commodity ASE, PMA272 can significantly ease internal and external integration issues and costs facing a platform manager.

Configuration management is a byproduct of the commodity approach. As ASE systems, modules, and inter-

faces become more standardized, it will become significantly easier to apply hardware and software configuration upgrades and theater-specific operational adjustments that stay ahead of the threat. This translates to a reduction in the operational time to market, increased agility and operational effectiveness, and cost savings. A potential risk, however, is that a technological vulnerability could be exploited across a larger fleet of platforms.

Commodity management of ASE also creates an opportunity for the planned leveraging of technology across multiple future platforms. Under a strategic roadmap concept, PMA272 uses the benefits of this attribute to develop waypoints in time to initiate development of future ASE systems that will mitigate an evolving threat. By looking further and more broadly across the entire future threat environment, rather than being constrained by a single platform's schedule or mission set, these waypoints can enable spiraled solutions to a continuum of threats across time. But this leveraging of technology is possible only when the commodity manager can influence ASE development across the spectrum of the Naval Aviation enterprise. By approaching ASE solutions in this manner, there is potential for the commodity PMA to achieve substantial savings over a platform-centric approach.

A final attribute for discussion in the commodity-based approach to ASE is one of coordination, trust, and accountability. We hold the platform PMA responsible for the key performance metrics of the program: cost, schedule, and performance. The commodity approach forces a relationship of trust and accountability among the PMAs such that ASE development does not adversely affect the platform's performance or schedule. And in this era of increasing jointness, the responsibility for coordination extends across Service lines. In a recent example, PMA272 is coordinating with the U.S. Army's Advanced Threat Infrared Countermeasures program for possible integration as a commodity into current and future Navy helicopter programs.

### **Sharpening the Focus: Alignment to Strategic Plans**

The attributes of a commodity approach support the key tenets of survivability, joint development and interoperability, and networked systems. The recent 2006 Quadrennial Defense Review addresses the importance of aircraft survivability, the continuing global war on terror, defense of the homeland, the primacy of joint operations, and the importance of domain awareness.

But the QDR and other joint concepts are more than just general guidance on DoD priorities and how the U.S. armed forces will conduct warfare for the next four years. They set a course for continued transformation and underscore the need for altering the fundamental ways we do business.

The commodity-based approach to ASE also supports the guidance contained in the *Naval Aviation Vision* (available at [www.cnaf.navy.mil/nae/](http://www.cnaf.navy.mil/nae/)) by reducing cost, enhancing agility through improved responsiveness and adaptability, and improving alignment both within and outside of the Naval Aviation Enterprise.

### **Vision for the Future**

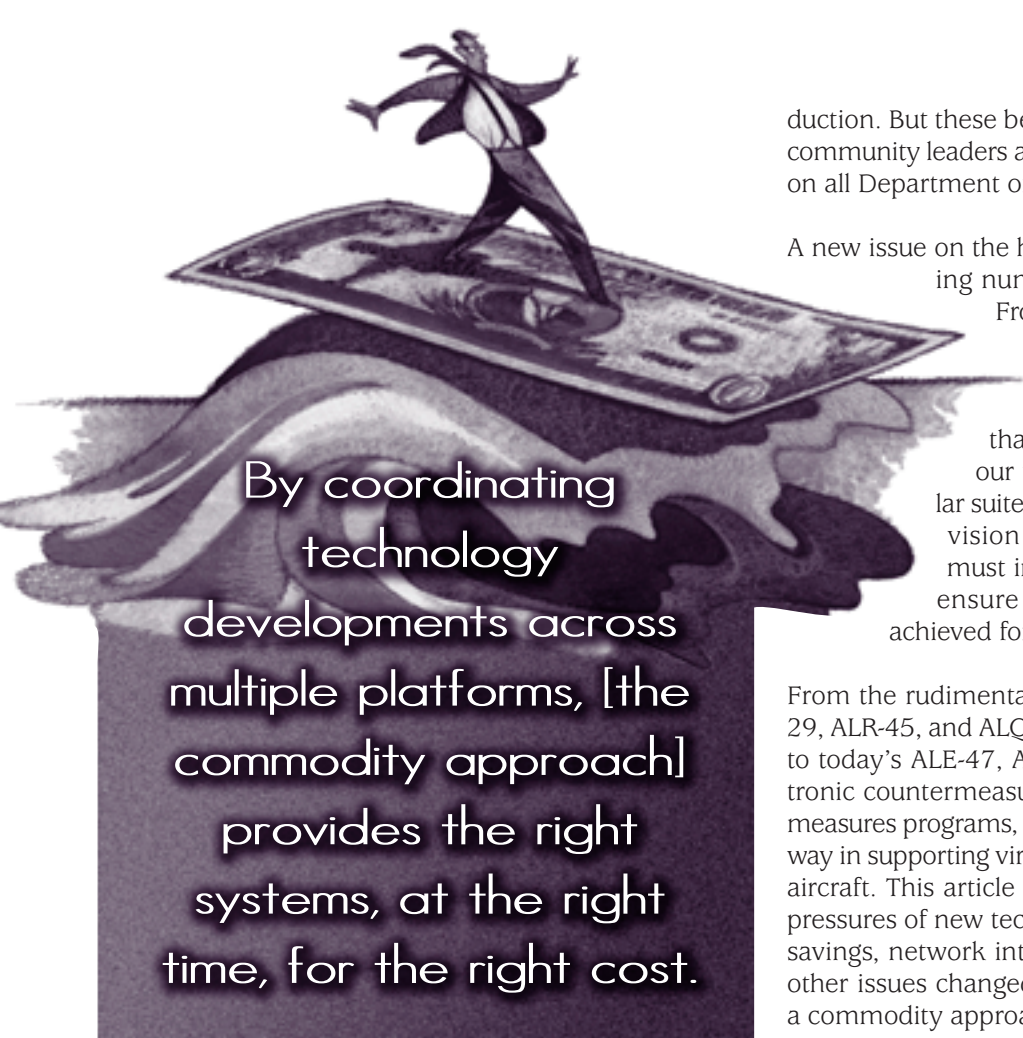
With its roots in the Vietnam-era PMA253 and advantages in agility, effectiveness, and cost savings, the future of commodity-based ASE is centered on movement toward common, modular ASE suites that leverage technology across platforms and operational environments. PMA272's vision for this future is that "All Naval aircraft are equipped with self-protection systems that are modular, integrated, and optimized to ensure survivability across the range of operations." This will be accomplished by:

- Moving toward common, modular self-protection suites
- Developing technologies that integrate into FORCENet and emerging operational concepts
- Developing future joint EW self-protection systems and capabilities and leveraging technological developments across time
- Maintaining balanced investments for in-service and future platforms.

### **The EW Self-Protection Roadmap: Achieving the Vision**

The EW Self-Protection Roadmap is a guide to achieve the commodity benefits of the PMA272 vision. It is centered on requirements for EW self-protection capability, rather than requirements for platforms. It formulates ideas and informs decisions for the long term, while providing key insights to programs within the current fiscal period. Furthermore, it guides PMA272 internally and provides a means for informing other stakeholders in the EW self-protection community about the programs upon which they rely.

The Roadmap process followed a Joint Capabilities Integration and Development System (JCIDS)-like process that involved requirements definition, gap analysis, and recommendations for alternatives. But at this simplistic level the similarity ends. Unlike JCIDS, the Roadmap includes the EW self-protection vision as a long-term guidepost and develops a series of operational vignettes to describe the context of EW self-protection in the future environment. Also unlike JCIDS, the Roadmap results in a series of waypoints in time where action is required. These waypoints pace the development of materiel and non-materiel solutions (doctrine, organizational, training, leadership, personnel, or facilities changes—DOTLPF) to mitigate capability gaps. One of the great benefits of the Roadmap process is that these waypoints can address capability gaps across the full spectrum of naval aviation platforms, from old to new, rotary- to fixed-wing, and sup-



By coordinating technology developments across multiple platforms, [the commodity approach] provides the right systems, at the right time, for the right cost.

duction. But these benefits will never be achieved if ASE community leaders are unable to influence ASE decisions on all Department of the Navy aircraft.

A new issue on the horizon is self-defense for our growing number of unmanned aerial systems. From the original concept of cheap, expendable platforms, unmanned aerial systems are rapidly becoming a significant investment that will contribute a critical portion of our warfighting capabilities. The modular suites portrayed in the EW self-protection vision and being developed by PMA272 must include UAS requirements and must ensure adequate protection levels are achieved for the missions they will fulfill.

From the rudimentary days of REWSON with the ALE-29, ALR-45, and ALQ-100 on limited numbers of aircraft, to today's ALE-47, ALQ-165, integrated defensive electronic countermeasures, and directed infrared countermeasures programs, aircraft survivability has come a long way in supporting virtually all Navy fixed- and rotary-wing aircraft. This article began with the question "Have the pressures of new technologies, industry partnering, cost savings, network integration, joint interoperability, and other issues changed the underpinning assumptions of a commodity approach to ASE?"

port to strike, as well as across time from the present until 2020. By maintaining focus on the EW self-protection vision as the guidepost and on the operational vignettes as the context, the Roadmap helps us to leverage technological development between programs and platforms to best serve the self-defense needs of naval aviation.

### Current Issues for EW Self-protection Stakeholders

The Roadmap process identifies several critical issues for PMA272 and the EW self-protection community, foremost of which is our acquisition and technical "sphere of influence." Leaders in the EW self-protection community have less influence over future programs than in the past, because of the increasing emphasis on commercial off-the-shelf technology and EW systems developed and integrated by a platform's contractor. This issue is important because a reduced sphere of influence weakens the scope of the commodity approach and results in a proliferation of platform-centric ASE systems. Our vision paints a future with a very limited number of EW self-protection suites composed of common, modular, and joint components for radio frequency, electro-optical/infrared, and laser threats. These suites will provide huge benefits in operational flexibility, interoperability, supportability, speed and simplicity of upgrades, and cost re-

The clear answer is "No," and the commodity approach is even more vital today because of these issues. It accelerates speed and agility, decreases costs, and offers advantages in integration and configuration management over the traditional platform-centric approach. But most important, by coordinating technology developments across multiple platforms, it provides the right systems, at the right time, for the right cost.

As operational, fiscal, and industrial pressures have evolved over time, it has become increasingly clear that to provide the best ASE solutions for naval aircraft, PMA272 must maintain its commodity approach to ASE development, and expand its role to a broader spectrum of platforms and ASE systems. We must improve coordination across all ASE users and stakeholders and be held accountable for providing the right equipment, at the right time, for the right cost, to outpace our adversaries in any environment. We must continually achieve our vision of providing effective survivability options for manned and unmanned Navy aircraft in the face of current and emerging threats.

The author welcomes comments and questions. Contact him at [william.chubb@navy.mil](mailto:william.chubb@navy.mil).

# An Interrelated Approach to Requirements Management

David M. Eiband

**M**any of us have imagined this one: the Service needs a new system to fill an operational need; you meet with the users and gather data, put together your team, produce the required documents, satisfy the required reviews—and, voilà, you’ve developed, tested, and fielded the essential system. “How tough can this be?” you ask.

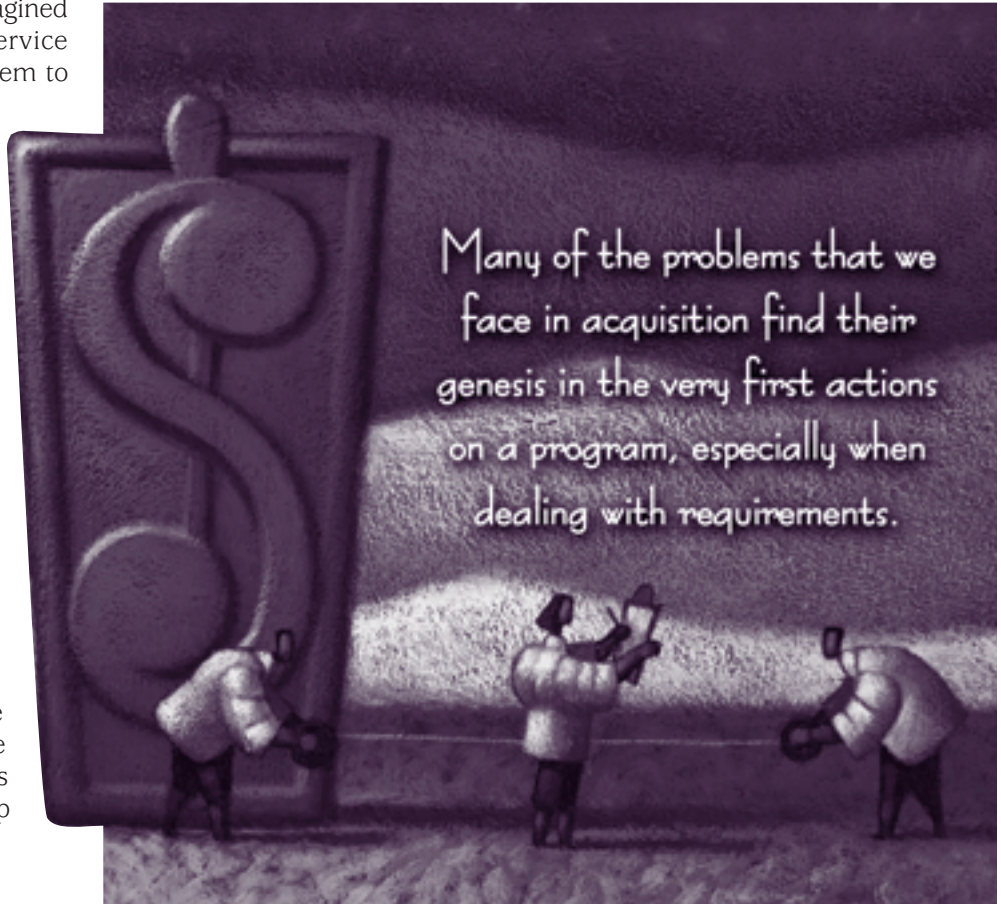
The real world, unfortunately, is not so straightforward and not nearly so forgiving, and many of the problems that we face in acquisition find their genesis in the very first actions on a program, especially when dealing with requirements. This article will discuss some potential approaches to ease treatment of requirements across a comprehensive, full-up program.

## Setting the Stage

Before jumping into solutions, some examination of “requirements” is warranted. We all know that the JCIDS—Joint Capabilities Integration and Development System—establishes a process to identify and validate solutions to capability gaps. The products of that process germane to this discussion are the Initial Capabilities Document (ICD) and the Capability Development Document (CDD), but later-changing requirements would also be included in the Capability Production Document (CPD). If the ICD and CDD contain the capability requirements, are there any other requirements necessary to efficiently conduct a program?

The answer to that question is unequivocally “Yes.” As the systems engineering process develops, a design so-

lution will lead to many more technical requirements in addition to the capability requirements noted in the ICD and CDD. And in addition to purely technical capability requirements, other requirements will develop in such areas as operational site construction; industrialization; construction, conversion, or expansion; or equipment modernization. Most programs will also generate requirements for quality assurance, first article testing, or lot acceptance. Nontechnical requirements will also arise. A properly structured program will have requirements for program, systems engineering, and risk management programs. The program office will also establish requirements for configuration, data, and interface management programs. Finally, most programs would identify requirements for cost control systems.



Many of the problems that we face in acquisition find their genesis in the very first actions on a program, especially when dealing with requirements.

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One can only conclude that there are a lot of requirements floating around any program. This indicates that we must do several things: first identify all appropriate requirements; second, maintain those requirements; and third, control any changes to the requirements set. Fortunately, there are several approaches and tools available to assist us in this effort.

### The Big Picture

While often the butt of jokes, the Big Picture is a usually a nice place to start on most projects. In our case in acquisition, our end product will never be delivered for use until we accomplish certain activities. First, we should almost always presume that some significant portion of the work will be done on contract; and to accomplish a contract, we will always need a Statement of Work (SOW), we will more than likely need a specification, and we will also need a Work Breakdown Structure (WBS).

Luckily for us, a lot of smart people over many years have developed procedures and tools that will greatly improve our chances for success. MIL-HDBK-245D, *Handbook for Preparation of Statement of Work*, provides clear instructions for writing a SOW or a Statement of Objectives if that approach meets your acquisition's needs. The *Handbook* clearly and succinctly defines the relationship between the performance requirements properly located in a specification, the non-specification work performance requirements located in the SOW, and the proper method for the order and delivery data. Given that there are only three deliverable products from any government contract—a technical product, non-technical products/services, and data—the *Handbook* is a very useful tool. In addition, the *Handbook* discusses standard formats, writing styles, terminology, and examples for both products and services. We are, without doubt, speaking of a functionally useful document.

As with SOWs, DoD has developed clear instructions for specification development. MIL-STD-961E, *Defense and Program-Unique Specifications Format and Content* both directs and assists the practitioner to “identify minimum requirements, list reproducible test methods, allow for a competitive proposal evaluation, and provide for a contract award at the lowest possible cost.” It can be seen that the requirements generated in the JCIDS process must be carefully and exactly translated into the product's specification, and as a matter of convention, those specification requirements “shall be worded such that each paragraph only addresses one requirement or topic.” This point is essential when considering that the requirements in the specification Section 3 must then be identically matched with the verification methods of Section 4. Since the starting point of this article was re-

## Relational View of Program Requirements

	ICD CJCISM 3170.01B	CDD CJCISM 3170.01B	WBS MIL-HDBK-245D	System Spec Section 3 MIL-STD-961E	System Spec Section 4 MIL-STD-961E	SOW MIL-HDBK-245D Part III • DAG	TEMP Part IV • DAG
2.X	6.X	1.X	3.X	4.X		3.X	4.X
2.X.X	6.X.X	1.X.X	3.X.X	4.X.X		3.X.X	4.X.X
		1.X.X.1	3.X.X.1	4.X.X.1		3.X.X.1	4.X.X.1
		2.Y				3.Y	
		3.Z				3.Z	

quirements management, limiting requirements to individual paragraphs should also be easier if this edict is followed.

Finally, MIL-HDBK-881A, *Work Breakdown Structures for Defense Materiel Items*, provides an excellent tool for cross checking requirements during program development. In the DoD acquisition context, WBSs are “product-oriented family trees composed of hardware, software, services, data, and facilities” that “relate the elements of work to be accomplished to each other and to the end product.” This definition should not be taken lightly, as it can be easily seen that the definition properly describes a complete system as well as possible component elements. The *Handbook* contains eight specific categories of defense items to be included: aircraft systems; electronic/automated software; missile systems; ordnance systems; sea systems; space systems; surface vehicle systems; and the newest group, unmanned air vehicle systems. These major defense systems can also be combined to define complex composite systems, such as a surface-to-surface missile mounted on a tracked vehicle with both systems containing electronic and computer components. In addition, the *Handbook* provides definitions for the common elements to be considered on any system. Using the handbook as a checklist provides a comprehensive set of considerations that should be addressed on any type system, so rather than having to divine derived requirements out of the ether, the *Handbook* forces the developer to ask whether or not all requirements have been properly addressed. Again, history has provided the user in the field with a powerful aid.

### Survival Techniques

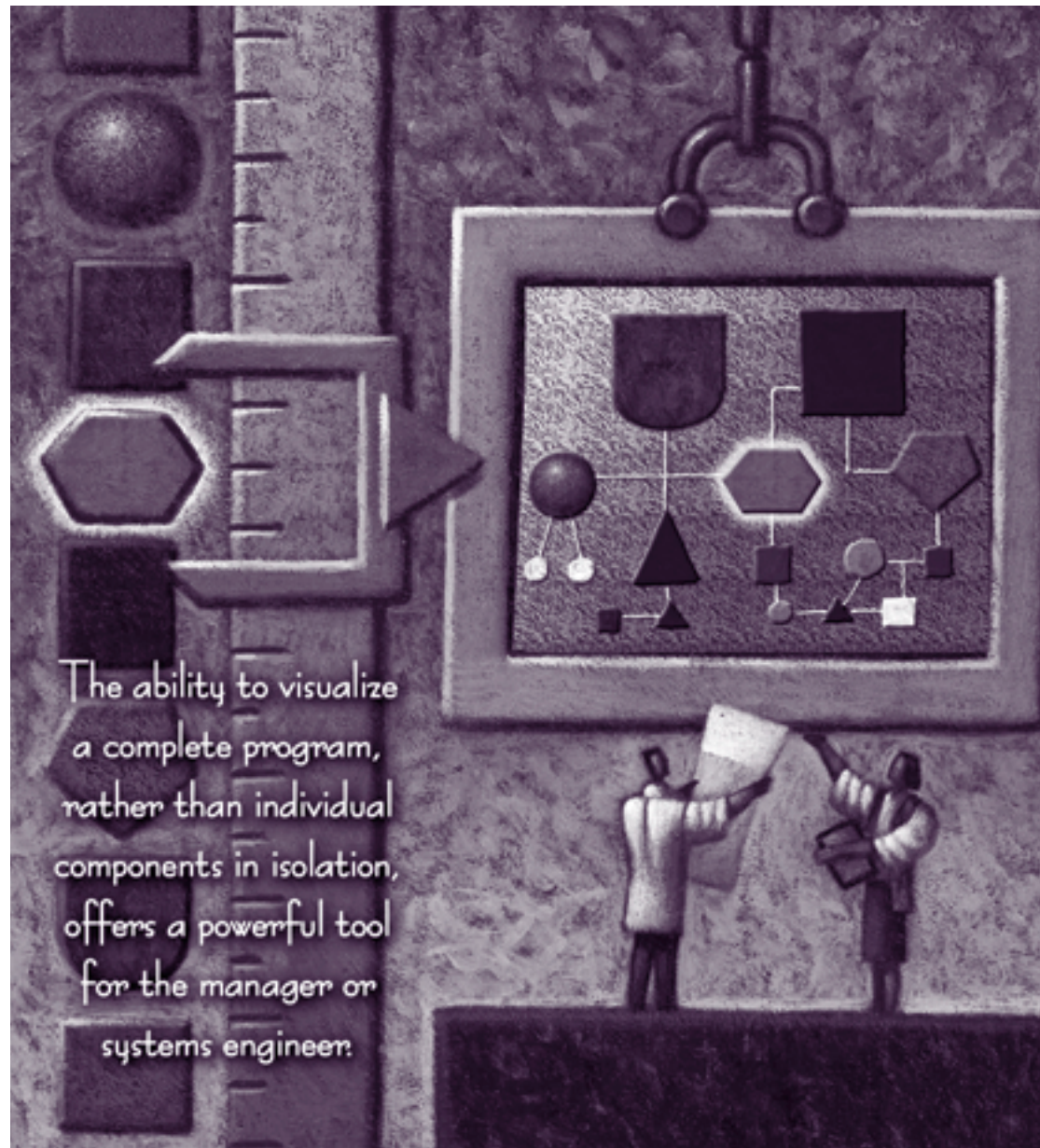
Following this logic process and using the noted tools, we should have made progress in the requirements management process. First, we should now have a reasonable handle on the majority of the requirements definitions; that said, the systems engineering process is both iterative and recursive, so we should expect requirements to change. The point is that we would like to have the vast majority of the requirements identified as early as possible in the program. Second, it is also clear that those requirements must be appropriately integrated into the pro-

gram, including contracting and documentation. That integration effort is the crux of the requirements management process.

One way to view the integration effort is represented graphically on the previous page, illustrating all the elements that have been discussed: ICD, CDD, WBS, specifications, SOW, and finally the Test and Evaluation Master Plan (TEMP). For ease, each column title identifies its source. Missing in the preceding discussion are the relationships among the critical elements, and the requirements in the graphic can now be connected to their output documentation. For example, a concrete Requirement X was identified in both the ICD and CDD, became a portion of the program WBS, and was represented in the systems specification and TEMP. Notice additionally, that in the systems specification, the actual requirement is noted in Section 3 and the verification of that same requirement is noted in

Section 4. Likewise the verification requirements from the systems specification are directly translated into the developmental test (DT) portion of the TEMP, Part III, and translated into the operational test (OT) portion of the TEMP, Part IV. Thus, the graphic allows one to easily visualize the progression of this simplistic requirement to its logical end, and the horizontal progression of the requirement across each row additionally shows where and how every action will be taken.

Likewise, in Requirement X.X, we see that the analysis conducted during the WBS developmental effort has added a new, related Requirement X.X.1. That new requirement is handled in exactly the same manner as Requirement X.X, and this related Requirement X.X.1 is clearly shown in relation to its superior Requirement X.X. In both situations, we can easily visualize the origin of each requirement—Requirements X and X.X from the ICD and CDD,



and Requirement X.X.1 from the WBS. Maintaining these relationships is critical to requirements management.

Requirement Y, like Requirement X.X.1, has its genesis in the WBS effort, but for our example, it is not a performance/technical product. Since only design and performance requirements are hosted in the systems specification, Requirement Y must reside in the SOW. For instance, Requirement Y could be a program management system, delivered by the contractor for inclusion in the overall program master plan. In that same vein, Requirement Z could be a requirement for contractor logistics support and, since it is not a design or performance requirement, should be included in the SOW.

The graphic also demonstrates the proper control and numbering of requirements. In the WBS, we see three related products numbered in series from 1.X through



1.X.X.1; a process (in this case a program management system) numbered beginning with Paragraph 2.Y; and finally another product (in this case contractor logistics support) numbered beginning with Paragraph 3.Y. In the systems specification, numbering of requirements begins in series with Paragraph 3.0, and verification requirements are directly related to the Section 3 requirements, but beginning in an identical series starting with Paragraph 4.0. The TEMP follows that same numbering process. Because of convention, in accordance with MIL-HDBK-245, the only binding SOW requirements are contained in Section 3 and begin in series starting with Paragraph 3.0.

Using this approach meets our first stated criterion (to identify all program requirements), and this approach also partially meets the second and third criteria (to maintain those identified requirements and control any changes). But clearly, this simple manual example would become very cumbersome on a program of any size. To accommodate that sizing problem, a more automated data management approach is required, in this case a relational database. As originally developed by E. F. Codd, a relational database allows the definition of data structures, storage and retrieval operations, and integrity constraints; and these attributes are exactly those required for this task. Using a relational database program thus allows one to automatically fill data fields from one document to another, as well as to maintain configuration man-

agement and configuration history. The addition of a relational database approach fully completes our three initial criteria.

### **Clear Advantages**

This approach to requirements management offers several clear advantages to the practitioner in the field, resulting in improved products for the warfighter. The ability to visualize a complete program, rather than individual components in isolation, offers a powerful tool for the manager or systems engineer. By establishing the relationships between these components, errors can be avoided, and—more important—changes can be understood and managed. In addition to this philosophical approach to requirements management, using available tools such as MIL-STD-961E, or MIL-HDBK-881A or 245D, can simplify the effort to produce well-written program documentation and should be maintained in every acquisition professional's toolbox. Lastly, relational database programs will greatly increase both efficiency and quality on acquisition programs. Combined, these techniques allow professionals to provide higher quality, more cost-effective products to our people in the field.

The author welcomes comments and questions. Contact him at [dave.eiband@dau.mil](mailto:dave.eiband@dau.mil).

# Meet the AT&L Workforce

## Lt Col Ernest “Turk” Tavares Jr.

CV-22 Systems Squadron Operations Officer/Sustainment Engineer  
U.S. Air Force

### *What does your job entail?*

As Ops O, I take care of the acquisition documentation that statuses the program to the PEOs and OSD, such as the DAES, SAR, Monthly Acquisition Reports, etc. I also work manpower issues and fill in for engineering when they are short manned. As a sustainment engineer, I interface with the user and run down maintenance and logistics issues and plan for the long-term sustainment of the CV-22 Osprey.



### *What do you find most fulfilling about your job?*

Making decisions that have a positive impact on the operational capability of the aircraft. For example, this vehicle will be the first rotary wing craft with an anti-iced radar pod, allowing true all-weather capability. I made decisions that expedited putting that capability in the aircraft.

### *And what do you find most frustrating?*

All the paperwork and the duplicative taskings from the three reporting chains (Navy Air Force, and United States Special Operations Command).

### *What do you think makes you successful at what you do?*

I don't like to wait around to make a decision. Get the info, and make a decision. I hate decision by committee.

### *What are your interests and pastimes when you're not at work?*

Astronomy, golf, and playing tennis with my daughters.

### *Is there anything unusual or interesting about you that you'd like to share with us?*

I'm a B-1 weapons system officer working in a CV-22 tiltrotor program office. In the Air Force, that is called a perfect fit.

## Sharmella A. Riggs

AN/APR-39A/B(V)2 Radar Warning Receiver Integrated Product Team Lead

Naval Air Systems Command Headquarters/Program Executive Office for Tactical Aircraft, PMA 272 (Advanced Tactical Aircraft Protection Systems Program Office)

### *What does your job entail?*

As an IPT lead in the Advanced Tactical Aircraft Protection Systems Program Office, I help provide the fleet a quality radar warning receiver system that is designed to offer maximum survivability on fixed wing, rotary wing, tilt rotor, and transport aircraft. I manage system requirements with the prime contractor and multi-Service platform representatives and ensure alignment of hardware and software system architecture design, system integration, and quality assurance with program requirements.

### *What do you find most fulfilling about your job?*

Responding in real time to e-mails and technical inquiries from the warfighters.

### *And what do you find most frustrating?*

The inability to fulfill fleet requirements because of funding constraints.

*What do you think makes you successful at what you do?* Success comes with the combination of my can-do attitude and the support of dedicated and motivated team members.

### *What are your interests and pastimes when you're not at work?*

I love spending time with my family, especially on vacation. In my spare time, I also enjoy coordinating special events and conferences.

### *Is there anything unusual or interesting about you that you'd like to share with us?*

I think it is interesting that I manage resources and am accountable for a geographically dispersed team located in five different regions of the country.



### **Attention AT&L PEOs, PMs, Managers, and Supervisors**

Do you have an employee you'd like to see recognized in *Meet the AT&L Workforce*—someone who works behind the scenes to support your organization? Send us the name, military rank (if appropriate), job title, defense agency/Service affiliation, and home or business mailing address, plus the employee's responses to the italicized questions above. Please include your own contact information, and spell out all acronyms. Profile responses may be edited.

Information may be e-mailed (preferably in a Word file) to [datl@dau.mil](mailto:datl@dau.mil).

We will contact you if your nominee is selected for publication.

**Photographs:** Only submissions with photographs will be considered. A casual photograph, not a formal bio portrait, is preferred. Submit a high-resolution digital file (300 dpi with a final print size no less than 3 x 5 inches) or mail a traditional photo to the address on page 1. *Photographs cannot be returned.*

# Teamwork Tells

## A Four-Year PEO Soldier Success Story

*Debi Dawson*

**T**he war in Iraq has changed how soldiers fight. Just a few years ago, lessons learned by soldiers in the field were not being addressed in a timely manner, and equipment requests were taking months, if not years, to make their way through an unwieldy acquisition process. When it became clear that soldiers urgently needed weapons and other items designed specifically for urban warfare and sniper fire, Program Executive Office (PEO) Soldier was among the first to step up to the challenge of applying the most up-to-date technology and delivering gear to soldiers in Iraq and Afghanistan in as short a timeframe as possible.

On the eve of his recent retirement, Army Brig. Gen. James R. Moran, PEO Soldier, reflected on the four-year history and accomplishments of PEO Soldier, whose mission is to arm and equip soldiers to dominate the full spectrum of peace and war, now and in the future. "After a couple of hundred years of doing business one way, it has been an accomplishment to change the mindset so that the soldier is now seen as a combat platform—America's most deployed combat platform—and, therefore, needs to be treated as a combat platform," Moran said.

As Moran sees it, PEO Soldier is a story of teamwork writ large: Since its inception in 2002—thanks to the combined efforts of American industry, Congress, and acquisition offices throughout the Pentagon—a relatively small team of military personnel, civilians, and contractors at Fort Belvoir, Va., has changed the Army's business model for acquiring and quickly fielding soldiers' gear.

No one said it was easy. "In the beginning it was 20-hour days and seven-day work weeks," said Moran. "When I came here in April 2002, I inherited almost 400 programs stashed away in every nook and cranny of the Army. Just getting them under one organization with 10 program offices and a headquarters was the first challenge. We also faced a fiscal challenge—getting the funding needed to procure the items that would support the military's aggressive deployment schedule for the conflicts in Iraq and Afghanistan."

Cultural change does not come easily to large organizations and certainly not to one as steeped in its own his-



PEO Soldier was created with one purpose: to equip the soldier. This gear consists of M4 rifles with the latest sensors, lasers, and sights, including Small Tactical Optical Rifle Mounted Micro-Laser Rangefinder, M68 Close Combat Optics, and Advanced Combat Optical Gun Sights.

*PEO Soldier photograph.*

tory as the Army. Yet today, the Army is well on the way to treating the soldier as a system—much as it treats tanks, howitzers, and aircraft as systems to be integrated with other even larger systems. All aspects of PEO Soldier

*Dawson is the PEO Soldier public affairs officer.*

equipment are developed to be integrated, modular, interoperable, and mission-tailorable. The result is a single, integrated combat system that enhances soldier performance in all critical areas: increased effectiveness, decreased load, improved mission flexibility, and greater survivability.

Moran elaborated: “Whether it’s a tank or a fighter plane or a combat ship, when that ship or plane or tank is delivered to the unit, it is delivered with all the pieces, parts, and systems associated with it. We don’t deliver a tank without a cannon. We don’t deliver a fighter without engines. We don’t deliver ships without power trains. Now we’re trying to field individual soldiers with the weapons and ammunition they need—the lasers, the optics, the clothing and textiles—so that neither the soldier nor the unit commander is responsible for integrating it and making sure it all works together.”

### Importance of Feedback from the Field

Once PEO soldier initiated the Soldier-as-a-System approach, it conceived the Rapid Fielding Initiative (RFI) in 2002, based on feedback from soldiers in Afghanistan who met with PEO Soldier representatives in the field to talk about their specialized equipment needs. The result

has been astounding: RFI accelerated procurement to provide—in days or weeks rather than the months once required—more than 700,000 active and Reserve troops with equipment, such as the advanced combat helmet, advanced ballistic helmets, ballistic goggles, kneepads, elbow pads, improved hydration systems, and first aid kits. By the end of 2007, the entire Army, as well as other Services participating in joint missions with the Army, will be equipped by RFI. The current RFI kit consists of 58 items developed to meet the rigors of battle, as requested by soldiers themselves. And soldiers have been the first to report the results: lives have been saved, injuries reduced, and effectiveness enhanced.

While Moran is quick to attribute PEO Soldier’s success to many, he unflinchingly highlights the feedback from soldiers in the field: “We listened to those who know best, whose lives depend on having the right gear, and we understood the need to move fast.” As a result, PEO Soldier dramatically increased production and fielding of a variety of survivability and protection items, including the new Army combat uniform, body armor, night vision devices, thermal weapon sights, and radios, plus more advanced remote systems. PEO Soldier continues to receive soldier feedback through its Web site, e-mails, and from

the teams sent out to the field periodically to ask soldiers how equipment is performing and what additional requests they may have. In fact, that’s how the original list of 15 soldier-requested items has grown to the current 58 items in the RFI kit.

“We are still fielding almost 1,000 soldiers a day,” Moran noted, “but we’re not there yet. It takes a long time to change a culture in the Army and to change all these procurement programs.”

RFI was not the first to try to get specialized equipment to soldiers quickly. Since 1989, the Soldier Enhancement Program (now managed for the Army by PEO Soldier and TRADOC [Train-

*ing and Doctrine Command*] System Manager Soldier) has worked to identify and enhance commercial off-the-shelf items that meet specific needs reported by soldiers—uniform redesign, ration improvements, laser eye protection, the desert combat boot, sniper kits, the soldier intercom, protective masks, and stabilized binoculars.



Equipped with the Advanced Target Pointer/Illuminator/Aiming Light, a soldier has an infrared aim laser, an infrared illuminator, and a visible aim laser at his fingertips to maximize firing distances.

PEO Soldier photograph.

However, Soldier Enhancement Program items are based on proposals that anyone can submit identifying an existing item that can be revised in three years or less.

### **State-of-the-Art Equipment**

Among PEO Soldier's other successes in meeting the needs of soldiers are an improvement to the Interceptor Body Armor (IBA) known as DAP or the Deltoid Axillary Protector, and the Common Remotely Operated Weapons Station (CROWS). DAP was developed in response to the improvised explosive device threats that soldiers face in Iraq. Unlike conventional threats, which usually come from the front, back, or above, IEDs throw shrapnel and spall at soldiers from below and from the sides. DAP enables soldiers to cover shoulder and upper arm areas as well as the armpit and underarm. The original IBA design is open around the arms to allow air to circulate. But it is a modular design, which allows for protective additions. Soldiers in the field developed the DAP prototype themselves by using groin protectors, and PEO Soldier responded by adding the DAP improvement to the IBA system.

CROWS is a remotely operated targeting system that can be mounted on top of an armored vehicle. This stable targeting system integrates sensors and firing controls so that the gunner can acquire and engage moving targets while protected inside the vehicle. Multiple CROWS prototypes have been deployed. The system includes daytime video capability, thermal imagery, and increased laser rangefinders.

Another example is PEO Soldier's Air Warrior system. Army aircrews deploying in support of Operation Iraqi Freedom and Operation Enduring Freedom have been equipped with this new-generation aircrew ensemble that provides advanced life support, ballistic protection, and chemical-biological protection in a system of mission-configured modules. The Air Warrior system enhances aircrew comfort, cockpit synergy, and aircraft mission capability; and it improves lethality, survivability, mobility, and sustainability. The system maximizes safe aircraft operation and human performance without encumbering the aircrew. Air Warrior was developed with interoperability in mind and has leveraged several joint Service technology efforts. In the past, before Air Warrior centralized the process, the separate development and application of aviation life-support equipment and mission equipment resulted in a layered, nonintegrated assemblage of protective/survival gear. The list goes on: the Electronic Data Manager is a ruggedized computer worn as a kneeboard that provides the enhanced communication capabilities; the Microclimate Cooling System is worn by the aviator/crewmember to reduce heat stress to helicopter crewmen; the Cockpit Air Bags System saves lives and prevents or reduces injuries by protecting the aircrew from multiple cockpit strike hazards.

PEO Soldier Equipment provides soldiers with state-of-the-art sensors, lasers, clothing and other individual equipment, including the Enhanced Night Vision Goggle, a helmet-mounted device that provides improved mobility and situational awareness in all weather and obscured battlefield conditions; the AN/PAS-13 Thermal Weapon Sight, which enables gunners to see deep into the battlefield, increasing surveillance and target acquisition range; the Modular Lightweight Load-Carrying Equipment system, which enables soldiers to tailor loads with modular, flexible, load-carrying equipment; and the Modular Sleeping Bag System, which allows environmental and physical comfort in a variety of situations.

### **The PEO Soldier Team**

Headquartered at Fort Belvoir, Va., PEO Soldier is supported by 10 project and product managers and their committed staffs. PM Soldier Warrior is responsible for Land Warrior, Air Warrior, and Mounted Warrior. PM Soldier Equipment has purview over sensors and lasers as well as clothing and individual equipment; and PM Soldier Weapons manages both individual and crew-served weapons.

Looking ahead, Moran affirmed his organization's commitment and called on others to ensure that support continues in the years ahead. "I think the biggest challenge ahead will be to continue the transformation of the Soldier-as-a-System concept. As defense dollars become ever more scarce—as they do after any major conflict—we need to ensure that these programs are adequately funded so that the tip of America's combat machine, the heart of our Army—the individual soldier—is adequately funded and resourced. Because we develop and field the best technology and the best equipment America can provide, our soldiers have confidence in their equipment. They know the United States government and the Army and the Congress are providing them the resources and equipment they need for victory on the battlefield."

With a final bow to the soldier, the general concluded, "I think that the American fighting men and women are the best fighting force that the world has ever seen because of their intelligence, their drive, their dedication, and their will to win. And I believe that because they have the will, it is our job to provide them the means for victory."

The author welcomes comments and questions. Contact her at [debi.dawson@us.army.mil](mailto:debi.dawson@us.army.mil).

[Defense AT&L printed an interview with Moran in the May-June 2004 issue and featured photographs of the equipment mentioned in this article. The interview is posted on the DAU Web site at [http://www.dau.mil/pubs/dam/05\\_06\\_2004/mor-mj04.pdf](http://www.dau.mil/pubs/dam/05_06_2004/mor-mj04.pdf).]

# We've Come a Long, Long Way

Maj. Chris Quaid, USAF ■ Maj. Dan Ward, USAF



**W**e reprint an ancient memorandum that recently found its way into the hands of our authors. It shows how far we have progressed since the unenlightened days in which it was written.

## SECRET COMMUNICAE FROM HIS GRACE ALOFT THE PAPAL STATE

**TO:** His Excellency Romulus Augustus, Emperor of Rome  
**FROM:** His Holiness Pope Simplicius  
**DATE:** January 12, CDLXXV  
**SUBJECT:** King Arthur and the PMs of the Round Conference Table

*Simplicius Summus Pontifex Romulo Augusto Imperatori et familiae salutem dicit (Babelfish engaged):* I, Simplicius,

greet you and your family, Romulus Augustus. I hope you're all keeping well. I will be to-the-point on some rather unfortunate business that needs your urgent attention. We have received word from Our Bureau in Britain that policies, procedures, and proper standard acquisitions are being woefully and deliberately ignored in a remote region known as Camelot.

It has been brought to Our attention that a regional director in Britain, known as King Arthur, is encouraging his peasant managers (PMs) to commit heresy against the ancient Acquisition Scrolls of Process Propriety. As you know, these scrolls have been in place for as long as Migratory Swallows have attempted to transport coconuts into Mainland Europe (as the saying goes), and they dictate "exactly what work is to be done, by whom, when,

**Ward** holds degrees in electrical engineering and engineering management. He is Level III certified in SPRDE, Level I in PM, T&E, and IT. He is currently assigned to the Air Force Research Laboratory in Rome, N.Y. **Quaid** is assigned to the Technical Executive Office of the National Geospatial-Intelligence Agency. The authors have removed their tongues from their cheeks for long enough to thank **Dr. Deborah McInnes** of the Jesuit High School, New Orleans, La., for her help with Latin translation.

and where.” We do not understand why Arthur believes his branch and his PMs should ignore Our ancient and hallowed procedures and policies, simply in the name of “accomplishing the mission,” whatever that means. (Nor do We understand how said Swallows think they can carry the coconuts, but that research is currently under way, as you know.)

The point is this: We have always executed Our acquisitions in accordance with the ancient scrolls. These scrolls were good enough for Noah, good enough for Moses, and good enough for Alexander the Great. Surely We do not need to remind you of the notable failures of years past caused by inattention to the Acquisition Scrolls, to include that high-rise Tower of Babel fiasco and the Philistines’ “Big Man Army of One” concept.

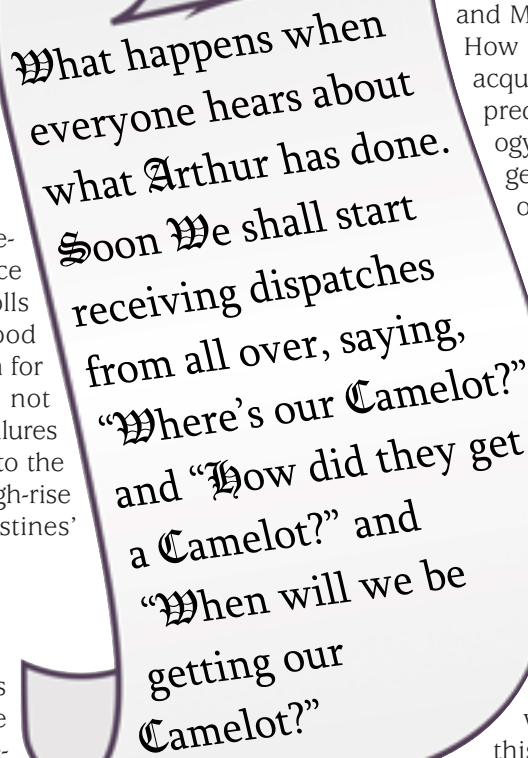
### **Thou Shalt Observe the Requirements Process**

To begin with, we have a very serious requirements issue with this whole Camelot thing. We have reason to believe King Arthur has set aside the hallowed practice of spending V years on a focused thrust to produce a SWORD (Standard and Wordy Operations Requirement Document). Our repeated requests for a SERF (SWORD Engineering Review Forum) have been unanswered to date.

Arthur unilaterally decided to create an independent Center of Excellence, which he calls Camelot, without incorporating the requisite number of PEASANTs (Processes for Evaluation and Standardization of All New Technologies). How can one create a Center of Excellence without lots of PEASANTs? Where is the assurance of system standardization?

Naturally, these rogue Britons have never filed a formal requirement in all of their miserable existence, nor have they ever submitted a claim through proper channels for things like better facilities, clothes, clean water, etc. If they really wanted improvements they could at least have composed a decent requirement so that We in Rome could decide how best to meet their needs. If Arthur and his PMs had gone through the formal requirements cycle (using their proper Latin on a standard form XVII-B) We could undoubtedly have squeezed them into the schedule within the next XXXV to XL years.

The problems created around rogue acquisitions are legendary. How shall We incorporate Camelot into the cur-



What happens when everyone hears about what Arthur has done. Soon We shall start receiving dispatches from all over, saying, “Where’s our Camelot?” and “How did they get a Camelot?” and “When will we be getting our Camelot?”

rent operational baseline, which was established over CD years ago by Caesar Augustus? The truth is, we have no room in our Operations and Maintenance budget for Camelot. How could Arthur expect our ancient acquisition office to have been able to predict today’s advances in technology CC years ago, when today’s budget was established? Another round of budget submissions is scheduled for the year DCXXVII; he should simply wait until then.

By all accounts, the Britons roguishly acquired a Camelot and the peasants are now happy, eating every day, well protected, going to school, and are generally evolving from a bunch of ragtags clad in animal skins and painted with Woad (whatever that is) into a thriving community.

That is all well and good, but what happens when everyone on this continent hears about what Arthur has done. Soon We shall start receiving dispatches from all over, saying, “Where’s our Camelot?” and “How did they get a Camelot?” and “When will we be getting our Camelot?” Pretty soon, everybody will want this level of service, and then what shall We do? The solution, clearly, is to shut down Camelot before the idea spreads.

### **Thou Shalt Do it Our Way**

Most disturbing are Arthur’s potentially illegal contracting vehicles. Even if Arthur blew off the requirements process We have in place, there are approved and ratified industry contractors whom he could have used to create Camelot. He selected none of them—with deplorable results.

For centuries the Roman Architecture Guild has created grand structures with Roman columns and statues and the like. Our contractors have built the same design for centuries, a design that is constant and unchanging. Our understanding is that Camelot has no Roman columns. We are offended by this state of affairs. How can a proper building not have dozens of Roman columns?

Arthur is using illegal contractors without going through a multi-year selection process. What’s more, We have received most disturbing reports that Arthur incorporated a small female minority (water sprite), namely the Lady of the Lake, LLC, for weaponry development on his Ex-

calibur project. What assurance did Arthur have that the Lady of the Lake, LLC, could deliver? Arthur's trust in her is most unnerving.

Arthur persists in the belief that his agile, small, and responsive contractors can, by discovering them sooner, improve or fix any mistakes more quickly and cheaply.

Clearly, Arthur doth not know whereof he speaketh, and you can tell him We said that.

### **Thou Shalt Keep Thy People in Their Places**

As if all that isn't enough, we also have reports that King Arthur has challenged his PMs Sir Robin the Brave and Sir Lancelot the Remarkably Talented with finding the Holy Grail. They were apparently sent on a quest outside their offices to do field work. Preposterous!

Who proclaimed that these PMs were qualified to perform such a function? Did they receive the proper IV-year degree in Grail Seeking from an accredited Institution of Higher Learning? Did they not know that the Roman Emperor has already tasked a French Castle (strangely also located in Britain) with finding and maintaining the Holy Grail? In fact, they tell Us they've already got one.

As further examples of his foolhardiness, Arthur is not telling the knights where to go or what to do. He is letting his subordinates take charge and find solutions on their own. Arthur's misplaced trust in what he calls his Integrated Project Team and the dangerous levels of empowerment of his subordinates will be Arthur's undoing. Does Arthur really believe that without his constant supervision his PMs will do anything right? And if they are truly capable, as he seems to think, does he have no fear of their double crossing him? Tsk, tsk, tsk!

King Arthur has no appreciation for doing what he's told and staying within his own lanes of clear responsibility. Does Arthur believe his team's diversity and different backgrounds will improve his chances of recovering the Artifact? Would not Team Camelot be better off if all members adhered to their specific assigned Roles as described in the Scrolls? (Our rhyme is unintended.)

### **Thou Shalt Know Who is in Command**

Our final charge against King Arthur stems from the observations of his brash inability to maintain bureaucracy. Arthur has "masterfully" carved a "glorious" Round Table and placed it in the center of his Conference Room, complete with Candles and Writing Tools and a Lazy Susan for sharing Chinese Food. During meetings at this Round Table, everyone sits together at the same altitudinal plane and everyone shares ideas and is enabled to be effectively cross-matrixed. Opinions, thoughts, and plans are encouraged from all members, which is clearly a recipe for chaos.

This Round Table represents a complete lack of recognition of Hierarchy. It is not at all clear where the Most Important Person is, let alone what Process and blocks and checks there are for the most Senior Member to collaborate with the most junior of members. In fact, it seems Arthur encourages open communication and guidance from all levels of the Team, with no appreciation whatsoever for Bureaucratic Processes. Most disturbingly, information, ideas, and tasks can flow up and down the company in a matter of minutes. Furthermore, when a lowly subordinate provides Arthur with an idea or a plan, instead of rightfully claiming the idea as his own, Arthur acknowledges the subordinate by giving him credit for the idea and sometimes bestows upon the subordinate the charge of executing the concept.

### **It Won't Do**

My good Emperor Romulus Augustus, it just won't do. In the year CDLXXV, our western culture is not ready for such displays as King Arthur and his PMs of the Round Conference Table. Call Us old fashioned or risk averse if you must. Perhaps someday, thousands of years hence, entities *will* be able to harness such practices as King Arthur's. Maybe in that day and age, businesses and governments that do *not* adhere to a risk-management, leadership-empowering, entrepreneurial, customer- and mission-focused environment will find themselves left behind. Maybe. But We doubt it. In any event, the year CDLXXV is not that time.

It appears that Arthur and his PMs have an erroneous philosophy that our ancient acquisition structure should accommodate the customer, the knights, or—Heaven forbid—the peasants. We acknowledge that operations and customer support are very important and have their proper place, which is right behind cost, schedule, and politics. It also appears that in challenging Our established practices, Arthur believes some sort of "British Empire" might some day replace the mighty and eternal Roman Empire. Which is laughable, of course.

Remove King Arthur, dissolve Camelot at once, and notify the Spaniards to begin devising a means to extract information from perpetrators of such as Camelot.

Please give my regards to your family and enjoy your upcoming tour of Constantinople.

*Cura ut valeas,*

Simplicus  
His Grace

The authors welcome comments and questions. Address them in Classical Latin to [daniel.ward@rl.af.mil](mailto:daniel.ward@rl.af.mil) and [christopher.quaid@pentagon.af.mil](mailto:christopher.quaid@pentagon.af.mil).



## In the News

### BUSINESS TRANSFORMATION AGENCY LEVERAGES DOD ACQUISITION DECISION MAKING **TESTING THE ENTERPRISE RISK ASSESS- MENT MODEL**

Paul K. Ketrick

**E**nvision gaining deeper insight into the risks associated with major automated information systems within the business mission area without asking program managers to create new artifacts. Imagine program managers and senior Department of Defense leadership working together to create usable, actionable risk mitigation plans that identify ownership and accountability from the program level up to the Office of the Secretary of Defense. Finally, picture an assessment model that looks across seven distinct risk areas (including people, processes, and external impacts) at a reduced cost and shortened schedule—again, without any additional oversight. That is the vision of the future for major business systems acquisition proposed by the developers of the Enterprise Risk Assessment Model (ERAM).

In January 2006, the Defense Business Systems Management Committee approved test cases for a concept that modernizes the way DoD manages the acquisition of major business information systems. Part of the 2007 National Defense Authorization Act, ERAM represents a major opportunity for the Business Transformation Agency to enhance the effectiveness of DoD business systems. As the BTA pursues its mission to transform defense business operations by rapidly delivering not just systems, but also capabilities, to the warfighter (for example, the ability to track personnel skill sets and match them to appropriate assignments, or the ability to efficiently value and track DoD property), ERAM can help identify risks and potential pitfalls early in the business system development process to better ensure success.

Ken Krieg, under secretary of defense (acquisition, technology and logistics), laid out a plan in April 2006 for “gaming” the ERAM concept through a set of initial test case systems: the Defense Integrated Military Human Resources System; the General Fund Enterprise Business System; and the Integrated Data Environment/Global Transportation Network Convergence. According to Krieg, “ERAM test cases provide unique opportunities to institutionalize change by applying recently proposed bold ideas and concepts that can establish credible models

and set the stage for real change, in real time.” The BTA charged the Investment Management (IM) directorate with testing the ERAM concept. At the conclusion of each successive test case, the BTA will reassess the effectiveness of the process. (Test cases were implemented May-September 2006)

The question we have been asked is, “What is the genesis of ERAM, and how is it different from past recommendations?”

In January 2006, the Defense Acquisition Performance Assessment Project, an external assessment, provided an independent review of and recommendations for the acquisition process. Similar recommendations in the past hadn’t really been able to produce lasting change. The ERAM initial test cases present an opportunity to create solutions and set examples for credible and enduring change management. ERAM is a model that helps program managers determine the root cause of problems and issues within their programs and to define a process that helps in gaining a deeper understanding of issues and risks.

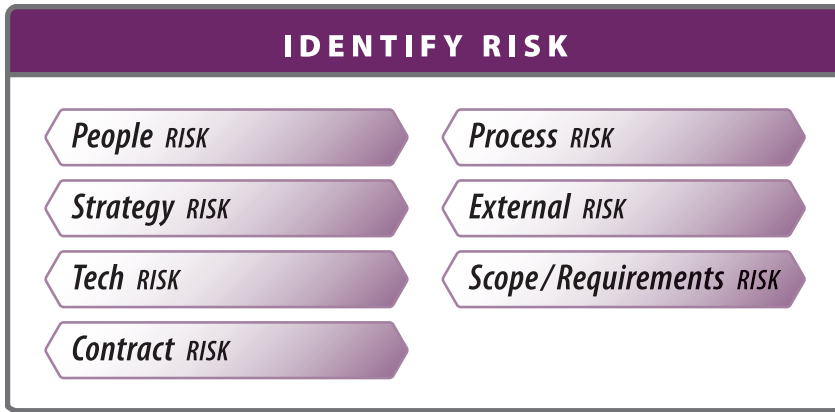
Krieg has talked about our need to “distinguish between ‘Big A’ and ‘little a’ acquisition.” ERAM ties into his vision of a capabilities-focused acquisition decision-making process. The differences between what we decide to buy at the strategic level (Big A) and how we develop, test, produce, and sustain the programs (little a) allow us to deliver capabilities to the warfighter. The ERAM concept gives decision makers increased visibility into their programs by providing insight without creating another layer of oversight, and it gives us situational awareness of both the Big A and little a in acquisition. The BTA has a strategic approach to investment management and to developing and testing ERAM. The overarching goal of the BTA is the rapid delivery of capabilities and informed decision making.

Within that framework, the IM team is focused on a variety of issues, including integrated and aligned requirements definition, integrated DoD decision support systems, and efficient investment review—all of which allow us to keep our eye on that overarching goal. Tom Modly and Paul Brinkley (co-directors of the BTA) agreed that IM, among other strategic activities, should spend the next 12 months developing, testing, and institutionalizing proven concepts to improve acquisition management process outcomes. ERAM ties directly into that strategy.

It is important to note that conceptually, ERAM is no different from the Department of Defense Directive (DoDD) 5000 process. However, the assessment itself is a content-rich, energy-focused approach. It uses existing artifacts and documents that allow us to leverage current acquisition decision-making processes. ERAM adheres to



## ERAM



## RISK MITIGATION PLAN



- Usable
- Actionable

### Enterprise Risk Assessment Model (ERAM) Risk Areas

the principles in DoDD 5000.1 and satisfies the critical requirements in DoDI 5000.2. ERAM is designed to be fast and flexible, enabling business systems to take advantage of emerging technology to deliver business capabilities faster. We expect the initial test cases to give us enough information to continue developing the model.

What is entailed in a typical ERAM assessment? Once a program is selected for assessment, a risk assessment team (composed of executive-level leadership and matrixed resources across the DoD enterprise) spends time carefully reviewing existing program documents to determine the specific context of the one-on-one interviews that serve as the basis for the assessment. The assessment team then spends several days onsite conducting thorough interviews with primary and secondary program personnel. In conjunction with appropriate program staff, the assessment team reviews materials, asks questions, develops conclusions, and develops an actionable risk mitigation plan for the program. A draft of the assessment is reviewed with the program manager, and a final risk mitigation plan is released. In the initial test phase, the ERAM process is set up to be executed in 60 – 90 days, from start to finish.

Senior DoD leadership does not have visibility into critical risk across business systems. ERAM is designed to help us identify systemic issues, gaps in policy, and concerns within internal and external communities. With this model, the goal is to respond to emerging technology, make better decisions about how we manage our investments, and deliver business capabilities faster.

For more information about ERAM, visit <http://www.dod.mil/bta/ERAM/index.html>.

*Ketrick is director, Investment Management Directorate, Business Transformation Agency.*

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### ARMY NEWS SERVICE (APRIL 20, 2006) ARMY ADVANCES ALTERNATIVE ENERGY TECHNOLOGIES

**D**ETROIT, Mich.—The Army is at the forefront of alternative energy advancements that will improve the capability of America's military forces.

Working alongside industry and academia research leaders, these technology developments will not only support our armed forces, but have unlimited commercial applications.

The Army Tank Automotive Research, Development, and Engineering Center (TARDEC), with its National Automotive Center (NAC), is working with industry and academia partners nationwide to research cutting-edge technologies in hybrid, hydrogen, and fuel cell vehicle developments.

"The research base in Michigan allows us (TARDEC) to collaborate with our automotive and academic partners to develop alternative energy solutions that are transferable to both the military and industry," said Dr. Richard E. McClelland, TARDEC director.

Ranging from solar panel power for the individual soldier to hydrogen, fuel cell, and battery power solutions for military and commercial vehicles, the NAC sits as the gatekeeper for technology transfers between military, industry, and academia.

Army partnerships in motion include:

- State-of-the-art Hydrogen Hybrid Demonstrator Vehicle—Quantum Technologies Inc., using a Ford Hybrid Escape platform, is working to pair hybrid electric vehicles with a hydrogen delivery and storage system that can potentially offer a cost effective alternative to fuel cell power
- Dana Corporation's parallel and series Intelligent Hydraulic Drive technology for the Army's Family of Medium Tactical Vehicles and the HMMWV
- The Hydraulic Hybrid, Advanced Materials, and Multi-fuel Engine Research program with Eaton Corporation's Hydraulic Launch Assist system
- United Solar Ovonic's UNI-PAC solar panel, which can be worn by soldiers and adapted to recharge a field generator or vehicle.

Headquartered at the Detroit Arsenal, Warren, Mich., TARDEC is the nation's laboratory for advanced military automotive technologies. TARDEC's mission is to research,

### Inter-Agency Learning Opportunity

#### Energy: A Conversation about our National Addiction

The Office of Force Transformation and the Under Secretary of Defense for Acquisition, Technology and Logistics, are jointly sponsoring a series of dialogues in the Washington, D.C. area on national security energy issues. Entitled "Energy: A Conversation about our National Addiction," the meetings are bringing high-level

attention to the emerging energy debate by providing a forum to engage senior leaders, academics, and researchers both inside and outside of government. A schedule of events is posted at the Naval Postgraduate School Web site at <http://www.nps.edu/cebrowski/conversation.html>.

DoD Mini Poster.



develop, engineer, leverage, and integrate advanced technology into ground systems and support equipment throughout the life cycle. Its technical staff leads research in ground vehicle survivability, mobility, intelligent systems, and maneuver support and sustainment.

TARDEC's National Automotive Center is the Army's official link to working with commercial and academic partners to create vehicles that give the Army the mobility, survivability, and agility it needs to operate efficiently and effectively in today's new threat environment.

For the military, the NAC's partnership approach makes it possible to improve vehicle performance, safety, and endurance while also reducing design, manufacturing, operations, and maintenance costs.

For commercial partners, the application of jointly developed technologies has similar impacts—safer cars and trucks, more advanced technology available to the consumer, and lower costs because of the broader market base.

*Information provided by the U.S. Army Tank Automotive Research Development and Engineering Center.*



### DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 21, 2006) **DOD CREATES DEFENSE SPECTRUM ORGANIZATION**

**T**he assistant secretary of defense for networks and information integration and DoD chief information officer John G. Grimes has directed the director of the Defense Information Systems Agency (DISA) to establish the Defense Spectrum Organization as a center of excellence for radio frequency spectrum analysis, planning, and support.

This new organization represents the next critical step in the Department of Defense's transformation of the management of radio frequency spectrum assets and processes.

This strategic realignment reflects DoD's ongoing effort to transform spectrum management in line with the President's Spectrum Policy Reform Initiative, which is developing a spectrum policy for the 21st century. The new office will merge and realign DISA's existing Defense Spectrum Office and Joint Spectrum Center.

"The Defense Spectrum Organization will significantly advance the department's efforts to make spectrum management information available to the warfighter anywhere, anytime," said Grimes.

This effort aims to transform the department's legacy spectrum management processes and capabilities to support an emerging net-centric environment in which radio frequency-based resources play an integral role.

Defense transformation hinges on the recognition that information is our greatest source of power. Information can be leveraged to allow decision makers at all levels to be more effective, make better decisions faster, and act sooner. Ensuring timely and trusted information is available where it is needed, when it is needed, and to those who need

it most is at the heart of the capability needed to conduct network-centric operations.

For more information on OSD Network and Information Integration's spectrum-related activities, visit <http://www.defenselink.mil/nii/>.

### ARMY NEWS SERVICE (APRIL 24, 2006) **CAB CHINOOKS SUSTAIN THE FORCE**

*Sgt. 1st Class Reginald Rogers, USA*

**C**AMP TAJI, Iraq—To soldiers on the front lines in Iraq, the delivery of supplies is critical to sustaining a force spread over 17,000 square miles.

The 4th Infantry Division's Combat Aviation Brigade CH-47 Chinook helicopters have become a major factor in ensuring repair parts, mail, and other much-needed materiel reach their intended destinations.

To date, CAB aircraft have delivered more than 7.7 million pounds of cargo and more than 60,800 passengers to locations throughout Iraq since taking over Multi-National Division—Baghdad's aviation mission four months ago. Of these passengers, more than 40,000 have traveled aboard the brigade's CH-47 Chinooks.

Army Chief Warrant Officer 2 Brent Byington, a Chinook helicopter pilot in Company B, 2nd Battalion, 4th Aviation Regiment, runs through preflight procedures before lifting off on an April 17 mission from Camp Taji, Iraq.

Photograph by Spc. Creighton Holub, USA.





## In the News

The Chinooks are assigned to Company B, 2nd Battalion, 4th Aviation Regiment, and have been solely responsible for bringing a heavy-lift capability to the fight. Because the Chinook pilots have flown more than 2,000 hours and delivered more than 3,800 tons of materiel, coalition forces have been able to keep more than 1,400 trucks off the roadways. This action has also kept an estimated 3,541 soldiers out of harm's way.

"I'm really proud because of the number of people we keep off the road. It's as important as any other mission," explained Army Chief Warrant Officer 2 Brent Byington, pilot, 2-4 Avn. Regt.

Byington said he realizes the importance of their mission, but added that loading the pallets, which can weigh as much as 7,000 pounds, is a difficult aspect of his job.

According to Sgt. Marc Lamontagne, crew chief, 2-4 Avn. Regt., the various missions include delivery of supplies and, on many occasions, travel to various forward operating bases throughout Iraq.

"The majority of our pallets were mail," he said, about one of the missions the crew flew April 17. "Some were aircraft parts with a lot of tires. We went to Baghdad International Airport, FOB Falcon, and then to FOB Rusty."

Byington said flying at night can be more difficult than daylight missions because it requires a lot more attention to detail and stamina.

"While piloting during the day, we judge our speed by looking at the ground," he said. "[During night missions] there is a lot more maneuvering your head around while wearing night vision goggles. It's a lot more fatiguing."

Byington said flying has its advantages—but like most deployed soldiers, he said he regrets one aspect about not being on the ground.

"I miss that I'm not actually getting to see [the culture] of Iraq," he said.

*Rogers writes for the Combat Aviation Brigade, 4th Infantry Division, Public Affairs Office.*

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### ARMY NEWS SERVICE (APRIL 26, 2006) ACTIVE PROTECTIVE SYSTEM FOR ARMY FUTURE FORCE

*Sgt. Ken Hall, USA*

**W**ASHINGTON—The U.S. Army remains committed to equipping soldiers with the best protection technology can provide, according to Army Maj. Gen. Charles A. Cartwright, program manager for the Future Combat Systems.

As evidence of this goal, the Army's effort to develop better protection for their mounted soldiers moved forward in March as the Raytheon Company was contracted to develop the Active Protective System for the Army's Future Combat Systems program.

Designed as an augmentation to current vehicle armor, the APS is an explosive ballistic countermeasure capability that will dramatically increase vehicle survivability against the spectrum of aerial ballistic threats. The APS is an operationalization of "hit avoidance" technologies that sense incoming threats and employ countermeasures to physically intercept, defeat, or deflect them, increasing the survivability of light-to-medium-weight vehicles.

"This is a significant step forward in the FCS program, which remains on coast and on schedule," says Cartwright. He expects the APS sub-system components to begin current force integration and qualification by the end of 2008.

The estimated \$70 million contract will require the APS technology to work with all other relevant systems within FCS. Real-world lessons learned from the global war on terrorism are being integrated into the development of FCS, a soldier-centric, network-enabled program.

Army Chief of Staff Gen. Peter Schoomaker says that FCS is the Army's key modernization program, and is both the surest and fastest way to provide soldiers additional tools to address the global missions they have been assigned.

"With FCS, the Army takes advantage of the best-of-industry technologies as soon as they are developed and puts them into the hands of soldiers in the field," he said. "This latest approach will get capabilities to our soldiers sooner, strengthening the current force, while laying groundwork for the force of the future."

*Information for this story provided by Maj. Desiree Wineland, U.S. Army Office of the Chief of Public Affairs.*



### NAVY NEWSSTAND (APRIL 27, 2006) **NAVY TO BASE FIRST FOUR LITTORAL COMBAT SHIPS IN SAN DIEGO**

**T**he Navy announced today that the first four Littoral Combat Ships (LCSs) will be homeported at Naval Station San Diego, Calif.

Key in the success of implementing these new concepts is the ability to collocate these ships to achieve readiness alignment and economy of scale. This collocation is especially important for the first ships in the class as waterfront facilities, infrastructure, training, and maintenance efficiencies are developed. San Diego was chosen as the initial homeport because of the Navy's increased emphasis on the Pacific theater based on the Quadrennial Defense Review.

"Homeporting the first four ships in San Diego will enable us to establish synergy between the ships and with local commands," said Vice Adm. Terry Etnyre, commander, Naval Surface Forces, based in Coronado, Calif. "With the Undersea Warfare Command here in San Diego and the Mine Warfare Command moving here soon, the undersea warfare and mine warfare mission packages will have direct coordination and representation locally."

LCS will carry some core capabilities, such as self-defense and command and control; but its true warfighting capability will come from its innovative and tailored mission modules. These ships will be configured for one mission package at a time, consisting of modules, manned aircraft, unmanned vehicles, off-board sensors, and mission-manning detachments. This will operate within open-systems architecture giving it the capability to reconfigure mission modules and ship systems to tailor it for specific warfighting missions.

The Littoral Combat Ships are the first Navy vessels to separate capability from hull form and provide a robust, affordable, mission-focused warship designed to provide assured access for our joint forces. LCS will have the size, speed, endurance, and connectivity to deploy as a member of carrier strike groups, expeditionary strike groups, or surface strike groups.

The innovative concepts in LCS do not end with its modularity. LCS will operate with a quarter of the crew normally assigned to ships this size through a combination of technology and process improvements for maintenance, logistics, training, and administration.

The keel for the first Littoral Combat Ship, to be named *USS Freedom* (LCS 1), was laid on June 3, 2005, and the second, to be named *USS Independence* (LCS 2), on Jan. 19, 2006.

### ARMY NEWS SERVICE (APRIL 28, 2006) **NEW TECHNOLOGY PROTECTS GI'S, SEAPORTS AGAINST NBC**

*Sgt. Crystal Rothermel, USA*

**C**AMP ARIFJAN, KUWAIT—Servicemembers at Kuwait's crucial seaports can focus more on their missions and less on the worries of chemical or biological attacks with the arrival of new NBC warning technology.

The Kuwait Naval Base is the newest recipient of Contamination Avoidance equipment, part of a Department of Defense-sponsored program to increase warning, awareness, and protection at seaports in the event of contamination.

"If you can detect it, you can avoid it," said Lt. Col. Pete Winston, safety officer in charge of the 143d Transportation Command. "If you avoid it you won't get contaminated."

The CASPOD [*Contamination Avoidance of Sea Ports of Debarkation*] package at Kuwait Naval Base includes chemical detectors, sensors, computer systems, and training. The nearby port of As Shuaybah is also equipped with CASPOD equipment. Together, the ports are the first CASPOD sites in a combat zone.

The technology arrived after years of testing, monitoring, and concerns, after a General Accounting Office investigation found shortfalls in decontamination equipment and warning systems at critical points. The CASPOD equipment underwent further tests, demonstrations, and improvements. Finally, the package was proposed to U.S. Central Command in 2001.

Today, CASPOD is more versatile than it was in its early stages. "CASPOD is not just for nuclear, biological, and chemical warfare," said Chris Vontomaszewski, CASPOD technician for SPOD and KNB. "It is for command, control, emergency response, and NBC."

The future of the CASPOD looks even brighter. The system will be simplified and "the ultimate goal is information sharing at a new level," said Vontomaszewski.



Soldiers from the 143d Transportation Command, Army Lt. Col. Pete Winston (right), safety officer in charge, and Army Sgt. 1st Class Michael McGraw (center) work with technician Chris Vontomaszewski (left) to add solar panels to the new contamination avoidance equipment at a Kuwaiti port recently. The CASPOD is part of a Department of Defense-sponsored and funded program to increase warning, awareness, and protection at seaports in the event of contamination.

Photograph by Sgt. Crystal Rothermel, USA.

Ideally, commanders will have the ability to see data from all ports on a single screen.

Vontomaszewski added that until then, servicemembers living and working in Kuwaiti ports enjoy a safer environment without the danger of a chemical or biological attack. The CASPOD is a proactive step towards protecting lives and property—now and in the future.

“The longevity and future development is important because worldwide political winds do change,” he said.

“The presence of CASPOD at seaports is a daunting reminder that, in such an event, the equipment is ready to detect any chemical or biological attack.”

“In just a matter of days, international matters can change,” says Winston. “We are here to defend and protect our forces and people.”

He added that future forces may see newer versions of CASPOD—and that the present installation is a stepping stone.

“I understand that some poor chemical officer down the road may have to defend this port,” he said. “This will help him.”

*Rothermel writes for the 143rd Transportation Command, Camp Arifjan, Kuwait.*



### AIR FORCE PRINT NEWS (APRIL 28, 2006) **CROWS GETS AIRMEN OUT OF THE TURRET**

Staff Sgt. Kristina Barrett, USAF

**K**IRKUK AIR BASE, Iraq—A new weapon system in the Air Force arsenal takes airmen out of the gun turret and into the safety of a fully up-armored Humvee.

The 506th Expeditionary Security Forces Squadron operates the only Common Remote Operated Weapon Station, or CROWS, in the Air Force inventory. As one of three security forces squadrons in Iraq with an outside-the-wire combat patrol mission, CROWS offers an additional capability for the unit.

The CROWS sensor unit includes a daylight video camera, a thermal imager for night operations, and a laser rangefinder. It is furnished with a fully integrated fire control system that provides ballistic correction.

CROWS is a stabilized gunner-operated weapon system, which allows the gunner to engage targets from inside a moving vehicle. It mounts to the M1116 up-armored High Mobility Multipurpose Wheeled Vehicle, commonly known as a Humvee. It provides the ability to remotely aim and fire a variety of weapons. The mount is capable of continuous 360-degree azimuth rotation and a minus 20- to 60-degree elevation movement.

“CROWS increases our situational awareness and allows us to see things we might never have known were there, especially at night,” said 1st Lt. David Bolin, security forces flight leader. “It’s an asset on the types of mission we do here.”

Airmen have taken CROWS-equipped vehicles on more than 25 combat missions. The range of the system exceeds that of the human eye so it has the ability to aid the gunner in looking for threats that may not be immediately visible. It also allows the fire team to find things they may not have known were there. One such mission



Senior Airmen Jeffrey Oats and Keshia Snedeker assemble a machine gun attached to the Common Remote Operated Weapon Station, or CROWS, on a Humvee at Kirkuk Air Base, Iraq, on April 25, 2006. The CROWS system takes airmen out of the gun turret and allows a variety of weapons to be remotely operated from inside the vehicle. Airmen Oats and Snedeker are assigned to the 506th Expeditionary Security Forces Squadron and are deployed from Moody Air Force Base, Ga.

Photograph by Staff Sgt. Kristina Barrett, USAF.



resulted in the seizure of a large weapons cache.

“On one mission, we were scanning the countryside looking for threats and spotted a bunker a substantial distance away,” said Senior Airman Jeffrey Oats, security forces gunner. “When we approached the area, we came upon a cache of more than 100 pieces of unexploded ordnance.”

Although the system has been used by the Army since early 2005, CROWS is still being tested by the Air Force, which is determining the role it could play in future operations. The 506th ESFS mission outside the base perimeter offers the chance to see CROWS in action. “We are continually evaluating it and passing information back to U.S. Central Command Air Forces,” Bolin said. “The system has many capabilities, on and off base.”

The CROWS control module, which mounts inside the vehicle, is the gunner interface, allowing operation from within the vehicle’s ballistic protection. Its main components include a display unit, switch panel unit and a joystick-type hand controller. The system provides full remote control of the weapon system via on-screen menus presented on the display.

“I believe this weapon system to be very useful for the military,” Oats said. “It increases our ability to observe and locate the enemy and eliminates the threat of sniper fire for the turret gunners.”

*Barrett is with the 506th Air Expeditionary Group Public Affairs.*

### ARMY NEWS SERVICE (MAY 4, 2006) **CRUSHER UNMANNED GROUND COMBAT VEHICLE UNVEILED**

**A**RLINGTON, Va.—The Defense Advanced Research Projects Agency (DARPA) and U.S. Army unveiled the Crusher unmanned ground combat vehicle last week in a ceremony hosted by the Carnegie Mellon University’s National Robotics Engineering Center in Pittsburgh, Pa.

The Crusher vehicle is a follow-on and upgrade to the Spinner vehicle that was developed in a prior DARPA/Army program. Crusher is a six-wheeled, all-



The Crusher unmanned ground combat vehicle was unveiled in April 2006 by the Defense Advanced Research Projects Agency.

Photograph courtesy Defense Advanced Research Projects Agency.

wheel drive, hybrid electric, skid-steered, unmanned ground vehicle.

The vehicle weighs 14,000 pounds fully fueled, and is designed to carry a 3,000-pound payload. At this 17,000 pound total weight, two Crusher vehicles can be carried by a single C-130H aircraft at substantial range. If desired, Crusher can carry up to 8,000 pounds of payload and armor without compromising its mobility.

Crusher represents a new class of unmanned ground combat vehicles (UGCVs) developed under the DARPA/Army UGCV-Perception for Off-Road Robots Integration (UPI) program. Crusher is a highly mobile vehicle designed from the outset to be unmanned. It is being equipped with state-of-the-art perception capabilities, and will be used to validate the key technologies necessary for an unmanned ground vehicle to perform military missions autonomously. Crusher will be equipped with representative sensing and weapons payloads for planned field experiments.

DARPA director Tony Tether noted, “With the combination of a robust, highly mobile vehicle design and an innovative autonomous control system, Crusher defines the state-of-the-art in autonomous unmanned ground vehicles systems. DARPA is pleased to be working with the Army to bring this new capability to fruition.”



“The technologies embodied in the Crusher vehicles provide a glimpse into the future of autonomous ground platforms. The Crusher and its predecessor, the Spinner, demonstrate the realm of the possible with regard to a combination of autonomous behaviors, hybrid electric propulsion, and robust vehicle design,” added Deputy Assistant Secretary of the Army (Research and Technology) Dr. Thomas Killion. “All of this combines to give the soldier greatly enhanced standoff capabilities with minimum impact on workload.”

“The Future Combat Systems (Brigade Combat Team) program has been working with DARPA’s UPI program for some time now, leveraging their advancements in robotics field testing, perception algorithm development, autonomy, and, more recently, in understanding wheeled system design characteristics for mobility and remote control latency and bandwidth effects on mobility performance,” explained Army Maj. Gen. Charles Cartwright, program manager, Future Combat Systems (Brigade Combat Team).

“The FCS (BCT), lead systems integrator, and platform providers have all witnessed and participated in dialog with DARPA and Carnegie Mellon University’s National Robotics Engineering Center related to Spinner and now Crusher experimentation. This interaction has been of great benefit to the FCS program, and we look forward to continued interaction and transition of technologies from this new vehicle system to our FCS UGV systems,” he said.

The two new Crusher vehicles are a major improvement in unmanned ground vehicle capability, according to Larry Jackel, DARPA UPI program manager.

“The original Spinner UGCV is an excellent platform, but in shakeout experiments, the new Crushers have already outperformed Spinner in all aspects,” Jackel said. “Combined with its autonomous control system, the Crusher defines the state-of-the-art in autonomous unmanned ground vehicles systems.”

The UPI program will conduct rigorous field experiments of the two Crusher vehicles and their perception and payload systems, with experiments planned at Fort Carson, Colo., this summer. The program will culminate in 2007 with Army users operating Crusher vehicles during representative missions in natural terrain.

The UPI effort will merge all Crusher functions (mission planning, perception monitoring, vehicle monitoring, and payload operation) into an operator workstation interface and determine interaction requirements via experimentation.

UPI is a joint program between DARPA and the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, managed by DARPA’s Tactical Technology Office. The Army’s Program Manager Future Combat System (Brigade Combat Team) closely follows the program.

Carnegie Mellon University’s National Robotics Engineering Center is the prime contractor for Crusher. Key subsystems and components are provided by CTC Technologies (vehicle hull chassis structure), Timoney Technology (suspension systems), Saft America (lithium-ion battery pack), and UQM Technologies (electric drive motors).

*Information provided by the Defense Advanced Research Projects Agency.*

### **AIR FORCE PRINT NEWS (MAY 11, 2006) SMART OPERATIONS 21 OFFICE FORMED AT PENTAGON**

*Staff Sgt. C. Todd Lopez, USAF*

**W**ASHINGTON—In February, Air Force leaders created a new program office at the Pentagon that will take the lead in optimizing the way the Air Force conducts its mission.

The Air Force Smart Operations 21 office, created in response to an initiative by Secretary of the Air Force Michael W. Wynne, will look at process improvement across the Service.

The new office provides top-level guidance for implementing AFSO21 initiatives. These initiatives will enhance a mindset in the Air Force that is already geared toward innovation, said Brig. Gen. S. Taco Gilbert III, director of the Air Force Smart Operations 21 office.

“The Air Force has always fostered a culture of innovation,” Gilbert said. “We are trying to take that culture of innovation to the next level, where we look at all the processes involved in what we do. We look at not doing more with less, but at being smarter about the way we are doing business—eliminating work that is unnecessary. We have tried to capture lessons learned from in-



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dustry and government agencies involved in process improvement.”

Senior leaders designed the program specifically for the Air Force, and it is based on similar industry process improvement practices like Lean, Six Sigma, and Theory of Constraints.

“Air Force Smart Operations 21 is a term coined by Air Force senior leadership to represent not only a program to institutionalize continuous process improvement, but also to describe a new way of thinking about the Air Force,” Gilbert said. “We want to be smart about the things we do for the future.”

Process improvement involves looking at the way something is done, from beginning to end, and determining how it can be done better. By outlining a process, people can then look for redundancies and “non-value added work” to eliminate.

Non-value added work is that which adds nothing to a process. Examples could be forms that are filled out unnecessarily, or excessive travel to get replacement parts when it would be more practical to house those replacement parts at a work center, Gilbert explained.

Even after teams apply initiatives to a process and improve it, there is still more work to do, Gilbert said. Every process can continue to be improved and more waste can always be found. Continual process improvement is the nature of AFSSO21.

“This isn’t about a one-time pass and you’re done,” he said. “It’s a continual process. After you go through once, you then examine the same process again and again. Generally, you find every process will require review four or five times and each time you find more to eliminate or that can be streamlined.”

Gilbert said Air Force leaders have identified 10 main processes divided into three areas: governing, core, and enabling. The processes are: planning and executing strategic initiatives, managing processes and programs, developing and sustaining warfighting capability, deploying personnel and materials, conducting kinetic and related operations, conducting non-kinetic and related operations, caring for people, providing information support systems, caring for infrastructure, and managing financial resources.

Each of the processes has several sub-processes. In actuality, there could be thousands or tens of thousands of actual processes used in the Air Force to accomplish specific parts of the overall mission. Each one, no matter how small or large, can be improved, Gilbert said.

“Every process we have needs to be improved,” he said. “Even in world-class organizations, you find that 60 to 70 percent of the activity in a particular process is waste—activity that doesn’t add value to the overall output.”

The Air Force logistics community has been applying AFSSO21-type improvements to its own processes for years now, long before the Air Force decided to initiate AFSSO21. That community found great success in applying Lean practices to processes like depot maintenance and engine repair, Gilbert said.

For instance, in KC-135 Stratotanker depot maintenance, Air Force Materiel Command returned an additional 100 aircraft to the operational fleet by applying AFSSO21 practices. With C-5 Galaxy aircraft, they reduced overhaul time from 339 days to just 171 days.

At U.S. Air Forces Europe, the commander chartered a team to look at consolidated telephone operations. The command employed 77 telephone operators, including some working under a \$600,000 contract at Incirlik Air Base, Turkey. The team looked at the full range of processes associated with telephone operations and found ways to consolidate and streamline them.

The result was to eliminate inefficiencies through consolidation, reduce the manpower requirement to 65 operators, and eliminate the need for the Incirlik contract, Gilbert said. The process improvements will not only produce \$2.4 million in savings over the next seven years, they will also generate better standardization and services across the command.

While such an improvement proves an immediate benefit to the command’s telephone operations, a larger benefit is realized when considering where those savings can be applied, Gilbert said.

“The real benefit from changing those processes is seen when you look at what it means for USAFE operations in general,” he said. “If we can cut down on the contract and operations costs in a variety of these areas, we’re talking about real savings that will translate into increased combat capability for the future.”



By using AFSO21 initiatives, process times can be reduced, so work can be done more quickly. And by reducing waste in processes, resources like money, time, and people can be freed up to do other work, Gilbert said.

The AFSO21 office is in the process of creating the guidance for implementing continual process improvement across the Service. In addition, at each major command and Air Staff function there is a colonel or brigadier general designated to support AFSO21 operations and initiatives.

The office will also help develop training for those who need it, as well as create ways to ensure the AFSO21 mindset is encouraged throughout the entire Air Force, he said.

Gilbert said that while formal implementation of AFSO21 practices across the Air Force have just begun, he doesn't believe it will be short-lived or ineffective as other process improvement programs have been in the past.

"We have found that even skeptics, after they have participated in an AFSO21 event, come away convinced there is real possibility here, that there was a return on investment, and that they had an impact," he said. "AFSO21 is about a mindset for the 21st century. This is not a short-term program—it is a program to fundamentally change the culture of the Air Force for the long haul."

### ARMY NEWS SERVICE (JUNE 5, 2006) **NEW COMMAND TO IMPROVE LOGISTICS MANAGEMENT**

*Michelle McCaskill*

**R**OCK ISLAND ARSENAL, Ill.—In order to streamline end-to-end logistics in support of the Army's modular force, the Army recently approved the establishment of a new subordinate command under the Army Materiel Command.

The change transforms AMC's Army Field Support Command at Rock Island Arsenal, Ill., to the Army Sustainment Command. The AFSC has already begun its transition to the ASC, with a ceremonial activation set for this fall.

"The Army is transforming and so is the Army Materiel Command," said Greg Kee, AMC deputy chief of staff, G-5, strategic plans and policy. "The Army has transformed to a brigade-centric Army, and AMC is realign-

ing its organizational structures to support the Army modular force from the brigade to the national level," he said.

The transition expands AFSC's current mission by adding reset synchronization, distribution, and materiel management functions, and integrating logistics support with joint and strategic partners. Already existing missions include managing the Army's pre-positioned stocks, the Logistics Civilian Augmentation Program, and field support. ASC will increase its staff by several hundred soldiers while also realigning a number of civilians with the command's global operations.

"Standing-up the ASC is a step in the right direction to improve logistical support to the warfighter for several reasons," said Lt. Gen. William Mortensen, AMC deputy commanding general. "ASC enables us to be more responsive and provides a single interface point to the soldier in the field for acquisition, logistics, and technology.

"Converting AFSC to ASC will link the industrial Army to the expeditionary Army, and help provide greater logistical integration and support to deploying forces as well as redeploying and training forces," he said. Kee acknowledged that change brings challenges, but AMC is prepared to face them head-on. "We are working with operational commanders to ensure that there is no gap in logistics capability to the warfighter as we transform."

*McCaskill writes for the Army Materiel Command Public and Congressional Affairs Office.*

### JOINT INFORMATION BUREAU (JUNE 8, 2006)

### **JLOTS '06 DEMONSTRATES HUGE JOINT MILITARY CAPABILITY**

**F**ORT STORY, Va.—About 1,800 active and Reserve military personnel from all four military services will pull their expertise together in the upcoming Joint Logistics Over-The-Shore (JLOTS) 2006 exercise here June 11-21.

JLOTS is a critical capability that allows the military to move forces and supplies without the benefit of a port. Cargo is discharged from ships anchored in a harbor onto smaller vessels or barges for movement to shore. JLOTS '06 is a multi-Service cargo distribution exercise incorporating the Off-Shore Petroleum Discharge System (OPDS), an all-weather facility for bulk transfer of petroleum, oils, and lubricants directly from an offshore tanker to a beach termination unit.



JLOTS 06 will exercise the Department of Defense's ability to deploy, discharge, and conduct reception, staging, and deployment of unit equipment and sustainment in a scenario that requires ships to offload while still offshore. The events are designed to improve military readiness, increase interoperability among participating agencies, and test new concepts. About 120 active, Reserve, and civilian personnel from the Military Surface Deployment and Distribution Command (SDDC) will provide overall command and control for the exercise as the Joint Task Force commander.

"Our goal is to train and ready an expeditionary joint force with this exercise in support of military deployments, sustainment, and disaster relief operations," said Army Col. Robert Oliveras, commander of SDDC's 597th Transportation Group and Joint Task Force commander for JLOTS. "Combining events within JLOTS '06 means gaining efficiencies and synergies while minimizing the environmental and operational impact on Fort Story," he added.

About 150 containers and 30 pieces of rolling stock will be moved ashore as part of the exercise. Most recently, the U.S. military conducted similar operations to increase discharge capability in support of Operation Iraqi Freedom and to deliver humanitarian supplies following the December tsunami in Indonesia. In this case, containers from USNS Red Cloud (a large, medium-speed, roll-on/roll-off ship) will be discharged onto Navy barges using ship-based cranes. Navy tugs will push the barges to shore where the containers will be lifted by crane onto trucks for onward movement.

The command will also be documenting cargo and testing new ways to employ Radio Frequency Identification, the primary method used by the Department of Defense to track cargo with in-transit visibility. In addition, the command is looking for implications as it develops a rapid-deployment surface distribution force in coordination with the United States Transportation Command.

### ARMY NEWS RELEASE (JUNE 19, 2006) FUTURE COMBAT SYSTEM APPROVED FOR FIRST SPIN OUT

**T**he Department of Defense approved June 6 the Army's acquisition approach for the first of the Future Combat System (FCS) Brigade Combat Team (BCT) technologies that will be spun out to troops to begin testing and evaluation as early as 2008. Under

Secretary of Defense for Acquisition, Technology and Logistics Ken Krieg also approved the criteria that will be met before the capabilities go into production. The decision, which was the result of the FCS (BCT) program review initiated in May 2006, requires the Army to prepare for an interim program review in late 2008.

The FCS (BCT) program manager, Maj. Gen. Charles Cartwright, welcomed the decision. "This approval is the latest in a long series of benchmarks that confirms this program is on target with cost and schedule, and is performing to plan," he said. Cartwright added, "This is an important step on the way toward implementing the Army's long overdue comprehensive modernization program and we're looking forward to getting these technologies into our soldiers' hands as soon as they're ready."

Spin Out One is composed of several systems designed to improve lethality and survivability for soldiers in the near future. These include:

- Non-Line-of-Sight-Launch System (NLOS-LS) will provide soldiers with precise artillery fire power while requiring fewer personnel and decreased logistical support than conventional systems.
- Unmanned Ground Sensors (UGS)-variants, both Urban and Tactical, will detect combatants in buildings, on foot, and in vehicles. The Tactical UGS will provide the added capability beyond detection of classifying Tactical vehicles.
- The Intelligent Munitions Systems (IMS) provides a tactical network of sensors and lethal/non-lethal effects to deploy, enable, and disable a smart field of munitions, which are more lethal to enemy combatants, provide increased mobility to friendly forces, and pose less risk to non-combatants than legacy munitions.

These systems are among the first that will be tested by the Evaluation Brigade Combat Team, whose mission is to support FCS evaluation and training. The EBCT will be established at Fort Bliss, Texas, in June 2007, and will conduct testing and evaluation at Fort Bliss and White Sands Missile Range. To find out more about FCS and the EBCT go to <http://www.army.mil/fcs/>.



## Spotlight on DAU Learning Resources

### SENIOR LEADERS HELPING TO DEVELOP THE AT&L WORKFORCE SECRETARY OF THE AIR FORCE VISITS PROGRAM MANAGEMENT OFFICE COURSE

*Professors Gary Hagan and Bob Faulk*

Course managers at the Defense Acquisition University are always looking for top-level guest speakers to provide students with an opportunity to discuss the critical issues and policy implications relevant to their course material. But arranging for top guest speakers is difficult given their heavy commitments and tight schedules.

In a fortuitous turn of events, Secretary of the Air Force Michael Wynne recently called DAU President Frank Anderson Jr. and asked if he could talk with some students in the classroom setting. On April 20, Professor Gary Hagan, course manager for DAU's Program Management Office Course (PMT 352) at the Fort Belvoir campus, was pleased to host Wynne as a distinguished guest practitioner for the latest offering of PMT 352.

Since the inception of PMT 352 over four years ago, Wynne is the highest ranking acquisition official to visit the course, and his visit was a rare opportunity for students to listen to, and interact on a personal level with one of DoD's top key decision makers. A strong supporter of DAU, particularly during his tenure as under secretary of defense for acquisition, technology and logistics, he enjoys talking with students at any opportunity.

Wynne spoke for about two hours to a diverse student body consisting of government civilian, military, and private industry students, and passed on his personal philosophy, his recent experiences undergoing Senate confirmation and his outlook on assuming his new post as secretary of the Air Force.

In a candid question-and-answer session, he engaged the students in an open discussion on pressing acquisition and security issues. Students unhesitatingly asked many probing questions about specific programs; Wynne's answers were succinct, displaying an impressive depth of understanding of the specific details of multiple programs. As an added benefit to the students, he also offered career guidance and perspectives based on



Secretary of the Air Force Michael Wynne, a former under secretary of defense (acquisition, technology and logistics) speaks to students of the Defense Acquisition University's Program Management Office Course (PMT 352) on April 20, 2006, at Fort Belvoir, Va.

*Photograph by Private First Class Michael Lindell, USA.*

his long career as an acquisition practitioner both in government and private industry.

The classroom component of PMOC, PMT 352B, follows PMT 352A, which is the prerequisite distance learning component of PMOC. These courses are designed to train Level II qualified students to be effective PM Level III leaders in a program office by honing analysis, synthesis, and evaluative skills. In addition to distinguished guest practitioners, PMT 352B features scenario-based practical exercises with topical themes, such as interoperability, prototyping, and evolutionary acquisition.

*Hagan is a professor and course manager for the Program Management Office Course (PMT 352) at DAU's Fort Belvoir, Va., campus. Faulk is director, DAU Learning Asset Integration, DAU/e-Learning and Technologies Center, also at Fort Belvoir.*



## Spotlight on DAU Learning Resources

### DEPARTMENT OF ARMY SENIOR SERVICE COLLEGE FELLOWSHIP AT DAU SOUTH REGION

**A**rmy Lt. Gen. Joseph L. Yakovac Jr., director, Acquisition Career Management, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), has established a Senior Service College Fellowship (SSCF) program for future leaders within the Army. The Defense Acquisition University will host the new fellowship.

The DAU Senior Service College Fellowship (DAU-SSCF) program provides leadership and acquisition training for Army Acquisition Corps (AAC) members at the GS-14 and above level or broadband equivalent. The program will contain core elements on leadership, research, program management, and mentoring at the senior level. The training will prepare individuals for senior-level positions in the AAC.

The pilot program is open to all Army acquisition workforce members who meet the eligibility requirements. The initial pilot began in July 2006 in Huntsville, Ala. The program is planned for expansion to other Life Cycle Management Command hubs in 2007.

Requirements for attendance:

- GS 14/15 level
- Level III certification in at least one acquisition functional area
- Four years' acquisition experience
- Recommendation from sponsoring command.

The SSCF at DAU in Huntsville will emphasize leadership in acquisition. Core areas of study are:

- Leadership training
- Optional master's degree in management from The University of Alabama at Huntsville
- Program management (PMT 401 certification)
- Studies in areas related to life cycle management in coordination with the Army Life Cycle Management Centers (LCMC)
- Research in aAcquisition topics
- A national senior-level speaker's program
- National security module
- Partnering with government and defense industries for a senior mentoring program.

For application and additional information about the SSCF, go to <https://www.hrc.army.mil/site/protect/active/opfam51/fy07SSCPilot.htm>.

### LEARN MORE ABOUT DAU'S STATE-OF-THE-ART MANAGEMENT DELIBERATION CENTER

**W**hen group deliberation or facilitation is what you need for teambuilding, decision making, or solving complex program management issues, consider the Management Deliberation Center facility at Fort Belvoir, Va. The MDC provides an electronic meeting capability designed to facilitate and enhance group problem solving and teamwork. To read more about the facility or a portable system for use at your site, go to [http://www.dau.mil/performance\\_support/MDC.asp](http://www.dau.mil/performance_support/MDC.asp).

### DAU 2006 CATALOG

**T**he 2006 DAU Catalog has been posted at <http://www.dau.mil/catalog>. The version at this Web site is configured as a traditional .pdf file broken down by chapter and appendix as well as the catalog in its entirety. Those interested may request a catalog on CD or in hardcopy (please specify) by contacting DAU's Student Services Office at [student.services@dau.mil](mailto:student.services@dau.mil) (hardcopies are limited to one copy per request). Currency of information contained in hardcopies and CDs should always be confirmed online.



### COURSES EQUIVALENT TO MANDATORY DOD ACQUISITION COURSES

**E**ver wonder if your previous private-sector training and education or training and education you may be contemplating for the future would meet the statutory requirements for DoD acquisition certification? Find out today by checking the matrix compiled by the Defense Acquisition University at <http://www.dau.mil/learning/appg.aspx> for a summary of equivalent credit authorization for DAU courses. (Course equivalencies are renewed annually, and are effective only as indicated.) The matrix is an extensive list of academic courses—classroom only—offered by various training providers that have been certified as equivalent to mandatory acquisition courses provided by DAU.

To date, no provision for computer-based technologies such as computer conferencing or Internet delivery has been identified. Individuals seeking credit for equivalency courses should provide a copy of their college transcript to their servicing personnel office.



### DAU AND NDIA TO SPONSOR DEFENSE SYSTEMS ACQUISITION MANAGEMENT COURSE OFFERING FOR INDUSTRY MANAGERS

**D**AU and the National Defense Industrial Association will sponsor an offering of the Defense Systems Acquisition Management (DSAM) course for interested industry managers at the following location:

- Sept. 11-15, 2006, Ritz Carlton, Atlanta, Ga..

DSAM presents the same acquisition policy information provided to DoD students who attend the Defense Acquisition University 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 CJCS 3170 series (instruction and manual)
- Defense transformation initiatives related to systems acquisition
- Defense acquisition procedures and processes
- The planning, programming, budgeting, and execution process and the congressional budget process
- The relationship between the determination of military capability needs, resource allocation, science and technology activities, and acquisition programs.

For further information see "Courses Offered" under "Meetings and Events" at <http://www.ndia.org>. Industry students contact Phyllis Edmonson at (703) 247-2577 or e-mail [pedmonson@ndia.org](mailto:pedmonson@ndia.org). A limited number of experienced government students may be selected to attend each offering. Government students must first contact Bruce Moler at (703) 805-5257, or e-mail [bruce.moler@dau.mil](mailto:bruce.moler@dau.mil) prior to registering with NDIA.

### SIX DEGREES OF INTEGRATION: PART I

*Christopher Roman • Stephanie Possehl • Joni Forman • Sue Stein*

**T**he Defense Acquisition University is preparing to launch three new 400-level courses that will enhance its existing series of acquisition (ACQ series) courses: ACQ450—Leading People in the Acquisition Environment; ACQ451—Integrated Acquisition for Decision Makers; and ACQ452—Forging Stakeholder Relationships.

In the fall of 2004, DAU faculty surveyed a representative population of senior acquisition professionals from

all DAWIA career fields. Respondents were asked to identify acquisition skill areas that required additional training (beyond Level III certification) and identify topics that would entice them to attend a post-level III course. The designs of the three new ACQ series courses were based on the survey responses and the following three assumptions:

- Mid-career acquisition professionals (and their supervisors) need training that goes beyond that required for career field certification and looks at senior-level success factors for defense acquisitions.
- Needed training should be 400-level courses delivered in a live, face-to-face venue over a three- to four-day period.
- Attendance would be demand-driven based on continuous learning needs and requirements, not mandated.

The authors designed the curriculum for one of these new courses, ACQ451—Integrated Acquisition for Decision Makers, and marshaled it through pilot offerings for faculty and participants. The preparation started from a clean sheet of paper. Since it was not a DAWIA certification course, the learning objectives were not driven by a functional proponent group within the DAWIA apparatus. Our starting position was merely the belief (based on survey responses) that many of the problems plaguing large, high-cost acquisitions were rooted in a lack of effective integration. Survey respondents believed that several barriers—some cultural and traditional, some programmatic and technical—prevented effective integration. Beyond these core guiding principles, the DAU course designers had free rein.

When most of us see or hear a term like "integrated acquisition," we immediately think of functional integration through IPTs—integrated product teams. In early discussions, we concluded that integration in the defense acquisition environment is a much broader construct. We call the course structure that emerged from over a year of study and experimentation "Six Degrees of Integration" (a play on psychologist Stanley Milgram's "six degrees of separation"). The course structure addresses both barriers and solutions to effective integration along six distinct dimensions, as illustrated in the sidebar.

Feedback from two successful pilot offerings confirms that the course construct is valid and useful, and it helped the authors make numerous refinements and enhancements. This article describes the first part of the course and two degrees of integration; Part II, in the next issue



## Spotlight on DAU Learning Resources

of *Defense AT&L*, will describe the second part of the course and the remaining four degrees of integration.

### Integration Overview

We wanted the six degrees of integration to emerge as a conceptual framework out of class reflection and discussion. We believed that it would emerge in a natural way and that course participants would feel more ownership of their learning if the framework was generated by them rather than prescribed by us. To accomplish this, we spend 30 minutes in class brainstorming a classroom definition of integration. Participants are asked: "Suppose a program manager tells you that her program is 'effectively integrated.' What might she mean by that statement?"

Participants in the pilot offerings generated lengthy lists of alternate meanings, of which the following are representative:

- She uses integrated product teams.
- He keeps his user informed.
- She has support of her leadership.
- He refrains from creating budget or schedule "surprises."
- She collaborates with program offices of interfacing systems.

We have found that in both pilots, participant brainstorming lists could be easily mapped into our six degrees of integration or to one of the other two new courses. For example, "interfacing with Congress" was generated in both brainstorming sessions. We acknowledged that congressional relations is a critical success factor for defense acquisitions and that it can be viewed as an integration issue, but in partitioning material across our three new courses, we chose to present it as a problem of stakeholder relations, not integration.

We conclude the brainstorming session by showing the partitioning of subject areas among the three new courses. We explain that, in general,

- ACQ450 (Acquisition Leadership) examines ways to lead up, down, and across.
- ACQ452 (Acquisition Stakeholders) evaluates methods and skills necessary to identify, assess, and promote the building of stakeholder relationships.
- ACQ451 (Acquisition Integration) examines people, processes, and products that are neither controlling nor controlled, but with which we must interface, interoperate, synchronize, or collaborate.

### SIX DEGREES OF ACQUISITION INTEGRATION

1. **"Big A" Integration.** Integrate the business processes and decision systems, (e.g. requirements generation and procurement).
2. **Functional Specialty Integration.** Integrate professional specialists on an acquisition team (e.g., logisticians and testers).
3. **Life Cycle Integration.** Integrate decision criteria to account for both near- and long-term consequences within and across programs.
4. **System of Systems Integration.** Integrate separate acquisitions to ensure current and future interoperation.
5. **Joint Integration.** Integrate requirements across military services to support the Services with a single joint acquisition.
6. **International Integration.** Integrate U.S. requirements with those of our allies to support multiple nations with a single acquisition.

### "Big A" Integration

The term "Big A" acquisition is relatively new, but the concept is quite old. It refers to the three interlocking processes through which the Department of Defense defines its requirements, budgets for capabilities, and acquires systems with the needed capabilities. The three processes are requirements generation; planning, programming, budgeting, and execution (PPBE); and acquisition.

During the first month of course design, we concluded that a fourth essential process was missing: the science and technology system that identifies and matures promising new technologies. Some felt S&T was a sub-process under acquisition, but for instructional purposes we depict it as a separate fourth process (we point out that this construction is not anchored in current DoD policy).

Participants engage in a number of classroom exercises aimed at strengthening their ability to identify and exploit Big A integration barriers and opportunities including:



## Spotlight on DAU Learning Resources

### Where Are You?

Participants, working in table groups, are given the diagram of Big A processes shown above and are asked to identify which process they work in and which bridges to other Big A processes they work on. By bridges, we mean either a formal interaction (e.g. the Acquisition Decision Memorandum that bridges PPBE with the acquisition system), or an informal bridge (e-mail correspondence between a program office and the requiring organization). Participants draw and label the bridges and indicate whether the bridge is one-way or bidirectional. Each table group briefs out its members' locations and bridges within the Big A construct.

### Strategies for Improved Integration?

Participants, again working in table groups, brainstorm ideas for improving Big A integration at two levels: a policy level, such as the policy changes recommended by the Defense Acquisition Performance Assessment Panel of 2006; and a personal level (e.g. something they can do when they return to their offices to improve Big A integration there).

### Functional Specialty Integration

We wanted to discuss effective collaboration between functional specialties (finance, logistics, testing, contracting, etc.) within a program office but realized that IPTs are already covered in various DAWIA certification courses.

We aimed for functional specialty integration beyond IPTs. First, we used a case study, "Comprehensive Fleet Assessment Module," which highlights some thorny collaboration issues among members of a program office. Discussion of the case goes beyond IPTs to analyze how high-performance teams, directed toward a common goal, can be shaped from multiple functional specialties. Second is an activity we call "speed dating"—collaboration exercises in which participants ask questions of another functional specialty, answer questions about their own specialty, and explain jargon terms within their specialty that are commonly misunderstood. (For example, one participant in the test and evaluation field explained the distinction between "operationally effective" and "operationally suitable" to a contracting officer, and the contracting officer reciprocated by explaining the concept of "termination liability.")

Finally, we give participants a real document, a half-page definition of "Sense and Respond Logistics." The document was written by logisticians for a general acquisition audience. However, the use of jargon leaves most

readers adrift. Here is the first sentence: "Sense and Respond Logistics is a transformational network-centric concept that enables Joint effects-based operations and provides precise, agile support."

A general audience understands neither the phrase "transformational network-centric concept" nor "effects-based operations," and the remainder of the text does little to clarify. Participants work in multifunctional table groups rewriting for clarity, thereby gaining an appreciation that functional integration depends a lot on using jargon-free language when communicating across functional specialties.

*Roman is professor of acquisition management at DAU, where he specializes in information technology and software. Possehl is professor of systems engineering management in the Defense Systems Management College—School of Program Managers (DSMC-SPM). Stein is currently the lead instructional system designer for DSMC-SPM and the DAU action officer for Council on Occupational Education (COE) accreditation. Forman is professor of acquisition management at DAU, managing the development of executive curriculum.*

### CENTRAL MICHIGAN UNIVERSITY AND THE DEFENSE ACQUISITION UNIVERSITY CMU/DAU STRATEGIC PARTNERSHIP

Central Michigan University and the Defense Acquisition University have formed a strategic partnership to leverage technological and learning best practices and lessons learned to enhance their efficiency and effectiveness in providing the DoD acquisition, technology, and logistics workforce with certification training, education, and professional continuing education. CMU features:

- Military-friendly formats and eight-week terms—faster degree completion
- Year-round classes—start any time
- Online library services and student support—convenient and quick
- State-accredited university with over 30 years' experience in off-campus programs
- Military tuition discount available
- Transfer credit for DAU courses.

CMU will accept several DAU courses as transfer credit into the master of science in administration (MSA) degree with a concentration in acquisitions administration. View a list of courses eligible for transfer credit at <http://www.cel.cmich.edu/dau>. Acquisitions administration students may transfer up to nine credits to sat-



## Spotlight on DAU Learning Resources

isfy concentration requirements. CMU's MGT 533 and PSC 522 are required courses on the acquisitions administration concentration. Call (877) 268-4636 to find out more about CMU's MSA in acquisition administration program.

### **BELLEVUE UNIVERSITY PRESS RELEASE (JUNE 14, 2006)**

**B**ELLEVUE, Neb.—Bellevue University has the distinction of being the first accredited university selected by the Federal Acquisition Institute (FAI) as an education partner. At the same time, Bellevue University was chosen to support the Department of Defense as it helps the rest of the federal government leverage innovative education programs through the Defense Acquisition University.

A signing ceremony of the agreement took place June 16 at Fort Belvoir, Va. Participating in the signing were Frank J. Anderson, president, Defense Acquisition University; Karen Pica, director, Federal Acquisition Institute; and Dr. Michael Echols, vice president of Strategic Initiatives, Bellevue University.

Bellevue University was selected because of its work with military personnel in earning college degrees as well as its nationally recognized online programs. Defense Acquisition University was established in 1991 to oversee the acquisition training for the 135,000 civilian and military employees of the Department of Defense. The Federal Acquisition Institute has operated for more than two decades, supporting the professional development of the federal acquisition workforce in the Department of Treasury, the FBI, the Coast Guard, and more recently, Homeland Security, among others.

The partnership is significant because of two laws: the Defense Acquisition Workforce Improvement Act (DAWIA) and the Office of Federal Procurement Policy (OFPP) Act, both of which mandate training and college education for all military and civilian government employees who work with government contracts. Persons working in government acquisitions are required to have 24 credit hours in business and management courses such as accounting, law, business, economics, purchasing, etc. The intent of the legislation is to improve the effectiveness of the people who manage defense and non-defense acquisitions on behalf of the federal government.

Over the past year, Bellevue University has been working with DAU senior leadership to define critical human

capital issues and develop cost effective approaches to aid the federal government in addressing high-priority workforce learning needs. Work in human capital investment published by Dr. Michael Echols, Bellevue University vice president of Strategic Initiatives, combined with the university's distance learning and adult learning expertise, has proven to be valuable to DAU in the development of a human capital strategy.

For more information on Strategic Initiatives or on Dr. Echols' work on Human Capital investment, visit <http://www.corporatelearning.com>.

*Bellevue University is a recognized national leader in providing post-secondary education opportunities for working adults. A private, non-profit institution, Bellevue University serves students at 10 learning sites in three states, as well as worldwide through its online learning platform, Cyber-Active(R) Learning. Bellevue University is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools. For more information, visit <http://www.bellevue.edu>.*

### **NEW CONTINUOUS LEARNING MODULES AVAILABLE TO THE ACQUISITION WORKFORCE**

**T**he Defense Acquisition University Continuous Learning Center (CLC) routinely develops and offers new continuous learning modules for the acquisition workforce. Eleven recent additions to the CLC are listed below:

- Privacy Protection
- Space Acquisition
- Spend Analysis
- Strategic Sourcing
- Acquisition Reporting Concepts and Policy Requirements for Acquisition Program Baseline (APB), Defense Acquisition Executive Summary (DAES)
- Diminishing Manufacturing Sources and Material Shortages Essentials
- Diminishing Manufacturing Sources and Material Shortages Case Studies
- Net-Ready Key Performance Parameter
- Continuous Process Improvement
- Item Unique Identifiers (IUID)
- Modeling and Simulation in Systems Engineering

To access the new modules, go to <http://clc.dau.mil> and select "Register." Follow the instructions specific to your agency/organization.



## Career Development

### AIR FORCE PRINT NEWS (APRIL 26, 2006) PROFESSIONAL, PERSONAL EDUCATION KEY TO AIR FORCE FUTURE

Master Sgt. Mitch Gettle, USAF

**W**ASHINGTON—The Air Force is the most technologically advanced and capable air force in the world, in part due to the professional and personal education airmen obtain, the secretary of the Air Force said recently.

“We need our people to be highly qualified and we set that standard from the first line of accession, and we retain that standard throughout a person’s career,” said Michael W. Wynne. “We actively encourage this development and we want our airmen to think of themselves on a quest for personal and professional development.”

The Air Force relies on many internal professional development courses for enlisted and officer education and training, but also seeks interaction and support from educational institutions in the United States.

“We sit in the cradle of education throughout America; we revel in the fact that our educational opportunities are the best in the world,” he said. “We need to take advantage of that and leverage the investment made by our senior educators across America.

“We can do this by making sure our personal and professional education dovetail into accessible degrees,” he said.

The secretary said he has asked Air University leaders at Maxwell Air Force Base, Ala., to come up with partnerships to ensure airmen can receive transferable credit to civilian institutions for all courses offered by AU.

The pursuit of or earning a degree is a very personal decision, the secretary said.

“I don’t want to stretch our personnel to exhaustion, but we want to foster our airmen to quest after personal and professional education in any ways or means they can,” Wynne said.

A joint letter released from Wynne and Gen. T. Michael Moseley, Air Force chief of staff, stated that promotion boards will once again consider officers’ educational progress as they advance in rank.

“Once a degree is achieved, you can [do an Internet search on] almost anyone’s background to see [he or she] earned a degree, and we find that we are trying to withhold information from that most vital element—the promotion board,” Wynne said.

The change in policy will not take effect until fiscal 2008.

“I did not want to dispose of the policy of masking degrees right away,” he said.

“Because we have some people who felt they may have been disadvantaged because they didn’t get the opportunity to show they had a degree, we are giving this time to all individuals who may not have had the opportunity to get a degree,” he said. “Interestingly enough, for [our enlisted, masking degrees] has never been the case. All enlisted promotion selection boards have seen, in succession, the educational success of those individuals up for promotion.

“Our future relies on educated airmen, whether they are active duty, Reserve, or Guard,” Wynne said.

### AMERICAN FORCES PRESS SERVICE (APRIL 27, 2006) DOD WORKING TO IMPROVE TOTAL WORKFORCE

Rudi Williams

**F**ALLS CHURCH, Va.—The Defense Department is seeking ways to foster sweeping changes in its civilian, Reserve, and active forces, DoD’s top personnel official said here April 25.

Any changes would be aimed at making the department more agile and effective, said David S. C. Chu, under secretary of defense for personnel and readiness.

Chu said DoD plans to convert thousands of military jobs to civilian positions. Other initiatives include transforming the armed forces, prolonging careers before retirement, and basing military promotions on preparedness rather than time in service.

DoD needs to better integrate its people because people are the core of the organization and the reason it has been successful, Chu said.



## Career Development

"It was their performance in the first Persian Gulf war almost 15 years ago that restored the American military to its place as the most respected institution in our society," he said.

Pointing out that integration of the National Guard, Reserve, and active forces into a "total force" isn't a new issue, Chu noted that former Defense Secretary Melvin Laird coined the phrase "total force" a generation ago. Laird used the term in describing how the active duty and reserve communities were brought together to thwart the Soviet Union's efforts to dominate Western Europe and the oil fields of the Persian Gulf, Chu said.

He said Defense Secretary Donald Rumsfeld's single, most important charge from the president is transforming the armed forces to meet challenges of the early 21st century.

Emphasizing that transformation is about much more than hardware, Chu said: "Yes, new weapons systems are important. But ultimately it's the people who are operating those systems that make the difference."

Therefore, he said, it's important to effectively manage how DoD manages its people, how it treats them, and how they're recruited, motivated, and retained so the nation can retain the finest fighting force in the world.

Chu discussed the three broad strands that are the focus of DoD's personnel agenda—civilians, active military forces, and reserve components.

"The issue is how we bring these together most effectively in this early 21st century period to produce the military capabilities that we must have to defend our people and our society," he noted.

He said one of Secretary Rumsfeld's central concerns is how to restore the civil service to its rightful place as an equal partner with the military.

"Too often in recent years managers have avoided using a federal civil service solution because the system has been too cumbersome," Chu said. "It doesn't give us an agile and responsive capacity."

DoD is working toward having civilians play a larger role in the defense of the nation.

"The department is in the process of converting about 20,000 positions from military to civil status," he said.

"And there are plans to convert at least 10,000 more positions."

Chu also said many changes have been made in the way DoD looks at the reserve forces.

"Historically, since World War II, the United States saw the reserves as a strategic asset, perhaps mobilized once in a generation," he said.

He added that the National Guard has generally been used for home tasks but not current operations. But that began to change in the last decade and expanded enormously after the attacks of Sept. 11, 2001.

"We made the decision in the department that the reserves would really be part of the operational force, an integral part of the total force," Chu said. "We recognized that reservists are not able to serve continuously, 24 hours a day, seven days a week, 365 days a year. Therefore, we have to be judicious and prudent in our use of reserve components."

About 500,000 guardsmen and reservists have been mobilized since Sept. 11, 2001.

Officials are working to bring civilians, reservists, and active duty personnel together into one integrated community, which would make the total force more agile and more responsive, Chu said.

"Unlike the Cold War where we had a very well-developed idea of what was the problem and what might be the solution, now we can't foresee with the same kind of certainty what the military operation of the future might look like," he said. "We have to be able to respond much more quickly than was true in the Cold War."

### AMERICAN FORCES PRESS SERVICE (APRIL 28, 2006)

### DEPUTY DEFENSE SECRETARY SIGNS NEW PERSONNEL SYSTEM INTO EFFECT

*Steven Donald Smith*

**W**ASHINGTON—Deputy Defense Secretary Gordon England signed a directive to implement the new National Security Personnel System during a roll-out ceremony here today.

"Today is a milestone event," England said during the Pentagon ceremony. "After two and a half years of very hard work, the Department of Defense is initiating the



human resources phase of the National Security Personnel System.”

About 11,000 Defense Department civilian employees from 12 DoD organizations will be part of the initial “Spiral 1.1” phase-in process of the new system.

England said the old civilian personnel system, which has been in place for 50 years, was not capable of keeping pace with the department’s needs.

“As our military forces are reoriented to better address a changing landscape, the civilian workforce too needs to become more agile, adaptable, and fully integrated with the efforts of our military forces,” he said.

Employees will be converted to pay bands that replace the general schedule and will be given new results-focused performance plans that are clearly linked to their organization’s mission and strategic goals, defense officials said.

The performance appraisal cycle for Spiral 1.1 employees begins April 30 and ends October 31. These employees will receive their first performance pay increases in January 2007. In addition, employees performing satisfactorily will receive an increase equivalent to the general pay and locality increase received by general schedule employees in January 2007, according to a DoD press release.

England said he understood if some civilian employees had a little anxiety about the conversion, but he stressed that supervisors have been given a lot of training to help make sure people are comfortable with the new system. “This is not a fire-and-forget effort,” he said.

Classroom and Web-based training covering the basics of NSPS, with special emphasis on performance management, has been in high gear for employees over the last several months, according to a DoD press release.

This is a critical time for the United States because the current security context is much more varied and un-



Deputy Defense Secretary Gordon England signs a directive to implement the new National Security Personnel System during a roll-out ceremony at the Pentagon, April 28.

Photograph by Robert Ward.

certain than at any time in the past, England said, and to meet today’s challenges the Department of Defense needs the right people in the right places, working in the right ways.

“People are our most valuable resource, and today we are improving the ability of the department’s people to be successful,” he concluded.

### **SHORTAGE OF MARINE CORPS ACQUISITION OFFICERS PROMPTS POLICY CHANGE OF PROFOUND AND LASTING IMPACT**

*Col Robert Martinez, USMC • Ron Morris*

**O**n March 27, the deputy commandant of the Marine Corps for aviation presented the 2005 Marine Aviation Detachment Patuxent River Semper Fidelis Award to the PMA-234 JATO (Jammer Technique Authorization Team). Part of the citation reads,



“Navy and Marine Corps Squadrons fielded new capabilities in only a few weeks—an unprecedented feat when compared to the years it has historically taken to field similar capabilities. ... The immediate impact of the systems fielded by the JATO Team no doubt saved the lives of many American servicemembers and Iraqi and Afghan citizens.”

The award illustrates that the acquisition process affects the warfighter not only in the long term, but in the near term as well. Acquisition program managers are responsible for leading a program through major milestones, which cover cradle-to-grave aspects of weapons systems and equipment, said Col. Robert Martinez, commanding officer, Marine Aviation Detachment, Patuxent River, Md.

Until recently, officers seeking to advance in the acquisition career field had to train for their primary military occupational specialty (MOS) while at the same time working towards acquisition requirements. This often resulted in acquisition officers' non-selection for promotion. With no primary MOS in acquisitions, the Marine Corps was challenged to provide enough qualified candidates to lead its important acquisition programs, said Martinez.

To improve the situation, he said, the commandant of the Marine Corps created the U.S. Marine Corps Acquisition Professional Officer 9959 MOS in 2004. The Marine Corps Acquisition Command Slate Board selects highly qualified 9959 Marine officers where the Corps has a unique and vested interest.

Membership in the acquisition workforce initially comes through the primary MOS monitor, who assigns officers to entry- and mid-level acquisition billets. Billets are coordinated through co-occupational field sponsors (chief of staff, Marine Corps Systems Command for ground officer, and the commanding officer Marine Aviation Detachment, Patuxent River for aviation officers). Once assigned to an acquisition billet, officers can seek acquisition certification, said Martinez. Certification also depends on eligibility for membership in the Acquisition Corps.

*Martinez is commanding officer, Marine Aviation Detachment, Patuxent River, Md., and Morris is his acquisition manpower officer.*

### ARMY NEWS SERVICE (JULY 5, 2006) U.S. ARMY TRANSFORMS PERSONNEL MANAGEMENT

**W**ASHINGTON—Have you heard of the Defense Integrated Military Human Resources System—better known as DIMHRS? Wondering if it's still alive? DIMHRS is indeed alive, moving forward and scheduled for implementation in fiscal year 2008.

Now soldiers can stay informed on this historic personnel and pay transformation by simply logging onto the new Army DIMHRS Web site at <http://www.army-dimhrs.army.mil>.

In order to meet the demands of the global war on terrorism and keep pace with the modern warfighter, the Army is transforming how it manages its personnel by implementing DIMHRS, which will have an impact on every soldier.

In order to communicate this monumental effort to the entire Army community, the Army has launched the Army DIMHRS Web site, which will be the Army's primary means to communicate DIMHRS-related news and updates.

“This enhanced Web site provides the Army DIMHRS team a great opportunity to tell the Army community all about Army DIMHRS and to keep the community informed on where we are with the program,” said Col. Jeanne Brooks, Army DIMHRS program manager.

DIMHRS is the largest commercial off-the-shelf solution ever attempted by the federal government and will result in the largest, fully integrated human resources system in the world.

Supporting the soldier is at the core of the Army's mission, and DIMHRS will provide the Army with a much-needed integrated personnel and pay system to ensure timely and accurate compensation, benefits, and entitlements for the more than 1.3 million active, Reserve, and National Guard servicemembers performing Army missions around the globe each day.

The Army DIMHRS Web site provides an overview of the Army DIMHRS program, monthly highlights, Army DIMHRS announcements, and a library full of DIMHRS resources.



## Conferences, Workshops & Symposia

96TH AIR BASE WING PUBLIC AFFAIRS  
(MAY 2, 2006)

### EGLIN'S LEAN EVENT IMPROVES CONTRACT PROCESS

Brian Kern

**E**GLIN AIR FORCE BASE, Fla., May 2, 2006—Put 10 strangers into a room together for a week and tell them to change the world—that's what happened at Eglin's first Lean Rapid Improvement Event in March.

In the world of civil engineering, SABER, or Simplified Acquisition Base Engineering Requirements, will never be the same after the team improved its contracting procedures.

Similar to iterations of prior successful efforts, the Lean program intends to create a new way of thinking, cultivate a spirit of "doing it right the first time," and improve overall effectiveness and efficiency.

Lt. Col. Robert Menard, 96th Air Base Wing Contracting Squadron commander, championed the Eglin session and is encouraged that it doesn't take a Lean subject matter expert to implement prescribed changes and improvements.

"It's much more of a common sense approach," Menard said. "With about a day's worth of training, you can really see the potential benefits."

The Lean program was established under the umbrella of "Air Force Smart Operations for the 21st Century," or AFSO21, to make necessary continuous process improvements in Air Force operations and accountabilities.

"It doesn't have all of the statistical control of Total Quality Management," Menard said. "This is exciting because you can see immediate changes and improvements. The magic is in learning the basics and making it part of your process toward continual improvement."

Gary Wollam, Air Armament Center Strategic Planning director, said there are many methods for accomplishing continuous process improvements.

"The Air Force is leaning heavily toward Lean as the method of choice," Wollam said. "Its concepts are easy

to understand and relatively simple to apply after only a limited amount of training. And Lean is best learned by doing Lean events such as the SABER RIE."

Menard said programs like this and related programs such as TQM are generally thought to be production-based but can be geared toward non-production-based

**"The Air Force is leaning heavily toward Lean as the method of choice. Its concepts are easy to understand and relatively simple to apply after only a limited amount of training."**

—Gary Wollam  
Air Armament Center Strategic Planning Director

work places: "If it can be applied in our setting where all we do is paperwork, it can be applied anywhere."

Maxine Reed, 96th Air Base Wing lead strategic planner, attended the SABER RIE last month and she had one word for the experience: "Awesome!"

"What made it work so well was that everyone was passionate," Reed said. "This is something that really needs buy in from senior leadership, and we had that—we were empowered."

Reed said the RIE group followed a paper trail for 3.2 miles, searching for steps that could be deleted from the process. She said an average timeframe for a contract to be awarded after it hits the SABER was reduced from 95 days to 44 days.

*Kern is with 96th Air Base Wing Public Affairs, Eglin AFB, Fla.*

### DEPARTMENT OF DEFENSE UNIQUE IDENTIFICATION FORUM

**T**he Office of the Under Secretary of Defense for Acquisition, Technology & Logistics, Unique Identification (UID) Program Office, has sponsored two UID Forums in 2006—Seattle, Wash., and Provi-



## Conferences, Workshops & Symposia

dence, R.I.—to provide practical guidance to military program managers and DoD contractors. These UID Forums provide practical guidance and help educate military and civilian program managers and DoD contractors, particularly small- to mid-sized contractors and all acquisition program managers, on how to achieve successful UID implementation as required by the DoD Policy Memoranda and the issuance of the Final UID DFARS Rule (dated April 22, 2005). The third forum will be held Sept. 12-13, 2006, in Dallas, Texas. Register at <https://www.registrationassistant.com/p/rg.asp?Event=4FFBF895C3992C504B2BE> for help with successful UID implementation as required by DoD policy (DFARS 211.274).

### MILITARY LOGISTICS SUMMIT 2006

**T**he Military Logistics Summit 2006, sponsored by the Institute for Defense and Government Advancement (IDGA), will be held Sept. 18-20, at the Sheraton Premiere, in Tyson's Corner, Vienna, Va. This highly anticipated forum is a place where hundreds of senior-level attendees will converge to share case studies, view new and emerging technologies, network with their peers, define challenges, and benchmark progress with military logistics experts. Retired Army Gen. Jack Keane, the former Army chief operating officer, will serve as the keynote speaker. His remarks will focus on "Transformational Management in a Complex Organization." Register for the summit at <http://www.iqpc.com/cgi-bin/templates/genevent.html?topic=329&event=10555&>.

### SECOND ANNUAL OBSCURANTS CONFERENCE

**T**he joint project manager for nuclear, biological and chemical contamination avoidance, product manager for reconnaissance and obscuration, Aberdeen, Md., is organizing the Second Annual Obscurants 2006 conference. The conference will be held Oct. 2-5, 2006, in Destin, Fla. The four-day conference will consist of presentations, discussions, and exhibits focusing on applications to modern warfare with an afternoon of off-site field demonstrations. Conference organizers are looking for presentations and posters on topics including but not limited to applications of smoke in the field (specifically Operation Enduring Freedom and Operation Iraqi Freedom), current and future capabilities and systems, modeling and simulation, environmental issues, toxicology, and dissemination methods. For more information, visit the conference Web site at <http://www.obscurants2006.com>, or contact the conference organizers at [obscurants\\_2006@bah.com](mailto:obscurants_2006@bah.com).

### INTERNATIONAL CONFERENCE ON ENTERPRISE TRANSFORMATION

**T**he International Conference on Enterprise Transformation will be held Oct. 17-18, 2006, at the Ronald Reagan Building and International Trade Center in Washington, D.C. Sponsored by the newly established Business Transformation Agency (BTA), the theme of the 2006 conference is *Defense Business Agility*. BTA will use this event as a conduit to inform both DoD and the defense contractor community of its priorities and plans for changing how DoD does business. Register for the conference at [http://www.afei.org/brochure/7a01/?action=add&evt\\_key=d1e22fb4-6106-4bfb-94fd-562656f7d9f0&Paying=Fees](http://www.afei.org/brochure/7a01/?action=add&evt_key=d1e22fb4-6106-4bfb-94fd-562656f7d9f0&Paying=Fees).

### PMI GLOBAL CONGRESS 2006

**M**ark your calendars now for the Project Management Institute (PMI) Global Congress 2006, to be held Oct. 21-24, in Seattle, Wash. In an era of rapid change and global trends, successful project managers must be prepared to manage projects on time and within budget, regardless of project type, scope, or location, and despite newly emerging challenges. The PMI Global Congress 2006 is the major project management educational and networking event for North America. This three-day event gives you the chance to gather the know-how and inspiration you need to consolidate and put into practice those key project management guidelines that make the difference in terms of project success. The Global Congress is also a meeting point for experts to discuss the most challenging project management trends. Watch the PMI Web site at <http://congresses.pmi.org> for future information on registration.

### 11TH ANNUAL EXPEDITIONARY WARFARE CONFERENCE

**T**he 11th Annual Expeditionary Warfare Conference will be held Oct. 23-26, 2006, at the Marriott Bay Point Resort Village in Panama City, Fla. For more information on this year's conference, contact Simone Baldwin, meeting planner, at 703-247-2596 or e-mail [sbaldwin@ndia.org](mailto:sbaldwin@ndia.org). Registration information will be posted as soon as it becomes available at <http://register.ndia.org/interview/register.ndia?#May2006>.

### ANNUAL SYSTEMS ENGINEERING CONFERENCE

**T**he 9th Annual Systems Engineering Conference will be held Oct. 23-27, 2006, at the Hyatt Islandia in San Diego, Calif. Registration information will



## Conferences, Workshops & Symposia

be posted as soon as it becomes available at <http://register.ndia.org/interview/register.ndia?#May2006>.

### 2006 TACOM APBI

**T**he 2006 TACOM APBI (Tank-automotive and Armaments Command—Advance Planning Briefing for Industry) will be held Oct. 25-27, 2006, at the Hyatt Regency Dearborn in Dearborn, Mich. The TACOM APBI provides broad-based business planning information to industry relating to future tank-automotive and armament plans, programs, and acquisition opportunities. As the agenda and registration details are finalized, they will be posted online at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### 44TH ANNUAL TARGETS, UAV'S, AND RANGE OPERATIONS SYMPOSIUM AND EXHIBITION

**T**he 44th Annual Targets, UAVs & Range Operations Symposium & Exhibition will be held Oct. 30-Nov. 1, 2006, at the Marriott Bay Point Resort Village Golf & Yacht Club. In today's environment there is an increased emphasis on joint operations by the Defense Department and the Defense Industry. This event will provide a forum for open exchange of technical and programmatic information between the Defense Department, its military services, industry representatives, and foreign organizations in the test and evaluation of air-to-air and ground-to-air weapons systems, which provide air/ground crew training for combat readiness. Watch the conference Web site for details on registration <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>. For more information contact Simone L. Baldwin, meeting planner, at 703-247-2596 or e-mail [sbaldwin@ndia.org](mailto:sbaldwin@ndia.org).

### ARMY SMALL BUSINESS CONFERENCE

**T**he Army Small Business Conference will be held Nov. 1-2, 2006, at the Hilton McLean, in Tysons Corner, Vienna, Va. An agenda for the conference will be posted soon at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>. For questions or inquiries contact: Carissa Mirasol, meeting planner at 703-247-2588 or [cmirasol@ndia.org](mailto:cmirasol@ndia.org).

### 2006 PEO/SYSCOM COMMANDERS' CONFERENCE

**T**he 2006 Program Executive Officer/Systems Command (PEO/SYSCOM) Commanders' Conference will be held at the Defense Acquisition University,

Fort Belvoir, Va., Nov. 7-8, 2006. The PEO/SYSCOM conferences and workshops are a series of senior-level, invitation-only, non-attribution events that host approximately 400 Department of Defense and industry participants at each event. They provide senior leadership from the Department of Defense and Industry an excellent opportunity to meet and share their views and priorities. As the agenda is finalized, a Web site with information on the 2006 conference will be publicized.

### SAN DIEGO SPAWAR INDUSTRY CONFERENCE

**T**he 2006 SPAWAR Industry conference will be held Nov. 14-16, 2006, at the Bahia Hotel and Resort in San Diego, Calif. This year's event is presented by the National Defense Industrial Association and the Space and Naval Warfare Systems Command. The Industry Conference is a major symposium for senior military, government, and industry officials to share their visionary and strategic perspective on the requirements, resources, development and implementation of initiatives that will provide direction for industry to shape business. For more information and details on upcoming registration, watch the conference Web site at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### 25TH ARMY SCIENCE CONFERENCE

**T**he 25th Army Science Conference will be held Nov. 27-30, 2006, at the JW Marriott Orlando, Grande Lakes, in Orlando, Fla. The 25th ASC marks a significant milestone for the Army science and technology community, with this year's conference theme paying tribute to 50 years of promoting and showcasing the Army's S&T program: *Transformational Army Science and Technology—Charting the Next 50 Years of Science and Technology for the Soldier*. The Army Science Conference is an annual event sponsored by the assistant secretary of the Army (acquisition, logistics and technology). Watch for details of the conference and registration information at <http://www.asc2006.com/>.

### 2006 NCMA GOVERNMENT CONTRACT MANAGEMENT CONFERENCE

**T**he 2006 National Contract Management Association (NCMA) Government Contract Management Conference will be held Dec. 4-5, 2006, in Tysons Corner, Va. Watch The NCMA Web site for upcoming details of the conference and registration information <http://www.ncmahq.org/meetings/calendar.asp>.



## Conferences, Workshops & Symposia

### THE INTERSERVICE/INDUSTRY TRAINING, SIMULATION, AND EDUCATION CONFERENCE (I/ITSEC)

**T**he 2006 Interservice/Industry Training, Simulation, and Education Conference (I/ITSEC) will be held Dec. 4-7, 2006, in Orlando, Fla. This year's theme will be *Training the 21st Century Joint Force ... Mission Focused to Achieve Warfighting Excellence*. As in past years, this year's event will welcome participants from Army Navy, Air Force, Marine Corps, Coast Guard, and industry. Its objectives are to promote cooperation among the military services, industry, academia, and various government agencies in pursuit of improved training and education programs, identification of common training issues, and development of multi-Service programs. Initiated in 1966 as the Naval Training Device Center/Industry Conference, the conference has evolved and expanded through increased participation by all the Services as well as industry. Registration for the conference will begin in fall 2006. Watch the conference Web site at <http://www.iitsec.org/registration.cfm> for more conference information and details on registration.

### 23RD ANNUAL TEST AND EVALUATION CONFERENCE

**T**he 23rd Annual Test and Evaluation Conference will take place March 12-15, 2007, at the Westin Resort Hilton Head Island, Hilton Head Island, S.C. 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, M&S 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. For registration or more information on this year's event, watch the conference Web site at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### 23RD ANNUAL NATIONAL LOGISTICS CONFERENCE AND EXHIBITION

**T**he 23rd Annual National Logistics Conference and Exhibition will be held March 19-22, 2007, at the Hyatt Regency Miami, Miami Convention Center, in Miami, Fla. Share insights with senior DoD leadership, top industry executives, project directors and program

managers, information technology providers and developers, government policy makers and regulators, defense contractors and design professionals, third party logistics providers, and equipment suppliers and manufacturers. For more information on this year's event, contact Meredith Geary, meeting planner, at [mgeary@ndia.org](mailto:mgeary@ndia.org) or call (703) 247-9476. For details on registration, watch the conference Web site at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### GUNS AND MISSILE SYSTEMS CONFERENCE AND EXHIBITION

**T**he 42nd Annual Armament Systems: Guns and Missile Systems Conference and Exhibition will be held April 23-26, 2007, in Charlotte, N.C. The 2007 conference will present topics that demonstrate how our nation's current gun, munition, and missile system technologies can be adapted and evolved to meet tomorrow's missions and operations. For more information on the conference, contact Heather Horan, meeting planner at [hhoran@ndia.org](mailto:hhoran@ndia.org) or call (703)247-2570. Watch for registration details at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### DEFENSE ACQUISITION UNIVERSITY ACQUISITION COMMUNITY CONFERENCE/SYMPOSIUM 2007

**M**ark your calendar and plan ahead to attend the April 17, 2007, Defense Acquisition University Community Conference/Symposium, sponsored by the Defense Acquisition University Alumni Association. Watch the association Web site at <http://www.dauaa.org> for future announcements, updates, and registration information.

### FEDERAL ACQUISITION CONFERENCE AND EXPOSITION (FACE) POSTPONED TO 2007

**T**he Federal Acquisition Institute (FAI), based upon recommendations of the Federal Acquisition Conference and Exposition (FACE) Steering Committee, composed of the FACE sponsors, determined not to hold FACE in 2006. The next FACE will be in 2007. It will continue to be sponsored by the Chief Acquisition Officers Council, Federal Acquisition Institute, U.S. General Services Administration, and Department of Defense. For more information on 2006 FAI scheduled events, visit the FAI Web site at <http://www.fai.gov/resource/face2006.htm>.



## Acquisition & Logistics Excellence

AIR FORCE RESEARCH LABORATORY  
(APRIL 21, 2006)

### AIRCRAFT INFRARED COUNTERMEASURES PROGRAM EARNS AWARD

*René Boston*

**W**RIGHT-PATTERSON AIR FORCE BASE, Ohio—The Large Aircraft Infrared Countermeasures program was selected as co-winner of the 2005 Defense Manufacturing Technology Achievement Award. The award was presented at the 2005 Defense Manufacturing Conference to the team behind the project, including Team Leader and Project Engineer Raymond J. Linville.

This award recognizes the hard work and dedication of the Manufacturing Technology engineers of the Air Force Research Laboratory's Materials and Manufacturing Directorate, along with the Mobility System Wing and the support contractors involved from Northrop Grumman Corporation.

The Manufacturing Technology effort resulted in significant cost, production rate, and reliability improvements that will be vital in protecting large aircraft from terrorist threat.

The Defense Manufacturing Technology Achievement Award, approved by the Joint Defense Manufacturing Technology Panel and presented by Sue C. Payton, deputy under secretary of defense (advanced systems and concepts), is the second award given for this effort.

In 2003, Linville was awarded the prestigious Air Force Science and Engineering Award in the Manufacturing Category, approved by former Air Force Chief Scientist Dr. Alexander H. Levis, for his work in personally defining, leading, and managing programs in support of Laser Eye Protection and the Viper(TM) Laser, one of the primary components on the countermeasures system.

The countermeasures system is designed to protect C-17s, C-130s, and other large aircraft from infrared-guided surface-to-air missile threats by automatically detecting a missile launch, determining if it is a threat, and activating a high-intensity directed laser beam countermeasure system to track and defeat the threat.

Large, slow aircraft with high signatures flying at low altitudes are prime targets for man-portable air defense

missiles and need the protection Large Aircraft Infrared Countermeasures systems provide.

The Viper Laser provides energy on target to jam threat missiles. Manufacturing Technology and Northrop Grumman Corporation representatives believed costs could be reduced for the Viper by addressing manufacturing, maintainability, reliability, supportability, and availability issues.

The insertion of Lean practices and principles increased yield and reduced touch labor costs, and design changes were made that reduced deficiencies and the number of assembly and adjustment steps for the electronic and optical components.

Finding more suppliers for high-value electronics, optics, and other materials created more competition and drove the cost down by substituting standardized components for the specialized ones.

Significant cost saving procedures implemented in the manufacture and assembly of the Viper Laser decreased the countermeasures system's acquisition cost per C-17 by about 30 percent.

Additional reliability and repair improvements resulted in less down time of the countermeasure system protected aircraft and an estimated \$1.2 million to \$1.8 million reduction in total ownership cost per aircraft.

Manufacturing improvements introduced by the effort during the first two years of the program allowed Northrop Grumman Corporation to dramatically improve the production yield, which increased the production rate of Viper Lasers from two per month to 15-20 per month.

Design improvements resulted in a 30 percent to 50 percent increased input/output laser power efficiency, which increased energy output, threat missile jamming capability, mean time between failure, and aircraft survivability.

The reduction in acquisition cost makes it financially feasible to acquire more countermeasures systems and protect more aircraft.

The benefit to the warfighter was almost immediate. Since the project allowed the contractor to ramp up pro-



duction more quickly, installation schedules were accelerated by one year, enough time to allow Large Aircraft Infrared Countermeasures systems to protect C-17s and C-130s during Operation Iraqi Freedom.

If just one aircraft has been protected from a threat missile just one time because of this project, the return on the investment is immeasurable.

This effort will continue with improvements to the mini-pointer tracker turret, another major component of the countermeasures system. The turret tracks the target and directs the laser beam in the proper direction.

Large Aircraft Infrared Countermeasures system units are already in operation on several aircraft and will soon be installed on more than 20 different fixed and rotary wing platforms across U.S. military services and several allied countries.

The Department of Homeland Security is investing over \$45 million to evaluate a counter man-portable air defense system based on the Viper(tm) Laser and mini-pointer tracker turret for use on U.S. civilian airliners.

Each of these installations will benefit from the system and production improvements implemented under this Manufacturing Technology effort.

*Boston is with the Air Force Research Laboratory, Materials and Manufacturing Directorate Public Affairs.*

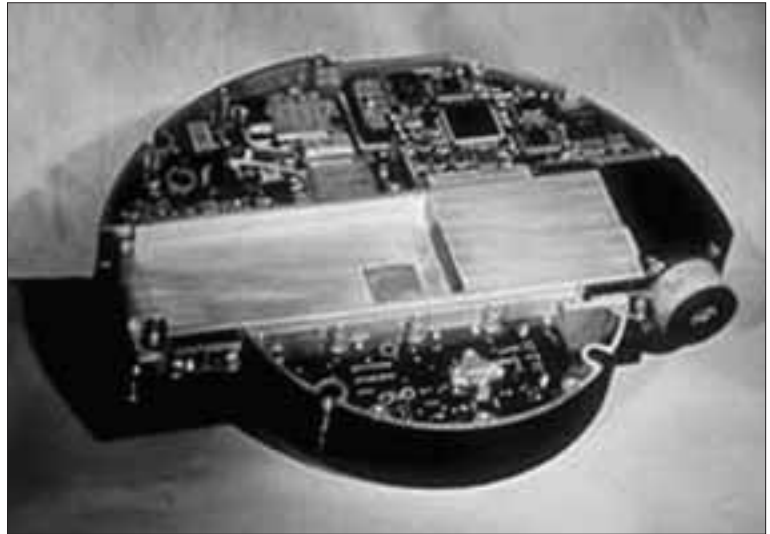
### AMERICAN FORCES PRESS SERVICE (MAY 5, 2006) INSTALLATIONS HONORED FOR EXCELLENCE

*Sgt. Sara Wood, USA*

**W**ASHINGTON—Five military installations were honored here today for their effective business management, support, and operational practices.

An installation from each Service and the Defense Logistics Agency received the Commander in Chief's Annual Award for Installation Excellence in a Pentagon ceremony. Receiving the award were:

- Fort Stewart and Hunter Army Airfield, Hinesville, Ga.
- Marine Corps Air Station Yuma, Yuma, Ariz.



The Viper(tm) Laser is one of the primary components on the Large Aircraft Infrared Countermeasures program, which was selected as co-winner of the 2005 Defense Manufacturing Technology Achievement Award. U.S. Air Force photograph.

- Naval Air Station Whidbey Island, Oak Harbor, Wash.
- Ramstein Air Base, Germany
- Defense Distribution Depot Susquehanna, New Cumberland, Pa.

The award winners are the Defense Department's leaders in creative management and stewardship of installations, and their actions maximize DoD's ability to have forces available anywhere, anytime, Ken Krieg, under secretary of defense for acquisition, technology and logistics, said at the ceremony.

"Today's honorees have demonstrated their commitment to a strong America by using their unique talents to improve the business of military installations," Krieg said. "Our military is founded upon good people, and we have many of those people represented here today."

**Fort Stewart and Hunter Army Airfield** is a major hub for Army force projection and is home of the 3rd Infantry Division. The installation has provided training technologies and resources to enhance readiness and increase combat effectiveness of its units, according to the award citation. The installation has also maintained a world-class platform to support mobilization, deployment and redeployment of forces while offering the highest possible quality of life for soldiers, families, retirees, and civilian employees, the citation read.



## Acquisition & Logistics Excellence

Marine Corps Air Station Yuma is the busiest airfield within the Department of the Navy. It is the only joint-use airfield in the Marine Corps, providing air traffic control, security and aircraft rescue, and firefighting services as well as maintaining runways and taxiways for itself and the Yuma International Airport.

The air station was recognized for its superior performance by doing the best job within assigned resources and accomplishing its mission while concentrating on innovative management practices, according to the award citation. The air station has been recognized many times for energy conservation, environmental management, public affairs, family support, and quality of life initiatives, the citation read.

Naval Air Station Whidbey Island was recognized for creating a "one stop resource" and community planning liaison office for quality of life and customer service, according to the award citation. The installation also has an outstanding wetland restoration program and provides services to the local communities through outreach and charity work, the citation stated.

Ramstein Air Base is the largest American community outside the continental United States. The base distinguished itself by significantly improving the productivity, mission processes, environment, and quality of life on the installation while executing its wartime and humanitarian missions throughout the world, according to the award citation. Ramstein Air Base has deployed almost 100,000 U.S. and coalition servicemembers on more than 2,100 combat, security, and humanitarian missions on three continents.

Defense Distribution Depot Susquehanna consolidates material from U.S. facilities into containers and pallets for overseas shipments. The depot supports the fielding of new weapons systems for the Army through the assembly of repair parts, tools, and technical manuals, and manages the Navy's publications and forms mission.

The depot's environmental program has been highly lauded, and its safety program is leading all defense distribution centers with its recently introduced Voluntary Protection Program, according to the award citation. The depot also has an active child and youth center, and completes the child abuse and risk assessment tool on a yearly basis, exceeding the standard requirement.

Installation management is more important now than it ever has been, as DoD transforms to better meet the

threats of the 21st century, Krieg said. Installations are crucial to this transformation because they provide a place to train, maintain, equip, and house forces, he said. Today's honorees are at the front of the military's transformation, and have mastered the complex business of installation management, he said.

"Their exemplary efforts to meet the challenges in a time of war are indeed commendable," he said.

The Commander in Chief's Annual Award for Installation Excellence was established in 1985 by President Reagan. Each Service and the Defense Logistics Agency identify an installation where the command has done the best job sustaining the mission, increasing productivity of the workforce, and enhancing quality of life for all who live and work at the installation.

### AIR LOGISTICS CENTER (MAY 5, 2006) FRANZ EDELMAN AWARD RECOGNIZES STREAMLINING EFFORTS

*John Birdsong*

**R**OBINS AIR FORCE BASE, Ga.—The Institute for Operations Research and the Management Sciences announced May 1 that Warner Robins Air Logistics Center has won the 2006 Franz Edelman Award for Achievement in operations research for its entry "Streamlining Aircraft Repair and Overhaul at Warner Robins Air Logistics Center."

The culmination of a rigorous competition referred to as the "Super Bowl of Operations Research," the Franz Edelman Award brings together the very best examples of innovation in the discipline from large and small, for-profit and nonprofit, corporate and governmental organizations around the world.

Past winners in the 35-year history of the Franz Edelman competition have included GM, Motorola, Continental Airlines, the New Haven Health Department, and the City of San Francisco Police Department.

The 2006 Franz Edelman Award winning entry, "Streamlining Aircraft Repair and Overhaul at Warner Robins Air Logistics Center," was presented by Ken Percell and Bill Best of Warner Robins Air Logistics Center, Prof. Mandyam Srinivasan of the University of Tennessee, College of Business Administration, and Sridharan Chandrasekaran, vice president of strategic services for software provider Realization Technologies, Inc.



## Acquisition & Logistics Excellence

The winning entry discussed how Warner Robins Air Logistics Center used Operations Research in 2005 to arrive at a radically different approach to manage the repair and overhaul activity on its C-5 transport aircraft.

The air logistics center used an operations research technique called "Critical Chain" to reduce the number of C-5 aircraft undergoing repair and overhaul in the depot from 13 to seven in just eight months.

The time required to repair and overhaul the C-5 aircraft was reduced by 33 percent. The five additional aircraft now in operation have generated immediate additional revenue of at least \$49.8 million per year. The replacement value for these aircraft is estimated at \$2.37 billion.

The additional workload the center is accommodating will bring in additional revenue of \$119 million through 2008, with this number projected to increase to \$248 million by 2009.

In accepting the award, Ken Percell, the executive director and senior civilian at Warner Robins Air Logistics Center stated, "Warner Robins is extremely pleased to receive the Franz Edelman Award for our work on reducing flow days for the C-5 aircraft line.

"The results underscore the gains that a proper application of these tools can offer to the Air Force," he said. "This accomplishment should reinvigorate the use of Operations Research in the Air Force and across all branches of the military in general."

"To be recognized by the business and academic communities for improvements we've made at this center, especially with aircraft maintenance operations, is quite an honor," said Bill Best, deputy director of the 402nd Aircraft Maintenance Support Group.

"This is what happens when the most capable people use the most innovative and advanced tools for this highly complex operation," he noted.

Critical Chain Project Management is a means of using resources in the most expeditious way possible. The adoption of this management tool has allowed major reductions in flow days. It makes use of the Concerto computer software, which gives a visual depiction of the aircraft, tasks, and status. The lists of tasks are color coded as to urgency, alerting maintainers to the most important things to do.

"On behalf of the entire C-5 enterprise, we are thrilled to win the 2006 Franz Edelman Award for Achievement in Operations Research and the Management Sciences," said Col. David Holcomb, C-5 system program manager. "The use of critical chain project management to reduce the time required for depot maintenance is a key element of our plan to increase aircraft availability," he noted.

"The 402nd Maintenance Wing at Warner Robins has executed Critical Chain Project Management brilliantly, resulting in additional C-5 aircraft available to accomplish our Rapid Global Mobility mission," Holcomb said.

"This initiative has provided our Mobility Air Forces with five additional aircraft to provide intertheater airlift support to our troops around the world," he emphasized. "The team's outstanding contribution to our nation's security warrants this prestigious award."

The other finalists were Animal Health Institute and Cox Associates; The U.S. Commercial Aviation Partnership, comprising Airports Council International-North America, Air Transport Association, Department of Homeland Security, Department of Transportation, The Boeing Company, and the Transportation Security Administration; Omya Hustadmarmor and More Research/ Molde University College, and Travelocity and Sabre Holdings.

The Institute for Operations Research and the Management Sciences is an international scientific society with 10,000 members, including Nobel Prize laureates, dedicated to applying scientific methods to help improve decision-making, management, and operations.

Institute members work in business, government, and academia. They are represented in fields as diverse as airlines, health care, law enforcement, the military, financial engineering, and telecommunications.

*Birdsong is with Warner Robins Air Logistics Center Public Affairs.*

### NAVAL SEA SYSTEMS COMMAND OFFICE OF CORPORATE COMMUNICATIONS (MAY 6, 2006) NAVSEA NAVAL OFFICER RECOGNIZED FOR EXCELLENCE

**W**ASHINGTON—Lt. Cmdr. Kristin Acquavella was presented the Meritorious Service Medal by Vice Adm. Paul E. Sullivan, commander, Naval Sea Systems Command (NAVSEA), and also hon-



## Acquisition & Logistics Excellence

ored with the Elmer Staats Young Acquisition Professional Excellence Award by retired Army Gen. William G. Tuttle Jr., chairman of the Procurement Roundtable (PRT), April 24 at the NAVSEA Management Information Center.

Acquavella received the recognition for her outstanding meritorious service to the Navy and for her outstanding performance as a submarine contracting officer at NAVSEA and at the Multinational Force Iraq (MNFI) Headquarters in Baghdad.

"Lt. Cmdr. Acquavella's exceptional competence, leadership, and determination are an inspiration to the members of the acquisition workforce," said Sullivan.

Acquavella is also the first Navy Department recipient and the first military officer to be awarded the PRT's Elmer B. Staats Young Acquisition Professional Excellence Award.

"This is the first time any military officer or Navy department official has received this prestigious award, and we are immensely proud of Lt. Cmdr. Acquavella," said Capt. Richard Sweeney, NAVSEA deputy commander for contracts (NAVSEA 02). "She is one of the finest naval officers I have ever known."

The Elmer B. Staats award, named for the former PRT chairman and former U.S. comptroller general, annually recognizes a junior federal acquisition professional who has contributed significantly to acquisition operations or acquisition policy. The recipient receives a plaque and a \$5,000 monetary award.

Acquavella's nomination and award were based on two significant accomplishments. First, she volunteered to fill a six-month contingency contracting assignment as chief of MNFI's Baghdad contracting office. While in Iraq, she awarded 1,300 contracts valued at \$165 million in support of 60,000 coalition forces. She performed her duties while being constantly exposed to hostile rocket and mortar attacks.

Second, as the procuring contracting officer for the NAVSEA "Submarine Factory," she provided significant savings to the government through her management of the contracts for the repairs and overhaul of submarines. She awarded the first competitively-bid depot maintenance period contract valued at \$174 million and two major submarine overhauls valued at \$82.8 million. She became the driving force behind a decision not to award

a sole-source submarine overhaul contract to a private shipyard, shifting the availability to a public shipyard and saving the Navy more than \$60 million.

For related news, visit the Naval Sea Systems Command Navy NewsStand Web site at <<http://www.news.navy.mil/local/navsea>>.

**"The results underscore the gains that a proper application of [Critical Chain Project Management] can offer to the Air Force. This accomplishment should reinvigorate the use of Operations Research in the Air Force and across all branches of the military in general."**

—Ken Percell  
Executive Director  
Warner Robins Air Logistics Center

### ARMY NEWS SERVICE (MAY 25, 2006) ANNUAL CLEA: ARMY RECOGNIZES LOGISTICS EXCELLENCE

J.D. Leipold

**W**ASHINGTON—More than 500 soldiers, their families, and civilians gathered here to be recognized by the Department of Army and the National Defense Industrial Association for their excellence in all aspects of Army deployment, maintenance, and supply logistics in what is known as the Chief of Staff, Army Combined Logistics Excellence Awards or CLEAs.

This marked the second consecutive year the three logistics excellence awards programs were combined into a single recognition ceremony, which covers the active duty Army, Army Reserve, and Army National Guard.

Some 76 units from Korea, Japan, Germany, Italy, Puerto Rico, Guam, and in 30 of the 50 United States were selected as winners or runners-up ranging in size from large to small units.

Guest speaker and Deputy Chief of Staff, G-4, Lt. Gen. Ann E. Dunwoody who also presented the awards praised all the participants noting that commands had taken on



the challenges of the award guidelines despite fighting the global war on terrorism, despite the realignment of bases, the resetting and retrograding of equipment, and instituting Lean Six Sigma.

"This is really a treat for me ... many of you have heard me say the three things I enjoy doing most are re-enlisting good soldiers, promoting individuals based on demonstrated potential, and rewarding folks for meritorious and outstanding performance," she said. "Today, we get to recognize the best of the best logisticians in our Army so I'm truly honored to be here."

View a complete list of the 2006 winners at [http://www4.army.mil/ocpa/read.php?story\\_id\\_key=9066](http://www4.army.mil/ocpa/read.php?story_id_key=9066).

### MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE (MC4) PUBLIC AFFAIRS (MAY 25, 2006) **ARMY LEADER EARNS 2006 ARTHUR S. FLEMING AWARD**

Ray Steen

**F**ORT DETRICK, Md.—U.S. Army Maj. Wilson A. Ariza, assistant product manager, Medical Communications for Combat Casualty Care (MC4), was selected by the George Washington University and the Arthur S. Flemming Awards Commission to join 11 others in receiving the prestigious 2006 Flemming Award. The awards are given each year to outstanding federal employees and are recognized by the president of the United States.

Ariza has played a critical role in helping to achieve presidential and congressional mandates by providing systems that enable a comprehensive, lifelong medical record for all servicemembers. At the MC4 Product Management Office (PMO), Ariza led the initial planning, development, and deployment of MC4 systems into the combat zone supporting Operation Iraqi Freedom. To date, MC4 PMO has deployed more than 12,000 systems to over 250 deployed medical units throughout Iraq, Kuwait, Qatar, and Afghanistan.

Ariza has twice been recognized by the Army Medical Department (AMEDD) for his role in advancing medical information technology in the battlefield. In 2002, the AMEDD named Ariza Officer of the Year for his leadership at Fort Hood, Texas, where he helped automate healthcare information for medical, dental, and veterinary programs. In 2005, Ariza helped MC4 PMO win the

AMEDD Information Management/Information Technology Team of the Year award.

The Arthur S. Flemming Awards were established in 1948 in honor of Arthur Flemming's commitment to public service throughout his distinguished career, which spanned seven decades and 11 presidencies. Past winners include such luminaries as Neil Armstrong, Elizabeth Dole, and Daniel Patrick Moynihan. Ariza received the award on June 13, 2006, at the annual Flemming Awards ceremony in Washington, D.C.

Headquartered at Fort Detrick, Md., MC4 develops, fields, and supports a medical information management system for Army tactical medical forces, enabling a comprehensive, lifelong electronic medical record for all servicemembers, and enhancing medical situational awareness for operational commanders.

*Steen is with MC4 Public Affairs at Fort Detrick, Md.*

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 25, 2006) **GRANTS TO ACCELERATE RESEARCH EFFORTS**

Erin Crawley

**A**RLINGTON, Va.—The Air Force Office of Scientific Research has awarded two Department of Defense Multidisciplinary University Research Initiative program grants to Arizona State University, totaling about \$9 million, potentially, over the next five years. The university is one of eight to receive more than one research award.

The Multidisciplinary University Research Initiative program is a multi-agency Defense Department program that supports research teams whose efforts intersect more than one traditional science and engineering discipline.

Multidisciplinary team efforts can accelerate research progress in areas particularly suited to this approach by cross-fertilization of ideas, hasten the transition of basic research findings to practical applications, and can help to train students in science and/or engineering in areas of importance to the Defense Department.

Air Force Capt. Clark Allred, program manager in the Aerospace and Materials Directorate at Air Force Office of Scientific Research, believes the Multidisciplinary University Research Initiative program is a wonderful way



to pump a lot of money into research areas of key importance to the Air Force.

“Multidisciplinary University Research Initiatives are important because they can give a program a critical mass by way of a large chunk of money that is given all at once,” said Allred.

At Arizona State University, the research grant money will support basic research efforts at the Ira A. Fulton School of Engineering and at the College of Liberal Arts and Sciences.

The Fulton school team will use a maximum of \$6 million from the Multidisciplinary University Research Initiative funds to conduct a major aerospace research project to support development work in advanced sensor systems for aircraft.

Their goal is to establish a sensor system that can better assess the structural health of aircraft.

Meanwhile, a team of faculty and graduate students from the College of Liberal Arts and Sciences could receive as much as \$2.6 million to develop cost-saving lasers using a new breed of silicon-based semiconductors.

Professor of mechanical and aerospace engineering at the Fulton School Aditi Chattopadhyay is the principal investigator on the aerospace project. Her team plans to improve the accuracy of risk assessment and aircraft life-span estimates.

By doing so, Chattopadhyay hopes to save the Air Force money in the long run by reducing operation and maintenance costs of the current Air Force fleet.

The fusion of science and vision is what makes the Air Force Office of Scientific Research mission so crucial to the future success of the Air Force.

Air Force Col. Jeff Turcotte, deputy director of Air Force Office of Scientific Research, said the Multidisciplinary University Research Initiative supported aerospace research at Arizona State University complements the Air Force Office of Scientific Research mission.

“Robust and reliable health monitoring of aircraft concepts are key to reducing future fleet maintenance costs and timelines,” said Turcotte. “We have a long way to go before realizing these benefits, but we believe this team

at Arizona State University can start us off on a long stride.”

The laser project team will use some breakthrough silicon materials discovered by a former Arizona State University chemistry graduate student, to continue years of collaboration and to put several recent discoveries into practice.

Principal Investigator and Arizona State University physics professor Jose Menendez believes this funded research will lead to the development of very cost-effective, high-performance infrared lasers with widespread military and commercial applications for sensing and communications.

*Crawley is with Air Force Office of Scientific Research Public Affairs.*

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 31, 2006) STANDARDIZATION PROGRAM PRESENTS ANNUAL ACHIEVEMENT AWARDS

**T**wo individuals and three teams have received awards from the Defense Standardization Program Office (DSPO) for outstanding contributions to the Department of Defense last fiscal year. The awards were presented on May 23, during a ceremony in Arlington, Va.

Since 1987, DSPO has recognized individuals and organizations that have effected significant improvements in quality, reliability, readiness, cost reduction, and interoperability through standardization. The mission is to identify, influence, develop, manage, and provide access to standardization processes, products, and services for warfighters and the acquisition and logistics communities. In addition, the program promotes interoperability and assists in reducing total ownership costs and in sustaining readiness.

Following are the Defense Standardization Program recipients for 2005:

#### **Individuals**

- Dr. Jose-Luis Sagripanti, U.S. Army's Edgewood Chemical Biological Center laboratory, developed a quantitative three-step method for determining the sporadic efficacy of liquids, liquid sprays, and vapor or gases on contaminated carrier surfaces. This method addresses the long-standing need for a proven test method to assess products and procedures used for deconta-



mination and disinfection (DECON) and provides a standardized and validated test to ensure that the military services select DECON products and practices, affording adequate protection to their personnel.

- Andreas Pappas, Defense Information Systems Agency, led an effort on UHF SATCOM waveform standards and technology insertion to mitigate the tactical satellite shortfall. Efforts were initiated to provide systems enhancements that will more than double the present UHF SATCOM systems capacity. Implementing integrated wavelength standards into deployed software-programmable radios will provide tremendous operational and economic benefits for the warfighter.

### Teams

- The Navy's Virginia Class Submarine Program team (PMS450) achieved tremendous savings by turning to standardization initiatives to help reduce overall acquisition and operation and maintenance costs of the program. The use of standardization succeeded in minimizing the program's overall logistics footprint, as well as reducing the class parts library. By investing \$27 million in parts standardization, the projected cost avoidance over the life of the Virginia Class program is estimated to be approximately \$789 million. Members are David Restifo, James Conklin, and Jimmy Smith.
- The Navy's Aircraft Wiring Support Equipment Commodity Program team developed the Aircraft Wiring Information System. This comprehensive database allows the standardization of repair tooling, specifications, and processes across all Navy and Marine Corps aircraft. The team's standardization efforts have reduced the proliferation of tools and support equipment and realized a total cost avoidance of \$15.9 million. Members are Gail Edwards, William Peck, Leah Boise, Robert Petrie, and Benjamin Yearwood.
- The Air Force's Community Sensor Model (CSM) Program Team developed a CSM Interface that eliminated proprietary, technical, and political barriers across all DoD reconnaissance systems. As a result of this work, the CSM interface became an emerging standard through the DoD IT Standards Registry Technical Working Group. With more than 21 models created and four more in development, armed forces operators will be able to measure target quality coordinates at one-third the cost of previous systems. Members are Air Force Capt. Ricardo Garcia, and Lea Gordon.

Additional information on the Defense Standardization Program, this year's awardees, and their accomplishments may be obtained by visiting the DSP Web site at <http://www.dsp.dla.mil/awards.htm>.

### DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 15, 2006) DEFENSE DEPARTMENT PRESENTS VALUE ENGINEERING ACHIEVEMENT AWARDS

**U**nder Secretary of Defense for Acquisition, Technology and Logistics Ken Krieg presented the annual Department of Defense Value Engineering Achievement Awards during a ceremony at the Pentagon June 15.

Value Engineering is a systematic process of function analysis to identify actions that reduce cost, increase quality, and improve mission capabilities across the entire spectrum of DoD systems, processes, and organizations. The Department of Defense Value Engineering Program continues to be an incentive for government and our industry counterparts to improve the joint value proposition by promoting innovation and creativity. These innovative proposals seek best-value solutions as part of a successful business relationship. During fiscal 2005, 3,047 in-house Value Engineering Proposals and contractor-initiated Value Engineering Change Proposals were accepted with projected savings/cost avoidance in excess of \$924 million.

The Value Engineering Awards Program is a highly visible acknowledgment of exemplary achievements and encourages additional projects to improve in-house and contractor productivity. Award winners from each DoD component were eligible for selection in the following five categories: (1) program/project, (2) individual, (3) team, (4) organization, and (5) contractor. Additional "special" awards were given to recognize innovative applications or approaches that expanded the traditional scope of value engineering use.

Today's awards were presented to the following individuals or teams in the categories noted:

#### ARMY

- **Program/Project:** Savannah and Mobile Districts, U.S. Army Corps of Engineers
- **Individual:** Hargovindbhai Patel, U.S. Army Tank-automotive & Armaments Life Cycle Management Command



## Acquisition & Logistics Excellence

- **Team:** C4ISR Value Engineering Team, U.S. Army Communications–Electronics Life Cycle Management Command
- **Organization:** U. S. Army Field Support Command
- **Contractor:** Stewart & Stevenson Services, Inc.
- **Special:** U.S. Army Armament Research, Development and Engineering Center
- **Special:** Marmet Lock Replacement Project Team, U.S. Army Corps of Engineers Huntington District

### NAVY

- **Program/Project:** Torpedo Downloader System, Naval Undersea Warfare Center Division, Newport
- **Team:** Sustainment Engineering Team Crane Division, Naval Surface Warfare Center
- **Organization:** Airborne Electronic Warfare Division Crane Division, Naval Surface Warfare Center
- **Special:** Dahlgren AEGIS Lean Events Team
- **Special:** Ordnance Engineering Department–PM 10 Crane Division, Naval Surface Warfare Center

### AIR FORCE

- **Individual:** Major Raul Parra, Tyndall Air Force Base, Fla.

### DEFENSE LOGISTICS AGENCY

- **Program/Project:** Clarence Jones, Hard-to-Buy Aircraft Items, Defense Supply Center Richmond
- **Individual:** Harry Sands, Defense Supply Center Philadelphia
- **Team:** Spare Parts Breakout Team, Defense Supply Center Columbus
- **Organization:** Defense Supply Center Columbus
- **Special:** DFAS Contract Payment Team

### Defense Reutilization and Marketing Service

- **Special:** Aviation Engineering Division, Defense Supply Center Richmond
- **Special:** Andrew Scott, Defense Supply Center Philadelphia

### MISSILE DEFENSE AGENCY

- **Program/Project:** Terminal High Altitude Area Defense Project Management Office
- **Individual:** Julie Smith, Terminal High Altitude Area Defense
- **Team:** Value Engineering Team, Huntsville and Redstone Arsenal, Ala.
- **Special:** Patricia Bourbeau, Terminal High Altitude Area Defense Project Management Office

### DEFENSE CONTRACT MANAGEMENT AGENCY

- **Contractor:** Raytheon Missile Systems, Tucson, Ariz.

### DEFENSE INTELLIGENCE AGENCY

- **Program:** Consolidated Application Integration
- **Team:** Community Action Group of the Chief Financial Executive General Defense Intelligence Program

## NAVY NEWSSTAND (JUNE 19, 2006) NAVFAC EARNS 2006 WHITE HOUSE CLOSING THE CIRCLE AWARDS

Senior Chief Journalist Regina Adams

**W**ASHINGTON—Naval Facilities Engineering Command (NAVFAC) was awarded two White House Closing the Circle Awards for outstanding environmental achievements at Naval Station Great Lakes, Ill., and Naval Base Ventura County, Port Hueneme, Calif., during a White House ceremony June 12.

The White House Closing the Circle Awards recognize outstanding achievements of federal employees and facilities that are significant contributions to, or have a positive impact on, the environment.

“Sustainable environmental performance has become an integral part of how we do business in the federal government,” said Ed Pinero, federal environmental executive. “These award-winning programs and individuals truly exemplify how our management and operations can be made more sustainable through enhanced environmental stewardship.”

Naval Station Great Lakes was given the award for Alternative Fuel Use and Fuel Conservation in Transportation in the military, for its use of biodiesel. Biodiesel is a cleaner burning alternative fuel and has become America’s fastest growing alternative fuel, according to the Department of Energy.

“We’re thrilled to see the use of biodiesel within the federal government continuing to grow and its users recognized with this important award,” said Joe Jobe, chief executive officer of the National Biodiesel Board. “These [vehicle] fleets are important models to their peers, as well as the nation at large. They are leaders in the government’s efforts to protect the environment, as well as executing President Bush’s goal of reducing dependence on foreign oil by 75 percent by 2025.”



# Acquisition & Logistics Excellence

NAVFAC Southwest Public Works Department at Naval Base Ventura County won the award for Sustainable Design and Green Building in the military. The naval base's Building 850 is an "Energy Showcase" facility, demonstrating new concepts in energy efficiency and "green" building principles to both the resident staff and neighboring communities.

"We are proud of what we accomplished in this project, not only in the energy savings and sustainable design features and materials incorporated, but in the high quality workspace we provided for our people," said Thomas Carr, NAVFAC Southwest deputy public works officer.

Marine Corps Air Station Cherry Point, N.C., was given an honorable mention for Waste and Prevention in the military.

*Adams is with Naval Facilities Engineering Command Public Affairs.*

## TENTH ANNUAL ADMIRAL STANLEY R. ARTHUR AWARDS FOR LOGISTICS EXCELLENCE

*James G. Smith*

The tenth annual Admiral Stanley R. Arthur Awards for Logistics Excellence were presented on June 27 at the Pentagon, Washington, D.C., by Army Lt. Gen. C. V. Christianson, director for logistics, J-4, the Joint Staff; Navy Rear Adm. Al Thompson, director, Supply, Ordnance and Logistics Operations Division, OPNAV N41; and retired Navy Adm. Stanley R. Arthur.

These special recognition awards are bestowed annually upon individuals and teams who epitomize logistics excellence. The three award categories—Military Logistician, Civilian Logistician, and Logistics Team (Operational, Acquisition, and/or Joint)—recognize Navy individuals and teams whose contributions have significantly supported the Navy mission, have promoted innovative ideas and concepts resulting in substantial and quantifiable benefits to the Navy, and have enhanced the logistics profession. Nominees may be involved in any or all phases of Navy logistics from early life cycle planning to in-service support. The 2005 award winners are:

### CAPT. THOMAS C. TRAAEN, SC, USN MILITARY LOGISTICIAN OF THE YEAR

Capt. Traaen, from COMPACFLT and Naval Supply Systems Command, distinguished himself in the exceptional

performance of duties while serving as director of Fleet Supply on the staff of commander, PACFLT, and as the deputy commander for Fleet Logistics Operations at the NAVSUPSYSCOM. He was instrumental in the development and certification by the business management modernization program (BMMP) of a comprehensive logistics readiness reporting tool, used weekly to report the fleet's logistical readiness to commanders.

### DR. LAMBROS P. TZEREFOSA CIVILIAN LOGISTICIAN OF THE YEAR

Dr. Tzerefosa, from the Naval Supply Systems Command, assembled and led a multi-talented team of specialists to deliver a joint operations focused system, the ordnance information system (OIS), which is the definitive logistics and inventory management transformational solution for the naval ordnance community. OIS provides maximum readiness through access, agility, adaptability, and persistent awareness and leverages the competencies of the Navy, Marine Corps, and Coast Guard through the integration of their existing ammunition management systems into a single more efficient and cost-effective system.

### THE CARRIER SUPPLY DEPARTMENT BRIDGE TO THE FUTURE CROSS FUNCTIONAL TEAM OPERATIONAL LOGISTICS TEAM OF THE YEAR

The Carrier Supply Department Bridge to the Future Cross Functional Team from COMNAVAIRPAC N41 Force Supply, *USS Abraham Lincoln* (CVN 72) and *USS Nimitz* (CVN 68) Supply Departments focused on sustainable, measurable changes to afloat business practices and worked on various projects designed to improve efficiencies, effectiveness, and readiness while reducing onboard inventory and realigning personnel.

### F/A-18 INTEGRATED READINESS SUPPORT TEAM (FIRST) ACQUISITION LOGISTICS TEAM OF THE YEAR

The F/A-18 FIRST, from the Naval Air Systems Command and the Naval Inventory Control Point, Philadelphia, provided an innovative performance-based logistics approach that increased the efficiency and effectiveness of the F/A-18 by uniting the responsiveness of industry with the expertise and capacity of the Navy's organic support activities. FIRST identified over \$430 million in savings and cost avoidance in supportability improvements and improved F/A-18 supply availability from 62 percent for the Hornet to 85 percent for the Super Hornet, reducing depot turnaround time and awaiting parts by 41 percent and 64 percent respectively.



## Acquisition & Logistics Excellence

### NAVY EXPEDITIONARY LOGISTICS SUPPORT GROUP (NAVELSG) PORT GROUP CHARLIE REDEPLOYMENT AND LOGISTICS (RESULTS) TEAM JOINT LOGISTICS TEAM OF THE YEAR

The Port Group CHARLIE RESULTS team, Kuwait Naval Base, Kuwait, Navy Expeditionary Combat Command performed with singular distinction, serving as the vital hinge pin of the logistics process in the Central Command Theater of operations through which a vast majority of equipment and supplies flow to the fighting forces engaged in OIF. Collaborating with the U. S. Army, civilian contractors, and Kuwaiti authorities, the Port Group CHARLIE RESULTS team established a stellar reputation as the best in the business at managing all facets of maritime port cargo handling operations. Working under a highly complex Joint Service hierarchy, the RESULTS team received and staged over 50,000 pieces of rolling stock and containerized cargo for over 207,000 armed forces members from 47 Army and Marine Corps units.

The Navy's premier logistics awards are named for Adm. Stanley R. Arthur. Arthur was commissioned in June 1957. He became a naval aviator in 1958 and later completed over 500 combat missions in the A-4 Skyhawk aircraft. During his distinguished career, Arthur served on the staff of the commander in chief, U.S. Pacific Fleet, Pearl Harbor; as assistant chief of staff for Plans and Policy with additional duty as commander, Rapid Deployment Naval Forces and U.S. Naval Forces



Central Command; as commander, Carrier Group SEVEN; as director, Aviation Plans and Requirements Division (OP-50); and as director, General Planning and Programming Division (OP-80). He was selected for the rank of vice admiral in February 1988 and assumed the duties as deputy chief of Naval Operations (Logistics).

On Dec. 1, 1990, Arthur assumed duties as commander, U.S. SEVENTH Fleet and commander, U.S. Naval Forces Central Command for Operations Desert Shield/Desert Storm. He directed the operations and tactical movements of more than 96,000 Navy and Marine Corps personnel and 130 U.S. Navy and allied ships. This represented the largest U.S. naval armada amassed since World War II. Arthur assumed duties as the vice chief of Naval Operations on July 6, 1992. He retired from active military service on June 1, 1995.

Further information and photos on the Adm. Stanley R. Arthur Awards program are available at <<https://awards.navy.mil/stanarthur>>.

*Smith is a supportability advocate with OPNAV (N401).*

The tenth annual Admiral Stanley R. Arthur Awards for Logistics Excellence are presented on June 27 at the Pentagon, Washington, D.C., by Army Lt. Gen. C. V. Christianson, director for logistics, J-4, the Joint Staff (front row, fourth from left); and retired Navy Adm. Stanley R. Arthur (far right).

Photograph by PNC Ken Robertson, USN.





## AT&L Workforce— Key Leadership Changes

DEPARTMENT OF DEFENSE NEWS  
RELEASE (APRIL 24, 2006)

### GENERAL OFFICER ANNOUNCEMENT

**S**ecretary of Defense Donald H. Rumsfeld announces that the president has nominated Army Brig. Gen. Stephen V. Reeves for promotion to the rank of major general. He is currently serving as Joint Program executive officer for Chemical and Biological Defense, Falls Church, Va.

FROM THE WHITE HOUSE, OFFICE OF  
THE PRESS SECRETARY (APRIL 25, 2006)  
**NOMINATION SENT TO THE SENATE**

**S**ue C. Payton, of Virginia, to be an assistant secretary of the Air Force, vice Marvin R. Sambur. (Payton currently serves as the deputy under secretary of defense for advanced systems and concepts.)

DEPARTMENT OF DEFENSE NEWS  
RELEASE (APRIL 27, 2006)

### FLAG OFFICER ANNOUNCEMENT

**S**ecretary of Defense Donald R. Rumsfeld announced today that the President has made the following nomination: Naval Reserve Rear Adm. (lower half) Sharon H. Redpath has been nominated for appointment to the grade of rear admiral while serving as deputy commander, Naval Inventory Control Point, Philadelphia, Pa.

DEPARTMENT OF DEFENSE NEWS  
RELEASE (APRIL 28, 2006)

### GENERAL OFFICER ANNOUNCEMENT

**T**he following general officer nomination was confirmed by the Senate on April 27, 2006: Army Maj. Gen. Michael D. Rochelle for appointment to the grade of lieutenant general and assignment as the deputy chief of staff, G-1, Army, Washington, D.C. He is currently serving as the director, Installation Management Agency, Arlington, Va.

DEPARTMENT OF DEFENSE NEWS  
RELEASE (APRIL 28, 2006)

### GENERAL OFFICER ASSIGNMENTS

**T**he chief of staff, Army announces the following officer assignments:

Brig. Gen. Robert M. Brown, deputy commanding general for Systems of Systems Integration, Army Research Development and Engineering Command, Fort Belvoir,

Va., to commanding general Natick Soldier Center, Natick, Mass., and Program Executive Office Soldier, Fort Belvoir, Va., with principal duty location at Natick, Mass.

Brig. Gen. Michael J. Lally III, commander, Defense Distribution Center, Defense Logistics Agency, New Cumberland, Pa., to commanding general, 3rd Corps Support Command, Army Europe and Seventh Army, Germany.

DEPARTMENT OF DEFENSE NEWS  
RELEASE (MAY 3, 2006)

### GENERAL OFFICER ANNOUNCEMENT

**T**he chief of staff, Army announces the assignment of the following officers:

Colonel Thomas M. Cole, deputy program manager for program integration, Future Combat Systems Unit of Action, Warren, Mich., to deputy program manager, Future Combat System Brigade Combat Teams Program Integration (Platform), Warren, Mich.

Colonel Robert D. Ogg Jr., chief, Capabilities Integration Division, Army Capabilities Integration Center, U.S. Army Training and Doctrine Command, Fort Monroe, Va., to deputy program manager, Future Combat System Brigade Combat Teams Program Integration (Network/Complementary Programs), Warren, Mich.

*Assignment to a general officer position should not be construed as the Senate's consent of promotion nomination, and there will be no action to frock or promote until Senate confirmation.*

DEPARTMENT OF DEFENSE NEWS  
RELEASE (MAY 4, 2006)

### FLAG OFFICER ANNOUNCEMENTS

**S**ecretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Navy Capt. Steven R. Eastburg has been nominated for appointment to the rank of rear admiral (lower half). Eastburg is currently serving as deputy program executive officer for ASWASM, Patuxent River, Md.

Navy Capt. Thomas J. Eccles has been nominated for appointment to the rank of rear admiral (lower half). Eccles is currently serving as major program manager for Seawolf, PEO Submarines, Washington, D.C.



## AT&L Workforce—Key Leadership Changes

Navy Capt. John Elnitsky II has been nominated for appointment to the rank of rear admiral (lower half). Elnitsky is currently serving as major program manager for Undersea Mobility, PM 399, Naval Sea Systems Command, Washington, D.C.

Navy Capt. James P. McManamon has been nominated for appointment to the rank of rear admiral (lower half). McManamon is currently serving as executive assistant to the assistant secretary of the Navy for Research, Development, and Acquisition, Office of the Secretary of the Navy, Washington, D.C.

Navy Capt. Charles E. Smith has been nominated for appointment to the rank of rear admiral (lower half). Smith is currently serving as major program manager for Aviation and Ship Integration, Naval Air Systems Command, Patuxent River, Md.

Navy Capt. Scott H. Swift has been nominated for appointment to the rank of rear admiral (lower half). Swift is currently serving as deputy executive officer for Naval Aviation and Tactical Air Systems, Office of the Secretary of Defense, Washington, D.C.

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 9, 2006)

#### GENERAL OFFICER ASSIGNMENT

**T**he chief of staff, Air Force announces the assignment of the following general officer:

Brig. Gen. Jay H. Lindell, director, Logistics, U.S. Air Forces in Europe, Ramstein Air Base, Germany, to commandant, Air Command and Staff College, Air University, Air Education and Training Command, Maxwell Air Force Base, Ala.

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 24, 2006)

#### GENERAL OFFICER ANNOUNCEMENT

**S**ecretary of Defense Donald H. Rumsfeld announced today that the president has nominated Army Maj. Gen. N. Ross Thompson III for appointment to the grade of lieutenant general and assignment as military deputy/director, Army Acquisition Corps, Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), Washington, D.C. Thompson is currently serving as director, Program Analysis and Evaluation, Office of the Deputy Chief of Staff, G-8, U.S. Army, Washington, D.C.

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 25, 2006)

#### GENERAL OFFICER ASSIGNMENTS

**T**he chief of staff, Army announces the assignment of the following officers:

Maj. Gen. Randal R. Castro, commanding general, Army Maneuver Support Center and Fort Leonard Wood/commandant, Army Engineer School, Fort Leonard Wood, Mo., to deputy director, Defense Threat Reduction Agency, Fort Belvoir, Va.

Maj. Gen. William H. McCoy Jr., commander, Gulf Region Division, Army Corps of Engineers, Operation Iraqi Freedom, Iraq, to commanding general, Army Maneuver Support Center and Fort Leonard Wood/commandant, United States Army Engineer School, Fort Leonard Wood, Mo.

Brig. Gen. Stanley H. Lillie, commandant, Army Chemical School, Fort Leonard Wood, Mo., to the Office of the Deputy Chief of Staff, G-8, U.S. Army, Washington, D.C.

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 26, 2006)

#### GENERAL OFFICER ASSIGNMENTS

**T**he chief of staff, Air Force announces the assignments of the following general officers:

Maj. Gen. (select) Paul J. Selva, director, operations, TCJ3, United States Transportation Command, Scott AFB, Ill., to director, Air Force strategic planning, Deputy Chief of Staff, Strategic Plans and Programs, Headquarters, U.S. Air Force, Pentagon, Washington, D.C.

Maj. Gen. Winfield W. Scott III, commander, Tanker Airlift Control Center, Air Mobility Command, Scott AFB, Ill., to director, operations and plans, TCJ3, U.S. Transportation Command, Scott AFB, Ill.

Maj. Gen. (select) Ronald R. Ladnier, director, resource integration, deputy chief of staff, logistics, installations and mission support, Headquarters, U.S. Air Force, Pentagon, Washington, D.C., to commander, Tanker Airlift Control Center, Air Mobility Command, Scott AFB, Ill.

Maj. Gen. (select) Polly A. Peyer, director, logistics, Headquarters Pacific Air Forces, Hickam AFB, Hawaii, to director, resource integration, deputy chief of staff, logistics, installations, and mission support, Headquarters, U.S. Air Force, Pentagon, Washington, D.C.



## AT&L Workforce—Key Leadership Changes

Brig. Gen. Francis M. Bruno, commander, 76th Maintenance Wing, Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker AFB, Okla., director, logistics, Headquarters Pacific Air Forces, Hickam AFB, Hawaii.

Brig. Gen. Judith A. Fedder, deputy director, legislative liaison, Office of the Secretary of the Air Force, Pentagon, Washington, D.C., to commander, 76th Maintenance Wing, Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker AFB, Okla.

### DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 26, 2006)

#### FLAG OFFICER ASSIGNMENTS

**C**hief of naval operations Adm. Mike Mullen announced the following flag officer assignments:

Rear Admiral (selectee) Mark D. Harnitchek is being assigned as director for strategy, plans, policy, and programs, J4/J5, U.S. Transportation Command, Scott Air Force Base, Ill. Harnitchek is currently serving as vice director for logistics, J4, Joint Staff, Washington, D.C.

Rear Adm. (lower half) Gerard M. Mauer is being assigned as commandant, Industrial College of the Armed Forces, National Defense University, Washington, D.C. Mauer is currently serving as deputy assistant chief of staff for joint experimentation, exercises, and assessment, Allied Command Transportation, Norfolk, Va.

### PICA NAMED HEAD OF FEDERAL ACQUISITION INSTITUTE

**K**aren Pica, former director of the Acquisition Workforce Program for Department of Homeland Security, and since November 2005, a member of the Defense Acquisition University/Acquisition Workforce Career Management staff, is the new director, Federal Acquisition Institute. Pica comes to FAI with more than 15 years of experience in workforce and human capital initiatives. She succeeds Gloria Sochon, outgoing FAI director, who has accepted a position with the General Services Administration, Federal Acquisition Regulation staff.

### ARMY NEWS SERVICE (JUNE 15, 2006) ARMY NAMES FUTURE FORCE INTEGRATION DIRECTOR

**F**ORT BLISS, Texas—Army Chief of Staff Gen. Peter Schoomaker announced on June 9 the selection of Brig. Gen. James L. Terry as the Future Force

Integration director, Army Capabilities Integration Center (ARCIC), at Ft. Bliss, Texas.

Terry is currently serving in Afghanistan as deputy commanding general for the 10th Mountain Division (Light) and deputy commanding general for Combined Joint Task Force-76.

“Brig. Gen. Terry possesses a unique background, including prior experience at the Training and Army Doctrine Command, Joint Forces Command, and most recently as deputy commanding general for the 10th Mountain Division and Combined Joint Task Force-76 in Afghanistan,” said Lt. Gen. Mark Curran, director for the Army Capabilities Integration Center. “That experience makes him superbly qualified to lead the Future Force Integration Directorate as the Army continues the development of the FCS program.”

The Army Capabilities Integration Center (ARCIC) is the Army's leader in the identification, design, development, and synchronization of capabilities into the Modular Force, both current and future, bringing together all Army as well as joint, interagency, multinational, and other partners to manage rapid change. Its measure of success is a campaign-quality Army with joint and expeditionary capabilities.

For more information on the ARCIC, visit the center's Web site at <<http://www.arcic.army.mil/>>.

### DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 26, 2006)

#### FLAG OFFICER ASSIGNMENTS

**C**hief of Naval Operations Adm. Mike Mullen announced the following flag officer assignments:

Rear Adm. Steven L. Enewold is being assigned as vice commander, Naval Air Systems Command, Patuxent River, Md. Enewold is currently serving as director for Joint Strike Fighter, Office of the Secretary of Defense, Washington, D.C.

Rear Adm. (lower half) John C. Orzalli is being assigned as commander, Mid-Atlantic Regional Maintenance Center, Norfolk, Va. Orzalli is currently serving as deputy director, Fleet Readiness Division, N43B, Office of the Chief of Naval Operations, Washington, D.C.

Rear Adm. (lower half)(selectee) Steven R. Eastburg is being assigned as assistant commander for Research and Engineering, Air 4.0, Naval Air Systems Com-



mand/commander, Naval Air Warfare Center Aircraft Division (AD00), Patuxent River, Md. Eastburg is currently serving as deputy program executive officer for Air, Antisubmarine Warfare, Assault, and Special Mission Programs, Patuxent River, Md.

Rear Adm. (lower half)(selectee) James P. McManamon is being assigned as deputy commander for Warfare Systems Engineering, SEA-06, Naval Sea Systems Command, Washington, D.C. McManamon is currently serving as special assistant to the assistant secretary of the Navy for research, development, and acquisition, Office of the Secretary of the Navy, Washington, D.C.

Rear Adm. (lower half)(selectee) Christopher J. Mossey is being assigned as commander, Pacific Division, Naval Facilities Engineering Command, Pearl Harbor, Hawaii. Mossey is currently serving as chief of staff, Naval Facilities Engineering Command, Washington, D.C.

### FROM THE WHITE HOUSE (JUNE 30, 2006)

#### **MCQUEARY NOMINATED AS DIRECTOR FOR PENTAGON'S OPERATIONAL TEST AND EVALUATION**

President Bush has nominated Charles McQueary to fill the position of director, operational test and evaluation (DOT&E). He succeeds Thomas Christie, who retired in 2005. McQueary is a former senior advisor to the under secretary for science and technology, Department of Homeland Security. Before becoming a senior advisor at DHS, he was the agency's under secretary for science and technology.

McQueary holds bachelor's, master's, and doctorate degrees from the Massachusetts Institute of Technology. He has also served as the president of advanced technology systems at General Dynamics.

### DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 29, 2006)

#### **FLAG OFFICER ANNOUNCEMENT**

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nomination:

Navy Rear Adm. David J. Venlet, for appointment to the grade of vice admiral and assignment as commander, Naval Air Systems Command, Patuxent River, Md. Venlet is currently serving as program executive officer for Tactical Aircraft Programs, Patuxent River, Md.

### DEPARTMENT OF DEFENSE NEWS RELEASE (JULY 7, 2006)

#### **GENERAL OFFICER ASSIGNMENTS**

The chief of staff, Air Force announces the assignments of the following general officers:

Maj. Gen. (select) Ronald R. Ladnier, director, resource integration, deputy chief of staff, logistics, installations and mission support, Headquarters United States Air Force, Pentagon, Washington, D.C., to vice commander, Tanker Airlift Control Center, Air Mobility Command, Scott AFB, Ill.

Brig. Gen. Charles R. Davis, deputy director, Joint Strike Fighter Program, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Pentagon, Washington, D.C., to director, Joint Strike Fighter Program, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Pentagon, Washington, D.C.

# DAU Alumni Association

## JOIN THE SUCCESS NETWORK

The DAU Alumni Association opens the door to a worldwide network of Defense Acquisition University graduates, faculty, staff members, and defense industry representatives—all ready to share their expertise with you and benefit from yours.



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- Stay connected to DAU and link to other professional organizations.
- Keep up to date on evolving defense acquisition policies and developments through DAUAA newsletters and symposium papers.
- Attend the DAUAA Annual Acquisition Community Conference/Symposium and earn Continuous Learning Points (CLPs) toward DoD continuing education requirements.

Membership is open to all DAU graduates, faculty, staff, and defense industry members. It's easy to join, right from the DAUAA Web site at <http://www.dauaa.org>.

For more information, call (703) 960-6802 or (800) 755-8805, or e-mail [dauaa@erols.com](mailto:dauaa@erols.com).



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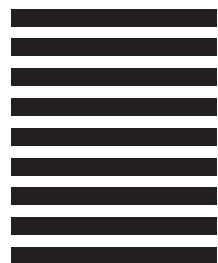
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# Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

## Surfing the Net

### Acquisition Central

[http://acquisition.gov/](http://acquisition.gov)

Shared systems and tools to help the federal acquisition community and the government's business partners conduct business efficiently.

### Acquisition Community Connection (ACC)

<http://acc.dau.mil>

Policies, procedures, tools, references, publications, Web links, and lessons learned for risk management, contracting, system engineering, total ownership cost.

### Advanced Concept Technology Demonstrations (ACTDs)

[www.acq.osd.mil/actd/](http://www.acq.osd.mil/actd/)

ACTD's accomplishments, articles, speeches, guidelines, and POCs.

### Aging Systems Sustainment and Enabling Technologies (ASSET)

<http://asset.okstate.edu/asset/index.htm>

A government-academic-industry partnership. ASSET program-developed technologies and processes increase the DoD supply base, reduce time and cost associated with parts procurement, and enhance military readiness.

### Air Force (Acquisition)

[www.safaq.hq.af.mil/](http://www.safaq.hq.af.mil/)

Policy; career development and training opportunities; reducing TOC; library; links.

### Air Force Materiel Command (AFMC)

<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.

### Assistant Secretary of the Army (Acquisition, Logistics & Technology)

<https://webportal.saalt.army.mil/>

ACAT Listing; ASA(ALT) Bulletin; digital documents library; ASA(ALT) organization; links to other Army acquisition sites.

### Association for the Advancement of Cost Engineering International (AACCI)

[www.aacei.org](http://www.aacei.org)

Promotes planning and management of cost and schedules; online technical library; bookstore; technical development; distance learning; etc.

### Association of Old Crows (AOC)

[www.crows.org](http://www.crows.org)

News; conventions, courses; *Journal of Electronic Defense*.

### Committee for Purchase from People Who are Blind or Severely Disabled

[www.jwod.gov](http://www.jwod.gov)

Information and guidance to federal customers on the requirements of the Javits-Wagner-O'Day (JWOD) Act.

### Defense Acquisition University (DAU)

[www.dau.mil](http://www.dau.mil)

DAU Course Catalog; *Defense AT&L* magazine and *Defense Acquisition Review Journal*; course schedule; policy documents; guidebooks; training and education news for the AT&L workforce.

### DAU Alumni Association

[www.dauaa.org](http://www.dauaa.org)

Acquisition tools and resources; government and related links; career opportunities; member forums.

### DAU Distance Learning Courses

[www.dau.mil/registrar/enroll.asp](http://www.dau.mil/registrar/enroll.asp)

DAU online courses.

### Defense Advanced Research Projects Agency (DARPA)

[www.darpa.mil](http://www.darpa.mil)

News releases; current solicitations; "Doing Business with DARPA."

### Defense Electronic Business Program Office (DEBPO)

[www.acq.osd.mil/scst/index.htm](http://www.acq.osd.mil/scst/index.htm)

Policy; newsletters; Central Contractor Registration (CCR); assistance centers; DoD EC partners.

### Defense Information Systems Agency (DISA)

[www.disa.mil](http://www.disa.mil)

Structure and mission of DISA; Defense Information System Network; Defense Message System; Global Command and Control System.

### Defense Modeling and Simulation Office (DMSO)

[www.dmsso.mil](http://www.dmsso.mil)

DoD Modeling and Simulation Master Plan; document library; events; services.

### Defense Systems Management College (DSMC)

[www.dau.mil](http://www.dau.mil)

DSMC educational products and services; course schedules; job opportunities.

### Defense Technical Information Center (DTIC)

[www.dtic.mil/](http://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.

### Director, Defense Procurement and Acquisition Policy (DPAP)

[www.acq.osd.mil/dpap](http://www.acq.osd.mil/dpap)

Procurement and acquisition policy news and events; reference library; DPAP organizational breakout; acquisition education and training policy, guidance.

### DoD Defense Standardization Program

[www.dsp.dla.mil](http://www.dsp.dla.mil)

DoD standardization; points of contact; FAQs; military specifications and standards reform; newsletters; training; nongovernment standards; links.

### DoD Enterprise Software Initiative (ESI)

[www.esi.mil](http://www.esi.mil)

Joint project to implement true software enterprise management process within DoD.

### DoD Inspector General Publications

[www.dodig.osd.mil/pubs/](http://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/](http://www.acq.osd.mil/ott/)

Information about and links to OTT's programs.

### DoD Systems Engineering

[www.acq.osd.mil/ds/se](http://www.acq.osd.mil/ds/se)

IPolicies, guides and other information on SE and related topics, including developmental T&E and acquisition program support.

### Earned Value Management

[www.acq.osd.mil/pm](http://www.acq.osd.mil/pm)

Implementation of earned value management; latest policy changes; standards; international developments.

### Electronic Industries Alliance (EIA)

[www.eia.org](http://www.eia.org)

Government relations department; links to issues councils; market research assistance.

### Federal Acquisition Institute (FAI)

[www.faionline.com](http://www.faionline.com)

Virtual campus for learning opportunities; information access and performance support.

### Federal Acquisition Jump Station

<http://prod.nais.nasa.gov/pub/fedproc/home.html>

Procurement and acquisition servers by contracting activity; CBDNet; reference library.

### Federal Aviation Administration (FAA)

[www.asu.faa.gov](http://www.asu.faa.gov)

Online policy and guidance for all aspects of the acquisition process.

### Federal Business Opportunities

[www.fedbizopps.gov/](http://www.fedbizopps.gov/)

FedBizOpps.gov is the single government point-of-entry for federal government procurement opportunities over \$25,000.

### Federal R&D Project Summaries

[www.osti.gov/fedrnd/about](http://www.osti.gov/fedrnd/about)

Portal to information on federal research projects; search databases at different agencies.

### Federal Research in Progress (FEDRIP)

<http://grc.ntis.gov/fedrip.htm>

Information on federally funded projects in the physical sciences, engineering, life sciences.

### Fedworld Information

[www.fedworld.gov](http://www.fedworld.gov)

Comprehensive central access point for searching, locating, ordering, and acquiring government and business information.

### Government Accountability Office (GAO)

[www.gao.gov](http://www.gao.gov)

GAO reports; policy and guidance; FAQs.

### General Services Administration (GSA)

[www.gsa.gov](http://www.gsa.gov)

Online shopping for commercial items to support government interests.

### Government-Industry Data Exchange Program (GIDEP)

[www.gidep.org/](http://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 (NTIS), and National Information Services Corporation (NISC) joint venture single-point access to government information.

### Integrated Dual-Use Commercial Companies (IDCC)

[www.idcc.org](http://www.idcc.org)

Information for technology-rich commercial companies on doing business with the federal government.

### International Society of Logistics

[www.sole.org](http://www.sole.org)



# Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

## Surfing the Net

Online desk references that link to logistics problem-solving advice; Certified Professional Logistician certification.

### International Test & Evaluation Association (ITEA)

[www.itea.org](http://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.

### U.S. Joint Forces Command

[www.jfcom.mil](http://www.jfcom.mil)

A "transformation laboratory" that develops and tests future concepts for warfighting.

### Joint Fires Integration and Interoperability Team

<https://jfiit.eglin.af.mil>

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 (JITC)

<http://jitc.fhu.disa.mil>

Policies and procedures for interoperability certification; lessons learned; support.

### Joint Spectrum Center (JSC)

[www.jsc.mil](http://www.jsc.mil)

Provides operational spectrum management support to the Joint Staff and COCOMs and conducts R&D into spectrum-efficient technologies.

### Library of Congress

[www.loc.gov](http://www.loc.gov)

Research services; Congress at Work; Copyright Office; FAQs.

### MANPRINT (Manpower and Personnel Integration)

[www.manprint.army.mil](http://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 (NASA)'s

#### Commercial Technology Office (CTO)

<http://technology.grc.nasa.gov>

Promotes competitiveness of U.S. industry through commercial use of NASA technologies and expertise.

### National Contract Management Association (NCMA)

[www.ncmahq.org](http://www.ncmahq.org)

"What's New in Contracting?"; educational products catalog; career center.

### National Defense Industrial Association (NDIA)

[www.ndia.org](http://www.ndia.org)

Association news; events; government policy; National Defense magazine.

### National Geospatial-Intelligence Agency

[www.nima.mil](http://www.nima.mil)

Imagery; maps and geodata; Freedom of Information Act resources; publications.

### National Institute of Standards and Technology (NIST)

[www.nist.gov](http://www.nist.gov)

Information about NIST technology, measurements, and standards programs, products, and services.

### National Technical Information Service (NTIS)

[www.ntis.gov/](http://www.ntis.gov/)

Online service for purchasing technical reports, computer products, videotapes, audiocassettes.

### Naval Sea Systems Command

[www.navsea.navy.mil](http://www.navsea.navy.mil)

Total Ownership Cost (TOC); documentation and policy; reduction plan; implementation timeline; TOC reporting templates; FAQs.

### Navy Acquisition and Business Management

[www.abm.rda.hq.navy.mil](http://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](http://www.onr.navy.mil/sci_tech)

News and announcements; acronyms; publications and regulations; technical reports; doing business with the Navy.

### Navy Best Manufacturing Practices Center of Excellence

[www.bmpcoe.org](http://www.bmpcoe.org)

National resource to identify and share best manufacturing and business practices in use throughout industry, government, academia.

### Naval Air Systems Command (NAVAIR)

[www.navair.navy.mil](http://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.ofc.osd.mil](http://www.ofc.osd.mil)

News on transformation policies, programs, and projects throughout the DoD and the Services.

### Open Systems Joint Task Force

[www.acq.osd.mil/osjtf](http://www.acq.osd.mil/osjtf)

Open Systems education and training opportunities; studies and assessments; projects, initiatives and plans; reference library.

### Parts Standardization and Management Committee (PSMC)

[www.dscc.dla.mil/psmc](http://www.dscc.dla.mil/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](http://www.pmi.org)

Program management publications; information resources; professional practices; career certification.

### Small Business Administration (SBA)

[www.sbaonline.sba.gov](http://www.sbaonline.sba.gov)

Communications network for small businesses.

### DoD Office of Small and Disadvantaged Business Utilization

[www.acq.osd.mil/sadbu](http://www.acq.osd.mil/sadbu)

Program and process information; current solicitations; Help Desk information.

### Software Program Managers Network

[www.spmn.com](http://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 (SPAWAR)

<https://e-commerce.spawar.navy.mil>

SPAWAR business opportunities; acquisition news; solicitations; small business information.

### System of Systems Engineering Center of Excellence (SoSECE)

[www.sosece.org](http://www.sosece.org)

Advances the development, evolution, practice, and application of the system of systems engineering discipline across individual and enterprise-wide systems.

### Under Secretary of Defense

#### (Acquisition, Technology and Logistics) (USD(AT&L))

[www.acq.osd.mil/](http://www.acq.osd.mil/)

USD(AT&L) documents; streaming videos; links.

### USD(AT&L) Knowledge Sharing

#### System (formerly Defense Acquisition Deskbook)

<http://akss.dau.mil>

Automated acquisition reference tool covering mandatory and discretionary practices.

### U.S. Coast Guard

[www.uscgmil](http://www.uscgmil)

News and current events; services; points of contact; FAQs.

### U.S. Department of Transportation MARITIME Administration

[www.marad.dot.gov/](http://www.marad.dot.gov/)

Information and guidance on the requirements for shipping cargo on U.S. flag vessels.

Links current at press time. To add a non-commercial defense acquisition/acquisition and logistics-related Web site to this list, or to update your current listing, please fax your request to *Defense AT&L*, (703) 805-2917 or e-mail [defenseatl@dau.mil](mailto:defenseatl@dau.mil). DAU encourages the reciprocal linking of its home page to other interested agencies. Contact: [webmaster@dau.mil](mailto:webmaster@dau.mil).

# Defense AT&L Writer's Guidelines in Brief

## Purpose

The purpose of *Defense AT&L* magazine is to instruct members of the DoD acquisition, technology & logistics (AT&L) workforce and defense industry on policies, trends, legislation, senior leadership changes, events, and current thinking affecting program management and defense systems acquisition, and to disseminate other information pertinent to the professional development and education of the DoD Acquisition Workforce.

## Subject Matter

**We do print** feature stories that include real people and events. Stories that appeal to our readers—who are senior military personnel, civilians, and defense industry professionals in the program management/acquisition business—are those taken from real-world experiences vs. pages of researched information. **We don't print** academic papers, fact sheets, technical papers, or white papers. We don't use endnotes or references in our articles. Manuscripts meeting these criteria are more suited for DAU's journal, *Defense Acquisition Review*.

*Defense AT&L* reserves the right to edit manuscripts for clarity, style, and length. Edited copy is cleared with the author before publication.

## Length

Articles should be 1,500 – 2,500 words. Significantly longer articles: please query first by sending an abstract and a word count for the finished article.

## Author bio

Include a brief biographical sketch of the author(s)—about 25 words—including current position and educational background. We do not use author photographs.

## Style

Good writing sounds like comfortable conversation. Write naturally; avoid stiltedness and heavy use of passive voice. Except for a rare change of pace, most sentences should be 25 words or less, and paragraphs should be six sentences. Avoid excessive use of capital letters and acronyms. Define *all* acronyms used. Consult "Tips for Authors" at <http://www.dau.mil/pubs/damtoc.asp>. Click on "Submit an Article to *Defense AT&L*."

## Presentation

Manuscripts should be submitted as Microsoft Word files. Please use Times Roman or Courier 11 or 12 point. Double space your manuscript and do not use columns or any formatting other than bold, italics, and bullets. *Do not embed or import graphics into the document file*; they must be sent as separate files (see next section).

## Graphics

We use figures, charts, and photographs (black and white or color). Photocopies of photographs are not acceptable.

Include brief numbered captions keyed to the figures and photographs. Include the source of the photograph. We publish no photographs or graphics from outside the DoD without written permission from the copyright owner. We do not guarantee the return of original photographs.

Digital files may be sent as e-mail attachments or mailed on zip disk(s) or CD. *Each figure or chart must be saved as a separate file* in the original software format in which it was created and must meet the following publication standards: JPEG or TIF files sized to print no smaller than 3 x 5 inches at a minimum resolution of 300 pixels per inch; PowerPoint slides; EPS files generated from Illustrator (preferred) or Corel Draw. For other formats, provide program format as well as EPS file. Questions on graphics? Call (703) 805-4287, DSN 655-4287 or e-mail [defenseatl@dau.mil](mailto:defenseatl@dau.mil). Subject line: *Defense AT&L graphics*.

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## Submission Dates

Issue	Author's 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.

## Submission Procedures

Submit articles by e-mail to [defenseatl@dau.mil](mailto:defenseatl@dau.mil) or on disk to: DAU Press, ATTN: Judith Greig, 9820 Belvoir Rd., Suite 3, Fort Belvoir VA 22060-5565. Submissions must include the author's name, mailing address, office phone number (DSN and commercial), 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.

