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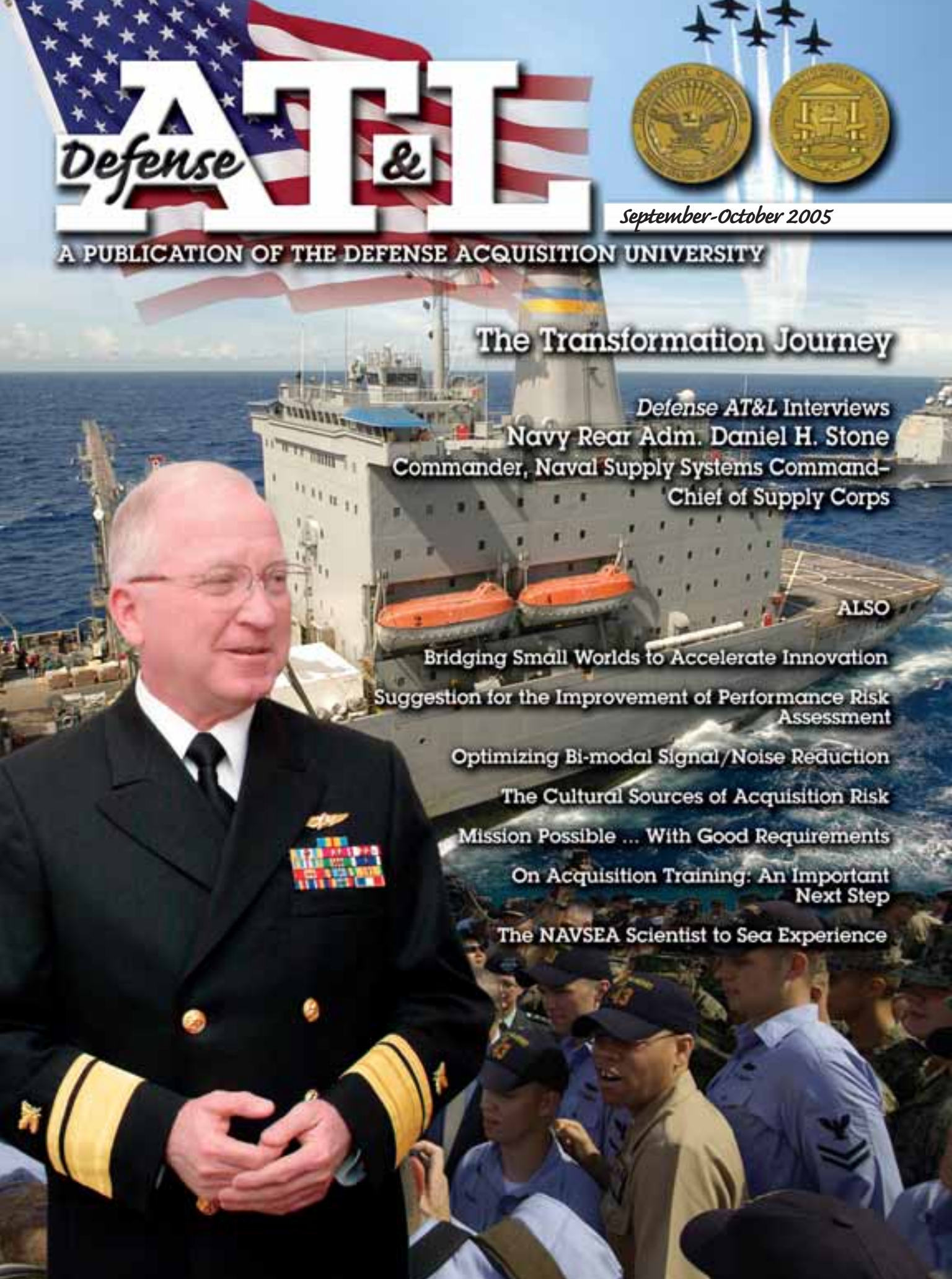

The Transformation Journey

Defense AT&L Interviews
Navy Rear Adm. Daniel H. Stone
Commander, Naval Supply Systems Command–
Chief of Supply Corps

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Bridging Small Worlds to Accelerate Innovation

Suggestion for the Improvement of Performance Risk Assessment

Optimizing Bi-modal Signal/Noise Reduction

The Cultural Sources of Acquisition Risk

Mission Possible ... With Good Requirements

On Acquisition Training: An Important Next Step

The NAVSEA Scientist to Sea Experience

Defense AT&L

A Publication of the

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The Transformation Journey

Rear Adm. Daniel H. Stone, SC, USN

Rear Adm. Daniel H. Stone, SC, USN, became commander, Naval Supply Systems Command and 43rd chief of Supply Corps in July 2004. Stone leads a worldwide workforce of over 24,000 military and civilian personnel who provide a broad array of logistics support and retail services to U.S. and allied naval forces. As chief of Supply Corps, he is responsible for community management of over 3,800 active and Reserve Supply Corps officers and over 32,000 active and Reserve enlisted personnel.

In April, Stone spoke with *Defense AT&L* from his office in Mechanicsburg, Pa., and shared his vision for NAVSUP, explaining how the organization is working to reverse over-specialization among the workforce, and how the creation of future sea bases will allow the rapid delivery of personnel and material from bases on the high seas all over the world.

Q

Adm. Stone, after about eight months [at the time of the interview] *in your current job, what is your vision for NAVSUP?*

A

In the words of the CNO [*chief of Naval Operations*]: "Warfighting capability is a given for our Navy." Readiness has been, is, and always will be NAVSUP's key focus, and it will be my focus. Enhancing our ability to deliver cost-wise combat capability through logistics to our warfighters and our customers will always be our greatest challenge.

Three major NAVSUP initiatives will enhance readiness and help us achieve the CNO's vision.

The first is transformation. In Transformation Phase I—initiated by my predecessor, Vice Adm. Justin D. McCarthy, in the summer of 2002—we better aligned the organization with the mission, collapsed flagpoles and stovepipes, and made major strides in singling up materiel management with a more global strategy. We are currently in the second phase, which focuses on identifying products and services and aligning corporate costs to our products and services. This phase also includes driving down the costs by introducing efficiency into processes with the deployment of Lean Six Sigma methods. [*Six Sigma is focused on reducing variation and improving process yield by following a problem-solving approach using statistical tools. Lean is primarily concerned with eliminating waste and improving flow.*]

The second part of this vision is recapitalizing our information technol-

Photograph by Staff Sgt. Kevin Moses, USA.

ogy systems with a Navy enterprise resource planning system. This involves completely replacing the IT logistics business systems we use today and installing the new system on over 251,000 desks across the Navy. The goal is a real-time central database that allows for flexibility and integration of the entire logistics pipeline.

The third initiative is our human capital strategy. This Navy-wide HCS effort will allow us to recapitalize our workforce in order to provide the right skills at the right time to accomplish the right work. HCS is to NAVSUP what recapitalization of weapons systems is to the Navy. We are a support community, and we follow the lead of the warfare communities. Our approach to HCS is to build a strategy for the supply community throughout the Navy—officer, enlisted, and civilian.

Through these three initiatives, we will keep pace with the modernization of our Navy. We need to think not only about the next two years, but also about what our Navy will look like in the next 20 years. That's the challenge that's been presented to this organization. The NAVSUP enterprise and the Navy's supply community have a history of success in meeting the mission of supporting the warfighter. That support continues today, and we are looking ahead to deliver the logistics capability the Navy needs tomorrow. Transformation is a journey, not a destination. This is a great team, and I have full confidence that we will deliver. Adding value and being a part of bringing this vision to fruition will be one of my greatest achievements.

Q

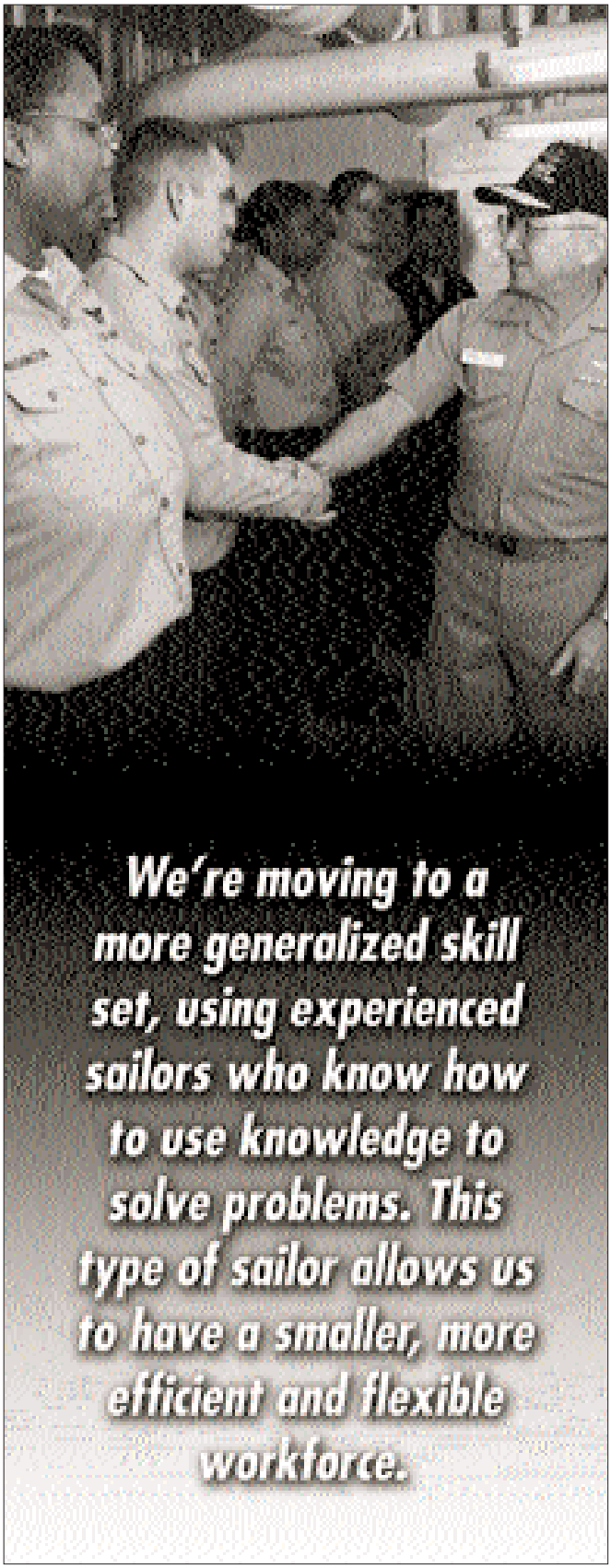
Can you expand on your remark that implementing HCS is to the Supply Corps and NAVSUP what recapitalization of weapons systems is to the fleet? How will HCS improve the readiness and responsiveness of your organization?

A

The right quality and number of trained professional joint warfighters are necessary to take on the challenges of the 21st century. We must always invest in our people and their warfighting excellence, which is expressed when the CNO says, "Mission first, people always." People remain at the heart of all we do and are the capital asset of this enterprise. We've already done considerable work in identifying the skills and knowledge we're going to need to build an intelligent and agile workforce.

Technological improvements over the last several decades have driven increased specialization. In turn, increased specialization has driven a larger force. Our platforms cannot accommodate, nor can we afford, further increases in staffing to support this specialization trend. Therefore, we're now moving to a more generalized skill set, using experienced sailors who know how to use knowledge to solve problems. This type of sailor allows us to have a smaller, more efficient, flexible workforce.

Rear Adm. Stone meets crew members during a routine visit aboard the nuclear-powered aircraft carrier USS Nimitz in the Pacific Ocean, March 2005. U.S. Navy photograph by Photographer's Mate 2nd Class Elizabeth Thompson.



Rear Adm. Daniel H. Stone, USN

Commander, Naval Supply Systems Command, and Chief of Supply Corps

Rear Adm. Daniel H. Stone became commander, Naval Supply Systems Command, and 43rd chief of Supply Corps in July 2004 and commands a worldwide workforce of over 24,000 military and civilian personnel. As chief of Supply Corps he is responsible for community management of over 3,800 active and Reserve Supply Corps officers and over 32,000 active and Reserve enlisted personnel.

Commissioned as an ensign in the United States Navy upon graduation from Villanova University, Pa., in 1971, Stone attended Navy Supply Corps School in Athens, Ga. At sea, he served as supply officer of the aircraft carrier, USS Ranger (CV 61), 1987-89; of the nuclear guided missile cruiser, USS Long Beach (CGN 9), 1982-84; and as the aviation supply officer aboard the aircraft carrier, USS Constellation (CV 64), 1976-78. He is qualified as a naval aviation supply officer.

A distinguished progression of shore assignments culminated in his immediate past position as director of logistics and engineering, North American Aerospace Defense Command and United States Northern Command, Peterson Air Force Base, Colo., from 2002 to 2004.

Stone holds a master's degree in business administration from the University of Florida. His decorations include the Defense Distinguished Service Medal, the Defense Superior Service Medal, the Legion of Merit with two gold stars, the Navy Meritorious Service Medal with three gold stars, and various personal and command awards.

To capitalize on common skills, we need to identify where we have unique skills, such as in the aviation and submarine communities, and ensure proper alignment of those skills and capabilities. We are also looking for ways to develop our senior enlisted workforce to assume division officer-level assignments. Specifically, as the Navy recapitalizes the fleet with new ships like the Littoral Combat Ship and DD(X) with smaller crews, our human capital strategy needs to identify and develop our supply enlisted troops who will man these ships to manage our support processes. .

Force shaping is about developing personnel programs and policies that provide an optimal blend of organizational alignment, personal growth, and personal development. On the civilian side of the enterprise, recruiting, training, and retaining the best people are top priorities for shaping the future NAVSUP workforce and ensuring consistently superior quality of service.

Q

Sea basing, putting in place mobile seagoing logistics platforms, promises to make the oceans a permanent base for conducting military operations by placing at sea an unprecedented amount of firepower, maneuver forces, command-and-control systems, and logistics capabilities that are needed to project and sustain military operations. How important is sea basing to the NAVSUP mission?

A

Critically important because access, overflight clearance, and basing rights for military operations around the world are no longer a given. Because our maneuver space is the high seas, our Navy has an advantage in overcoming those obstacles. Sea basing is intended to provide highly responsive and adaptive support to the combined U.S. joint forces and coalition forces.

The concept requires that all Services will develop logistics systems that support operations from a sea base. Current studies look at the ability of the sea base to conduct selective materiel offload and rapidly deliver personnel and materiel to and from the sea base via high-speed connectors. The increased use of joint logistics interoperability and leverage of new technologies will be crucial to sea basing. The concept focuses on "places" where the warfighter is not operating on bases, which gives the Navy the freedom to exploit and maneuver globally on the high seas. In many cases, these may be non-traditional operating areas. Sea basing will need to be a synchronized capability that's brought together as needed.

Q

How does the command ensure that the supply chain can meet surge requirements?

A

Your question really frames the mission of the logistics community. The DoD supply system is a global network of capability that brings together DoD and commercial capability to support the warfighter. We've tested the commercial vendors nationally to ensure that they could respond to a fleet sortie order within 96 hours.

For example, we rely heavily on the Defense Logistics Agency to satisfy our need for subsistence and clothing. Our extraordinary DLA teammate has established a global

The Virtual SYSCOM provides a consistent broad base of cost, technical, and programmatic support for shaping Navy investments that transcends individual commands and programs.

network of companies with proven capability, ready to supply units anywhere. Ships and submarines keep at least several weeks of food aboard. During our 2004 surge exercise, prime vendors were able to provide 98 percent of provisions for Navy customers.

The staging and movement of bombs or ordnance to our forward forces is the responsibility of the Naval Operational Logistics Support Center, a NAVSUP activity based in Norfolk, Va. NAVSUP is responsible for moving munitions to where they are needed, and we must respond to requisitions. NOLSC fully supports this endeavor, providing Navy and Marine Corps (aviation) non-nuclear ordnance life-cycle inventory management logistics support service.

When it comes to spare parts, my team manages a very complex supply chain. Navy, DLA, and commercial sector companies partner to position and replenish assets aboard our deployed units. To fund the supply chain to produce the desired output, we work closely with the fleet and the OPNAV [*Office of the Chief of Naval Operations*] staff to determine surge requirements and the necessary resource levels to achieve fleet supply readiness objectives.

Q

The basic concept of "Virtual SYSCOM" is one of shared goals and integrated operational concepts: a codified method that enables different Naval commands to work together to identify redundant processes and achieve numerous efficiencies in overall business management. How did the Virtual SYSCOM concept evolve?

A

In 2003, leadership from NAVSEA [*Naval Sea Systems Command*], NAVAIR [*Naval Air Systems Command*], SPAWAR [*Space and Naval Warfare Systems Command*], and NAVSUP came together to identify redundant processes and achieve numerous efficiencies in overall business management in support of the CNO's Sea Enterprise and Sea Power 21 goals and objectives.

Their goal was to collaborate in order to achieve cost-wise, integrated business and technical practices to better support the Navy. In 2004, the concept broadened, as cross-functional SYSCOM teams and "functional communities" were charged with examining their collective effectiveness, reducing their cost of doing business, and integrating their capabilities in a more seamless manner to better serve the warfighter.

The Virtual SYSCOM provides a consistent broad base of cost, technical, and programmatic support for shaping Navy investments that transcends individual commands and programs. The Virtual SYSCOM itself will be a center of excellence as it becomes a clearinghouse for sharing and promoting information on cross-SYSCOM efficiencies and best practices.

Q

And what's NAVSUP's role in the Virtual SYSCOM?

A

We now look at all logistics issues through a logistics partnership council, which was initiated by the Virtual SYSCOM and then expanded to include the fleet and Marines. This partnership will realize savings by identifying and streamlining common processes, standards, and policies.

Q

What is being done to ensure satisfactory relationships between NAVSUP and industry?

A

It's important that we always look for ways to leverage commercial capability to better manage the supply chain. Our supply chain management strategy necessitates that we work closely with our industry partners and employ their best practices.

For example, my team recently visited FedEx® facilities to look at best practices because the use of express transportation is a supply chain enabler.

The increased use of performance-based logistics contracts is an excellent example of NAVSUP's commitment to redefine traditional industry/government acquisition roles and responsibilities. Through performance-based logistics, a single supplier provides the materiel to meet

Naval aviation logistics is a good example of Navy and Marine Corps integration. Almost every aspect of aviation support runs through common processes, whether it is readiness reporting or requisitioning a repair part.

a customer's requirements, without the intervention of, or need for, organic inventory managers or intervening storage, materiel handling, and transportation systems. At the same time, there's increased product availability, reliability, technology insertion, and obsolescence management at a lower total cost to the fleet customer and the Navy.

We're applying PBLs across the Navy weapons systems, and there's a deliberate process to identify and implement PBL opportunities, including a thorough business case analysis. Thus far, the experience with these efforts has been positive.

Q
What impact will remote sensing have on the supply chain?

A
We've joined with the DoD logistics community to embrace automated systems. Supply officers around the globe can track the use and re-supply status of repair parts, consumables, etc., while on board Navy ships, in port, or under way. We have begun to employ RFID [*radio frequency identification*] similar to the technology that Wal-Mart and the commercial sector are using. Plans are to integrate this automated capability into new and existing platforms. Tomorrow's Navy platforms, like the DD(X) [*the U.S. Navy's future multi-mission surface combatant designed to deliver precision strike and fire support*], will monitor the status of on-board repair parts, consumables, and sustainment by means of information systems using RFID—not just on board but from support centers ashore. This distance support concept is key to successfully reducing crew sizes on the new ships that will be delivered in the next 10 to 15 years.

Q
What is NAVSUP doing to meet the just-in-time concept of supplies?

A
A just-in-time concept of support is one approach that can be used to deliver combat capability through logistics. The driver in selecting which method we use to provide support to our forces is the response timeframe required to meet the mission. Once we know what response is required, cost and rush factors are applied. In some cases, a just-in-time approach is best; in other cases, the rush/cost analysis will point us toward a positioned inventory solution. In all cases, we look to balance cost and response.

Q
How is NAVSUP working to support the Department of Navy's goal to standardize logistics across the Navy-Marine Corps team?

A
In 2003, the deputy CNO (fleet readiness and logistics) and the deputy commandant (installations and logistics) signed an agreement—a "terms of reference"—to integrate the two Services' logistics functions. The overall objective is to achieve a coordinated program that ensures naval logistics capabilities are used to their full potential in support of the fleets and forces under assignment to combatant commanders. Currently, there are 14 integration prototype initiatives grouped under requisition processing and supply support; information technology; materiel distribution and tracking; education and training; and operational logistics support.

Naval aviation logistics is a good example of Navy and Marine Corps integration. Almost every aspect of aviation support runs through common processes, whether it is readiness reporting or requisitioning a repair part. We use the same allowancing tools and run the same maintenance and supply information systems. This allows Blue/Green interoperability, regardless of whether it's a USMC Hornet Squadron flying off a carrier or a Navy squadron rotating through a Marine Corps Air Station in Japan. The shared support system works well today and is a good example of Marine Corps/Navy teaming.

Q
Adm. Stone, thank you for your time.

A
It's been a pleasure.

Bridging Small Worlds to Accelerate Innovation

Carderock Naval Laboratory Pilot

Gary Markovits ▪ Devin C. Markovits ▪ Joseph P. Teter

The President's Council on Competitiveness defines innovation as the ability of an organization to deliver a continuous stream of relevant products and services to its customers; and according to the National Innovation Initiative, innovation is the "single most important factor in determining America's success through the 21st century." But our nation and the defense industry are facing an innovation gap. Driven by the complexity, uncertainty, and pace of world events, the demand for innovations is outstripping our ability to provide them. To close the gap and meet demand, we must innovate smarter not harder.

The Myth of the Lone Inventor

Innovation can be seen as a progression of inventions, each solving the next in a series of challenges and moving the initial innovative idea one step further from mind to market, from concept to product. So the solution seems simple. We must invent solutions faster. And if we need more invention, let's just hire more inventors.

But where do we find more of those eccentric and prolific lone inventors? How do we recruit and hire the likes of a Thomas Alva Edison, a Henry Ford, a Leonardo da Vinci, or an Albert Einstein? The answer is we don't. Why not? Because the "lone inventor" is a myth.

Henry Ford has been credited with having invented mass production and with it introducing the Model T, a "car for the masses" that changed the course of our nation and energized the American economy. But a closer examination of history reveals that Ford didn't go off in a corner by himself and rack his brain giving birth to the concept. Rather, Ford's mass production was a new assemblage of existing concepts. Ford borrowed the ideas of interchangeable parts from firearms and sewing machine manufacturers, continuous workflow concepts from cereal and cigarette manufacturing, and assembly line concepts from the meat packing industry. After visiting Swift's Chicago meat packing plant in 1906, William Klann, head of Ford's engine department, is quoted by Andrew Hargadon in *How Breakthroughs Happen—The*

Gary Markovits *is founder and CEO of Innovation Business Partners. He developed the concepts of IP Driven Innovation™ to help R&D and engineering organizations increase their capacity for innovation.* **Devin Markovits** *is vice president of patent analysis for Innovation Business Partners and led the development of Akribis Search™, the natural language processing patent search engine used in IP Driven Innovation.* **Teter** *is the director for technology transfer at the Carderock division of the Naval Sea Systems Command, responsible for developing partnerships with industry to facilitate the transfer of intellectual property to and from the Carderock warfare center. He received his doctorate in physics from Temple University, Philadelphia, Pa.*

Surprising Truth About How Companies Innovate as saying, "If they can kill pigs and cows that way, we can build cars that way."

In a patent lawsuit over the invention of the automobile, Ford testified, "I invented nothing new. I simply assembled into a car the discoveries of other men behind whom were centuries of work. … Had I worked 50 or 10 or even five years before, I would have failed. So it is with every new thing. Progress happens when all of the factors that make for it are ready, and then it is inevitable. To teach that a comparatively few men are responsible for the greatest forward steps of mankind is the worst sort of nonsense."

Bridging Small Worlds to Build a Brave New Small World

Each of the industries Ford borrowed from represented a "small world" all of its own. And in general, each of the small worlds was isolated from the others. The meat packers didn't communicate with the sewing machine manufacturers who didn't communicate with the cereal processors. Ford's genius lay in bridging those small worlds to create a new "hybrid" small world for the auto industry. Ford hired key people—Walter Flanders from Singer Manufacturing Company and Max Wollering from International Harvester, for example. Wollering brought the concept of single-purpose tools to automobile mass production. "There was nothing new to me," Hargadon quotes him as saying, "but it might have been new to the Ford Motor Company because they were not in a position to have much experience along that line." The new science of networking would say that Ford was "bridging small worlds" and "reducing the degrees of separation." For an enlightening overview of the role of networking in innovation see "Knock, Knock, Knocking On Newton's Door," *Defense AT&L*, March-April 2005.

But doesn't this leave us with the same problem of finding key people and hiring them away from other small worlds? We can't always do that. Our budgets and other constraints won't allow it. So what are the alternatives?

Leveraging the World's Investment in R&D

Every year, the nations of the Organisation for Economic Co-operation and Development <www.oecd.org> spend over $500 billion on research and development. It is spread across every conceivable discipline and addresses a multitude of challenges. Over the years, these trillions of dollars spent on R&D have resulted in an enormous collection of inventions.

In recent years, more than half of the R&D investment has been made outside the United States. Fortunately for us, the United States is the world's largest marketplace, and because of that, any invention of any economic value, be it foreign or American, is filed in the U.S. patent system. So the U.S. patent database is more than a repository of the legal rights of inventors, it is a knowledge base of the leading-edge elements and relationships generated by all of the small worlds—the clusters of R&D—around the globe. Properly mined, the knowledge from the patent database can be used to bridge a multitude of small worlds, helping all of us invent solutions to the challenges of our own small worlds.

This is actually what the founding fathers intended when they implemented the patent system: In exchange for legal protection, the inventor had to publish his or her findings in a patent to "promulgate the arts and sciences." Even 200 years ago, the founding fathers understood how important it was to bridge small worlds and share knowledge.

Using Patents to Accelerate Innovation

In the fourth quarter of 2003, the Office of Naval Research decided to test this bridging concept using patent mining tools and techniques developed by Innovation Business Partners.

At the Carderock Naval Laboratory in Maryland, four teams were assembled. Each team consisted of five people selected from different organizations across the laboratory. Each team was given a different challenge. One team, for example, had to address corrosion, the Navy's single largest maintenance issue. Each team brought in experts to discuss its particular problem and define the challenge. The teams considered how others had attempted to solve the challenge, what the shortcomings of past solutions were, and what the attributes would be of an ideal solution.

Every Thursday for 10 weeks, the teams met separately for brainstorming sessions. Using Innovation Business Partners' very precise Akribis Search™ technology, the teams were fed "relevant" patents that came from other small worlds but addressed problems analogous to the Navy's. They analyzed the patents for the different elements and relationships other inventors had used to solve analogous problems, and they brainstormed how the same components might be used to solve their own challenge. These sessions never lasted more than an hour-and-a-half, and the intent was not to solve the challenge in the session, but rather to plant in the minds of the participants new elements and relationships and allow them to incubate over the weekend.

Every Monday, the teams held another brief meeting to harvest new ideas and refine the challenge in light of the new knowledge. The new knowledge was used to formulate the next round of patent mining and provide the patents for the following brainstorming session.

After 10 weeks, the pilot was complete. One measure of output was the number of invention disclosures. The 20

"1913 - Trying out the new assembly line"
By an unknown photographer, Detroit, Michigan, 1913. National Archives and Records Administration, Records of the Bureau of Public Roads

people produced 10 invention disclosures on a per capita basis—100 times the laboratory average for the previous year. Ideas that can't withstand the test of an invention disclosure review are worthless, but after passing that hurdle, the performance of the four teams was still 50 times the site average. And one year after the pilot, the processes introduced are still being credited with new inventions. Given the relationship between invention and innovation such dramatic increases in the rate of invention will accelerate innovation.

Denmark, Diapers, and Heart Pumps

The team addressing the corrosion challenge provides an enlightening example. In listening to experts and refining their challenge, they focused on the corrosion of pipes. Normally one might have expected them to pursue a pipe coating to inhibit the chemical reactions between the salty condensate that forms on pipes and the metal. However, this would still have left the Navy with the problem of the condensate dripping from the pipes. That problem is solved today with drip pans, buckets, mops, and a lot of sailors. But in tomorrow's Navy, there will be fewer sailors per ship for mop duty, so simply coating the pipes was not the ideal long-term solution.

What other small worlds have an analogous problem? In part, the answer came in the form of a set of Danish building patents. The environment in Denmark is such that Danish builders face similar problems in their homes, offices, schools, and hospitals. But the Danish solution was only 70 percent of what the team needed. The more extreme conditions on board ship require higher-performing materials that can wick away moisture without retaining any of it. It turns out this is a problem that has been thoroughly addressed in another small world—the small world of diapers. The team brainstormed a combination of the Danish building patents and modern diaper materials that produced a solution for 90 percent of the shipboard environments. However, there remained one extreme environment in which the solution would not work; that environment called for active removal of the moisture. It turns out this challenge is analogous to that of removing moisture from aortic heart pumps. In the end, a combination of the elements from the Danish building, the diaper, and the heart pump patents produced a total solution.

But the story doesn't end there. The team discovered that the Danish building patents had been licensed by a U.S. company that was manufacturing a product for hospitals and large industrial buildings. The team brought in a representative of that company, explained how their improved invention could address the maritime market, and initiated discussions to explore the possibility of the company's manufacturing the product for the Navy. In the end, the team estimated they had saved two years and $10 million in R&D costs. Not a bad return for three hours a week over 10 weeks.

Meta-ideas Close the Innovation Gap

In fact, during the 30 hours, the teams produced nine invention disclosures, three of which were filed as patent applications. This was an excellent return on investment, especially considering that the majority of the participants had no prior experience with the patent process. Long term, it can be reported that 53 percent of the participants are using the techniques learned in the pilot to continue to create intellectual property for the Navy. Several of the participants who had not previously worked on patents are now regularly submitting invention disclosures in the course of their duties.

Tools like those used in the Carderock pilot are known as "meta-ideas" (ideas that support the generation and propagation of other ideas). They are the "breeder reactors" of innovation, the tools that can help us close the innovation gap and generate more value for our customers.

In 2004, the Office of Naval Research conducted a second set of pilots to explore the use of meta-idea tools to define R&D investment strategies and rapidly identify commercial off-the-shelf solutions to urgent operational issues. Stay tuned—results of these pilots will be reported in future articles in *Defense AT&L*.

The authors welcome comments and questions. Gary Markovits can be contacted at gary@innovationbp.com, Devin Markovits at devin@innovationbp.com and Teter at joseph.teter@navy.mil.

A Suggestion for the Improvement of Performance Risk Assessment

Alexander R. Slate

Performance risk assessment has been more commonly known as past performance assessment. Only recently has the Air Force, at least, been referring to it as performance risk assessment.

The definitions in the left column of the sidebar on the next page are found in the *Past Performance Evaluation Guide*, U.S. Air Force, March 2003, Version 1.1. They are used in the evaluation of past performance information and in exact or near-exact form, have been found on the majority of proposal requests that I have seen used in Air Force programs. (The Office of the Secretary of Defense *Guide to Collection and Use of Past Performance Information*, Version 3, May 2003, contains very similar definitions.)

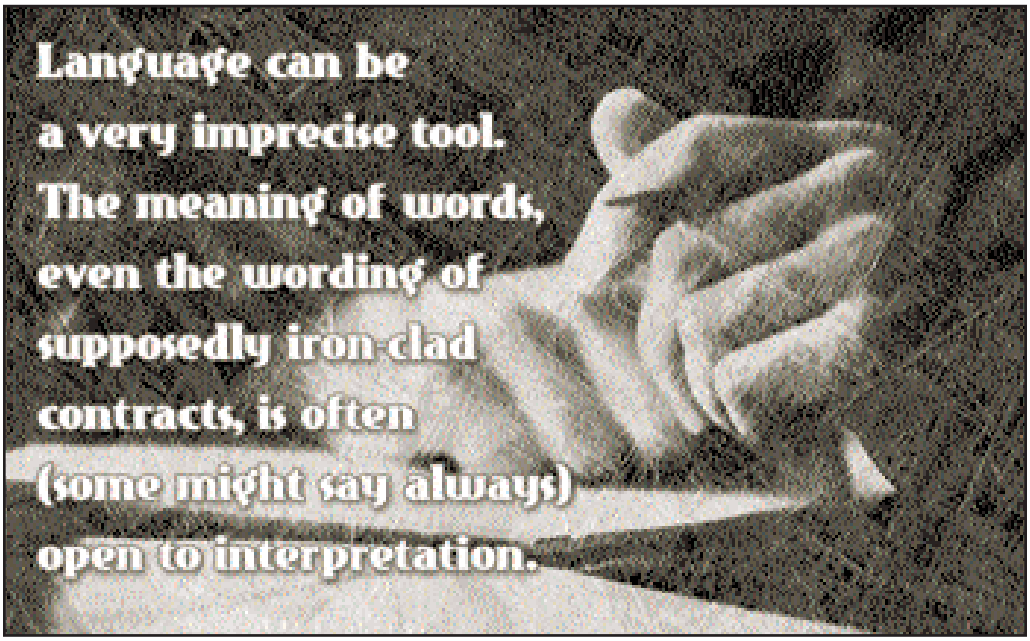
Language Issues

Only fairly recently have I become convinced of the potential benefits that past performance evaluations can give us in terms of choosing the right contractors for our work. Earlier, the Federal Acquisition Regulation requirement that past performance be at least as important as the most important non-cost/price factor didn't make sense to me. And while I am still not necessarily convinced that this stricture works in every situation, under certain conditions it makes great sense.

In my view, the best use of a source selection is to find a contractor who is truly looking for a win-win scenario, a contractor with the best interests of the government and its customers in mind, who intends to give the government fair value while making a reasonable profit. This doesn't necessarily mean choosing the contractor with the lowest cost or price, or even the contractor with the best cost or price in relation to having a technically superior proposal—though these things are certainly factors to consider.

Language can be a very imprecise tool. The meaning of words, even the wording of supposedly iron-clad contracts, is often (some might say always) open to interpretation. My understanding of tort law is that it often follows what is known as "the reasonable man interpretation": If a reasonable person could interpret something in a particular way, then that is a valid interpretation. So if we have a contractor who isn't driven by what we (and by extension, the warfighters) want and/or need, but is driven instead by the desire to give us what he or she wants to give us, then the specific wording of the contract may not matter, if it could reasonably be interpreted to mean what the contractor understands it to mean, not what we understand.

Conversely, if we have a contractor who's driven by a desire to work with us to meet our requirements, the specific wording of the contract may not be what's important. We will get what we need anyway. And that's a good thing!



Slate *currently works as a business integration specialist for 311 HSW/XP at Brooks City-Base, Texas.*

So choosing a contractor with a good attitude is very important. While we cannot evaluate attitude, we *can* evaluate actions that might indicate attitude, and one of the most effective ways is past performance.

One way of looking at a contractor response to a request for proposal (RFP) is to think of the proposal as a promise of what the contractor intends to do if awarded the contract. Our technical (or mission-capability, to be more correct) evaluation of the proposal is to determine whether this promise meets our requirements. Past performance evaluations answer the question, "Does this contractor (or contractor team) have a history of living up to its promises?"

Given these premises, the obvious question is this: What is wrong with the rating definitions as they stand? Don't they answer the promise-keeping question? Well, yes they do—but not necessarily in a complete manner.

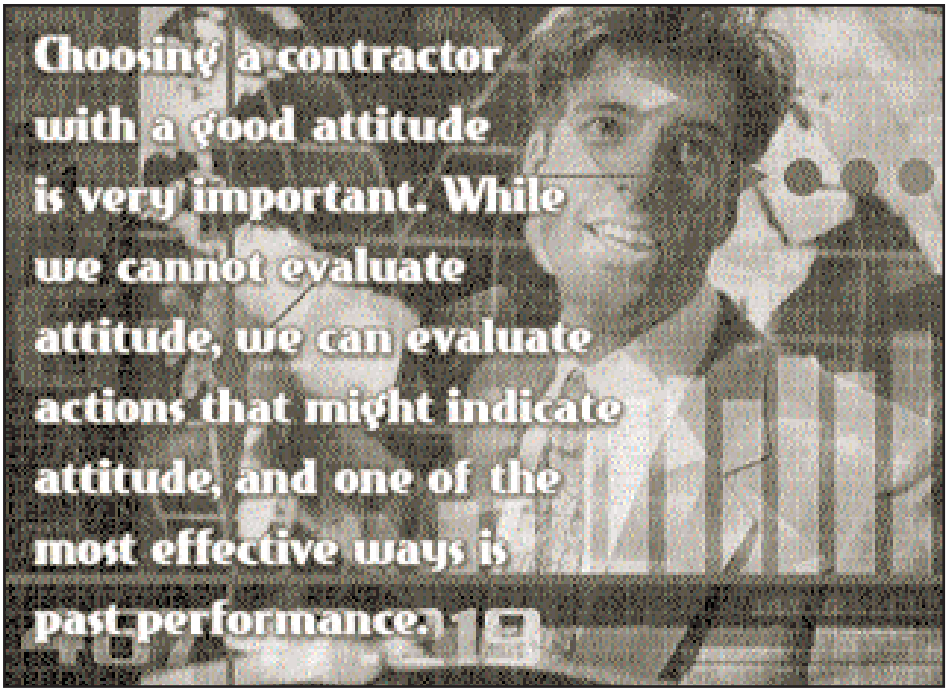
The Need for Alternatives

Let us look at just one definition—that of "exceptional": "The contractor's performance meets contractual requirements and exceeds many (requirements) to the Government's benefit." That's certainly exceptional, and I have no problem with it as such. However, to it is added: "The contractual performance was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective." I mostly like the second half of the sentence but not when coupled with the first half. And it is the whole *gestalt* of the first and second sentences *together* that defines exceptional.

So what do I feel is wrong with "The contractual performance was accomplished with few minor problems …"? The lack of problems is not what defines, for me, an exceptional contractor. Some of the work we do really pushes the envelope in terms of performance, and to be brutally honest, we rarely budget the right amount of money or time to execute a lot of these programs correctly. If you're to encounter only a few minor problems, you have to be extremely lucky and have everything go your way, or you have a contractor who isn't pushing the envelope. I would rather have

Past Performance Rating Definitions

Existing Definitions	Alternative Definitions
BLUE/EXCEPTIONAL	
The contractor's performance meets contractual requirements and exceeds many (requirements) to the Government's benefit. The contractual performance was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.	The contractor's performance meets contractual requirements and exceeds many (requirements) to the Government's benefit. In addition, if confronted with problems, the contractor took corrective actions that were highly effective and showed significant effort directed to working with the government. Such corrective actions were often taken proactively.
PURPLE/VERY GOOD	
The contractor's performance meets contractual requirements and exceeds some (requirements) to the Government's benefit. The contractual performance was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	The contractor's performance meets contractual requirements and exceeds some (requirements) to the Government's benefit. In addition, the contractual performance was accomplished with some minor problems, and when confronted with problems, minor or otherwise, the contractor took corrective actions that were effective.
GREEN/SATISFACTORY	
The contractor's performance meets contractual requirements. The contractual performance contained some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	The contractor's performance meets contractual requirements. The contractual performance contained some problems for which corrective actions taken by the contractor were satisfactory or for which exceptional efforts were taken but still proved not to be completely effective for reasons typically beyond the contractor's control.
YELLOW/MARGINAL	
Performance does not meet some contractual requirements. The contractual performance reflects a serious problem for which the contractor has not yet identified corrective actions or the contractor's proposed actions appear only marginally effective or were not fully implemented.	Performance does not meet some contractual requirements. The contractual performance reflects minor problem(s) for which the contractor did not identify corrective actions, or the contractor's proposed actions for problems (serious or minor) appeared only marginally effective, or (when under contractor control) were not fully implemented.
RED/UNSATISFACTORY	
Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	Performance does not meet most contractual requirements, and recovery is not likely in a timely manner. The contractual performance contains serious problem(s) for which the contractor's corrective actions were ineffective or reflected serious problems for which the contractor did not identify corrective actions.
NOT APPLICABLE	
Unable to provide a score	



a contractor who runs up against problems (minor or not) and takes exceptional action to work through them, taking "highly effective corrective actions."

But this situation would not be true for those types of efforts where we are not pushing the envelope or where we are asking for "standard" commercially available goods and services, particularly for things like service contracts. Here, we refer to items such as purchasing cars for a motor pool, or janitorial services for our buildings.

One Size Doesn't Fit All

I can foresee the need for an alternative standard, where the past performance rating definitions are appropriate to the needs of the effort. One set would be the existing definitions shown on the preceding page. These would serve situations where we are seeking commercially available goods and services. I would rewrite the definitions for the second set as shown on the right in the sidebar. These would be applied when we are attempting to expand the state of the art, particularly when there is a lot of research and development to be accomplished.

Some RFPs at Brooks City-Base have attempted to address this issue. Over the past two years, common language in Air Force Center for Environmental Excellence RFPs has included the following paragraphs in the Section M and in the instructions to the past performance response:

RFP Sec. M—*Where relevant performance record indicates performance problems, the Government will consider the number and severity of the problems and the appropriateness and effectiveness of any corrective actions taken (not just planned or promised). The Government may review more recent contracts or performance evaluations to ensure corrective actions have been implemented and to evaluate their effectiveness.*

PPI Form— *Please provide a brief description of service provided under this contract. Include details that will indicate specific efforts of key personnel identified in Question 14 below. Clearly demonstrate management actions employed in overcoming problems and the effects of those actions, in terms of improvements achieved or problems rectified. This may include a discussion of efforts accomplished by the Offeror, or applicable Teaming Partner, to resolve problems encountered on prior contracts as well as past efforts to identify and manage program risk. For example, submit quality performance indicators or other management indicators that clearly support that an Offeror, or applicable Teaming Partner, has overcome past problems.*

An Outrageous Suggestion?

To take it one step further, I might suggest asking offerors to address the verbiage below in their proposals. It is very similar in concept to the paragraphs presented above, but it is (perhaps) just a bit more direct. The answer would provide excellent potential for determining an aspiring contractor's commitment to real performance.

Please present a situation during a program where a significant problem or problems developed. Explain the origins and causes of the problem(s) and how the problem(s) was/were detected. If applicable, explain how the problems were solved including (as applicable) how the customer was informed or brought into the process of fixing the problem. Alternatively, if no such situation exists, present a situation where a significant problem was avoided.

My new ratings definitions and the suggestion for a proposal evaluation question aren't going to fit all acquisitions. When we are looking for a system or service in well-defined, well-practiced areas, the current guides serve well. But there are applications where we're pushing the envelope of performance, where there are a lot of potential unknowns, or where we feel that our picture of what we might really need could evolve during the course of an acquisition—and those situations are where my suggestions would have value.

The author welcomes comments and questions. Contact him at alex.slate@brooks.af.mil.

Optimizing Bi-modal Signal/ Noise Reduction

A Fairy Tale

Maj. Dan Ward, USAF

This is a fairy tale, so naturally, it takes place far, far away and Once Upon A Time. Like many fairy tales, it is about a boy named Jack who lives on a small farm.

Now Jack was a clever boy, as fairy tale Jacks often are, and marvelously gifted at fashioning wonderful devices to make farm life easier. Whenever someone in the local village or at a neighboring farm encountered a frustration or difficulty, they told Jack about it. Jack would listen carefully, eyes big and hands still. Sometimes he asked questions, and sometimes he closed his eyes to listen better. Presently he would get up and wander about his farm, collecting a bit of wire here, a block of wood there, a strip of leather, a flower, a pebble, a handful of hay. He had a small workbench upon which he would lay his treasures, as he used the bits and pieces to fashion a new axe handle, perhaps, or a butter churn or horse bridle.

Such care did he take that his delightful creations seldom wore out or broke. The fortunate recipients of Jack's skill always remarked how much smoother, lighter, and better were the products of his hands than anything they'd seen before.

As I mentioned at the start, this is a fairy tale, and we have arrived at the moment where the fairy herself must be introduced. I am sorry to tell you the fairy Jack encountered was a naughty fairy, not the nice and gentle variety that shows up in certain other tales. She had suffered no offense, real or imagined, from Clever Jack, and thus had no excuse whatsoever for the mischief she caused.

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 has authored or co-authored 17 articles, an interview with pirates, and a poem for Defense AT&L. This is his first fairy tale.*

Illustration by Jim Elmore.

From Our Readers

Ward/Quaid Punks Strike a Chord

Nicely written! [*"Everything We Need to Know About Program Management, We Learned from Punk Rock," July-August 2005*.] I'm a month out from taking over PMA-226, the Marine CH-46 helo program, and I've been reading everything I can find to get in the right frame of mind. Ward and Quaid's article did it. Who'd ever expect to find Gonzo writing in *Defense AT&L*?

Rock on,

Lt. Col. H. J. Hewson
U.S. Marine Corps

Turk and Gadeken Give Sound Advice

Wayne Turk's excellent article, "Quality Management—A Primer" in the July-August issue was chock full of practical tips, turning an abstract term (quality) into something tangible, and passing on expertise so that our younger, less experienced managers don't have to learn the hard way—by trial and error.

I especially liked the emphasis on keeping a management reserve. Thank you, Mr. Turk, for pointing out that it is not always popular, but is still a prudent thing to do. On all projects, unexpected things happen, so why not keep some extra funds to deal with extra work?

I also appreciated the emphasis on using Earned Value Management. Too often, especially in my area (software), people want to state that they're 50 percent, 80 percent, or 95 percent complete without any objective basis for coming to such a conclusion. EVM sure beats gut-feel any day.

Perhaps the most important nugget was about requirements: avoid scope creep without additional funds; and prioritize requirements so that you know what can be eliminated if budget cuts come. Better to have a less functional product than no product at all!

More Than Rules

I also enjoyed Owen Gadeken's article "Ethics in Program Management" in the same issue. I agree strongly that organizational culture and leadership are critical factors in maintaining an ethical organization. I liked his analysis of value conflicts: "right vs. wrong" and "right vs. right." It's so easy for people to lose sight of the six pillars (basics) of ethics, and how hard it can be to follow all of them at the same time. I would like to add a third values conflict: "right vs. the appearance of wrong." Something can be legitimate (like taking a modest gift from a contractor) yet can give the appearance of not being okay. I suggest that people—especially leaders—avoid even the appearance of impropriety, as subordinates are always watching and following examples.

I think it is interesting that more people don't realize, as the article points out, that "ethics is ... much more than just a set of rules." The recent mandatory all-hands training on ethics seemed to me to be education on the rules, and not the values. I'd be interested in knowing what Dr. Gadeken thought of it.

Al Kaniss
Naval Air Systems Command

The fairy's name was Garble. Everyone agrees this is not a nice name for a fairy at all, and it may have accounted somewhat for her disagreeable disposition. Truly, how well behaved could a fairy be if she is given a name like that? Can you imagine a good fairy named Garble? Nor can I.

Being a naughty fairy, Garble would amuse herself by engaging in fairy mischief, such as hiding Jack's knife or pinching his leg. One day, a farmer came to Clever Jack asking him to make a new left-handed smoke-shifter. Garble was hiding in a shadow, listening to the men talk. When the farmer said "left-handed smoke shifter," Garble reached out and snatched the word "left" from the air between them and replaced it with the word "right." So Jack built a beautiful right-handed smoke-shifter. This did not suit the farmer at all, for as it happened, thanks to an encounter with a sharp piece of farm machinery, he had only one hand, and it was not the right one.

The confusion pleased Garble greatly.

The situation with the farmer was soon put right—or rather, put left—and Jack went on about his business. But Garble loved her new game and poured all her effort into switching one word for another and generally making a mess of things (which naughty fairies love to do). Jack took great pains to make sure he understood the requests he received, and Garble took great pains to change every single one. Whenever a farmer said "left," Garble made sure Jack heard "right." To make sure he'd got the request right, Jack would repeat it, saying "right," which, thanks to Garble, sounded like "left" to the farmer. Both believed

they had heard and understood the other, even though they actually had not. This made Garble laugh and laugh as she lay down under her toadstool to sleep at night.

Poor Jack found it all very frustrating, and so did the local farmers. Jack decided the problem was that he was not being careful enough, so he began to be very careful indeed, which took a lot of time. Before Garble came on the scene, Jack would spend a few minutes listening to a farmer describe the thing he needed. But now he was spending hours or even an entire day, trying to make sure he understood the farmer's requirements so that the tool he built would be precisely what the farmer was asking for. Then he would spend weeks building even the simplest tools. But that naughty Garble made sure not one was ever right. Eventually, because things took so long and were always wrong, farmers stopped visiting Jack. This made Jack very sad. It made the farmers sad too. The only happy one was Garble.

For all Jack's cleverness, he didn't know what to do about this strange problem, or even what the problem really was (remember, Jack didn't know he was in a fairy tale, and he didn't know about Garble). But being a resourceful boy, when he didn't know what to do, Jack did something anyway. In this case, he took a walk. He walked and walked, past farms and orchards, past pigs and geese, past green hills and more green hills. And this was the best thing in the world he could have done.

If you've not read any fairy tales recently, particularly the old fairy tales, you may not know that most fairies are quite strictly tied to specific locations. A dryad, for example, is a fairy who lives in a tree, while a naiad is a fairy who lives in a stream. Neither can venture far from her home. I am afraid I don't know whether Garble was a dryad or a naiad, as there were both streams and trees near Jack's farm. It doesn't really matter. The important thing is this: When Jack wandered off, Garble was unable to accompany him.

Jack walked and walked until he came across a farmer named Ulla, who owned an apple orchard. Farmer Ulla was exceedingly sad because it was harvest time and his favorite apple-picker-on-a-stick had broken. Ordinarily, he would have brought it to Jack, but thanks to Garble, he didn't dare. That is why the good farmer was sitting by the side of the road, looking sadly out at his orchard and holding his broken picker. Jack walked past without saying a word.

To this day, nobody knows why Jack turned around. Maybe the wind was blowing just so, maybe the sunlight glinted off a shiny red apple, maybe the road itself turned him around. Perhaps Jack's magic shoes, if they were magic shoes, brought him back to talk with Farmer Ulla. Or maybe he just decided to do it. Whatever the reason, Jack plopped down next to Farmer Ulla and said, "Hello." He asked about the apple picker. He turned it over in his hands, and then without further ado, he fixed it. Since Garble was far away, he fixed it with no problem whatsoever. Farmer Ulla was amazed! He jumped up, spun around three times, and got the hiccups. He then shook Jack's hand quite vigorously and ran off to finish the harvest.

All it took was for Jack to walk around and talk with the farmers on their own farms.

Jack sat there, happily puzzled, and asked himself one of the nicest questions a person can ask: "What went right?" In order to answer that question, he had to ask himself a second one: "What was different about this situation?" As near as he could figure, the only thing different was the place. You see now how clever Jack was?

So Jack jumped up and ran off to the next farm. The farmer was building a fence and needed a two-handed hole digger. After a few minutes' conversation Jack was able to make one for him, right on the spot. The same sort of thing happened at each place Jack visited on his way back to his own house. Without Garble around to confuse things, Jack and the farmers were able to understand each other quite well.

All it took was for Jack to walk around and talk with the farmers on their own farms.

As long as Jack stayed out of Garble's reach, he and the farmers understood each other. If you needed a two-handed hole digger, that's exactly what you would get—never a two-holed hand digger, which is something hardly anyone needs. And that's how things went for the rest of Clever Jack's long, happy life (at least until the Invisible Giants came along. But that's a story for another day).

Of course, this is just a fairy tale. It took place in a faraway land that is nothing like the place where you live. And anyway, you don't believe in fairies like Garble, do you? Certainly not.

The author welcomes comments and questions. Contact him at daniel.ward@rl.af.mil.

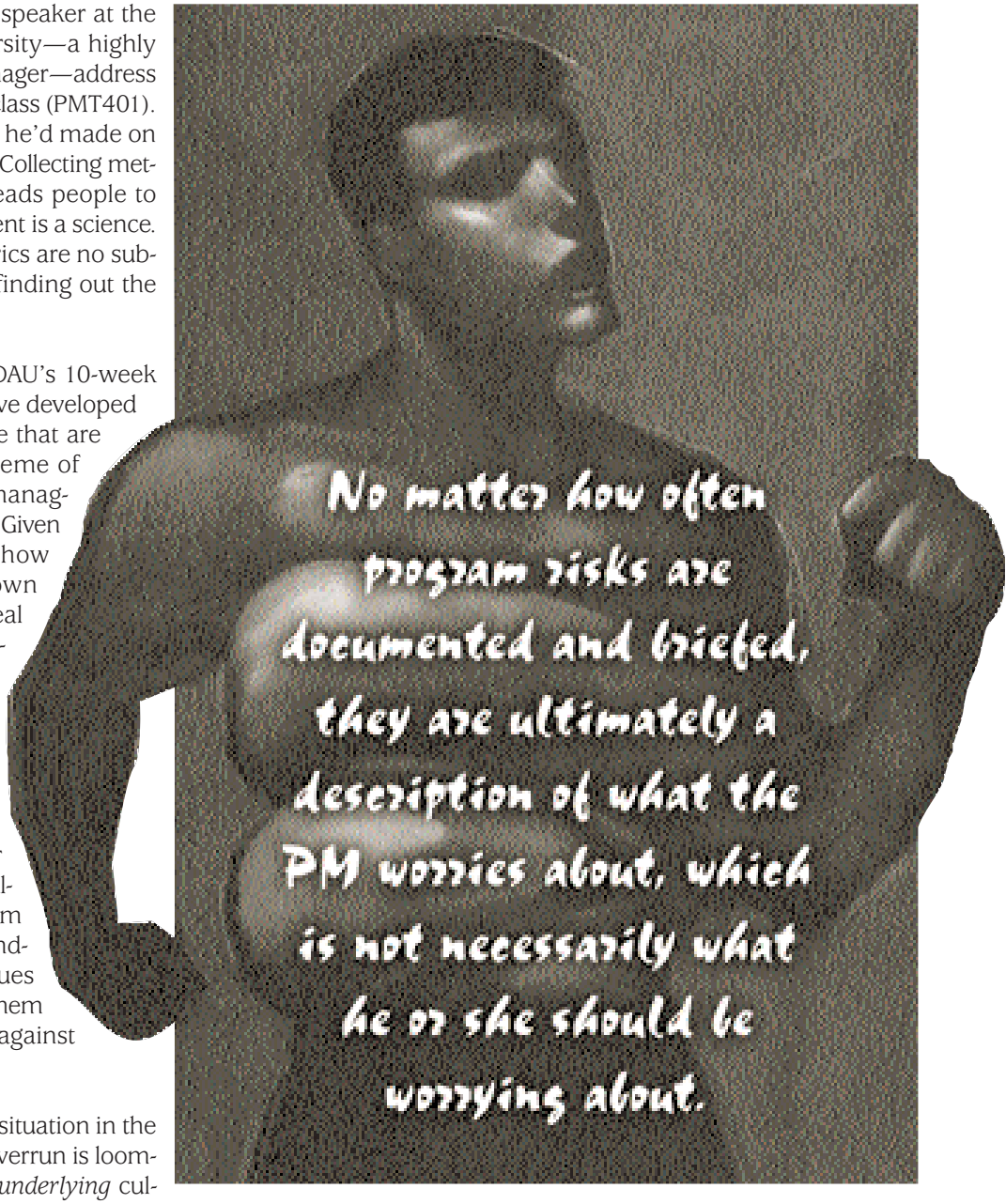
The Cultural Sources of Acquisition Risk

Part I

Christopher S. Roman

I listened recently to a guest speaker at the Defense Acquisition University—a highly accomplished program manager—address our program management class (PMT401). He emphasized a point that he'd made on previous visits to the university: "Collecting metrics poses a subtle danger. It leads people to believe that program management is a science. But it's not science, it's art. Metrics are no substitute for walking around and finding out the real problems."

As a case writer for PMT401, DAU's 10-week program managers' course, I have developed 15 cases and read dozens more that are used in the course. A major theme of the course is identifying and managing risks in acquisition programs. Given that theme, I was struck by how many of the cases (both my own and those written by others) deal with the art rather than the science of program management. Even if the immediate issue in the case is technical or financial or contractual, the underlying problem is frequently associated with roles, power structures, agendas, and other aspects of defense acquisition culture. A good deal of the classroom discussion focuses on understanding these underlying cultural issues so that students can respond to them effectively when they come up against them on the job.



As an example, if the *immediate* situation in the case is that a program funding overrun is looming (a funding issue), then the *underlying* cultural issue might be any of the following:

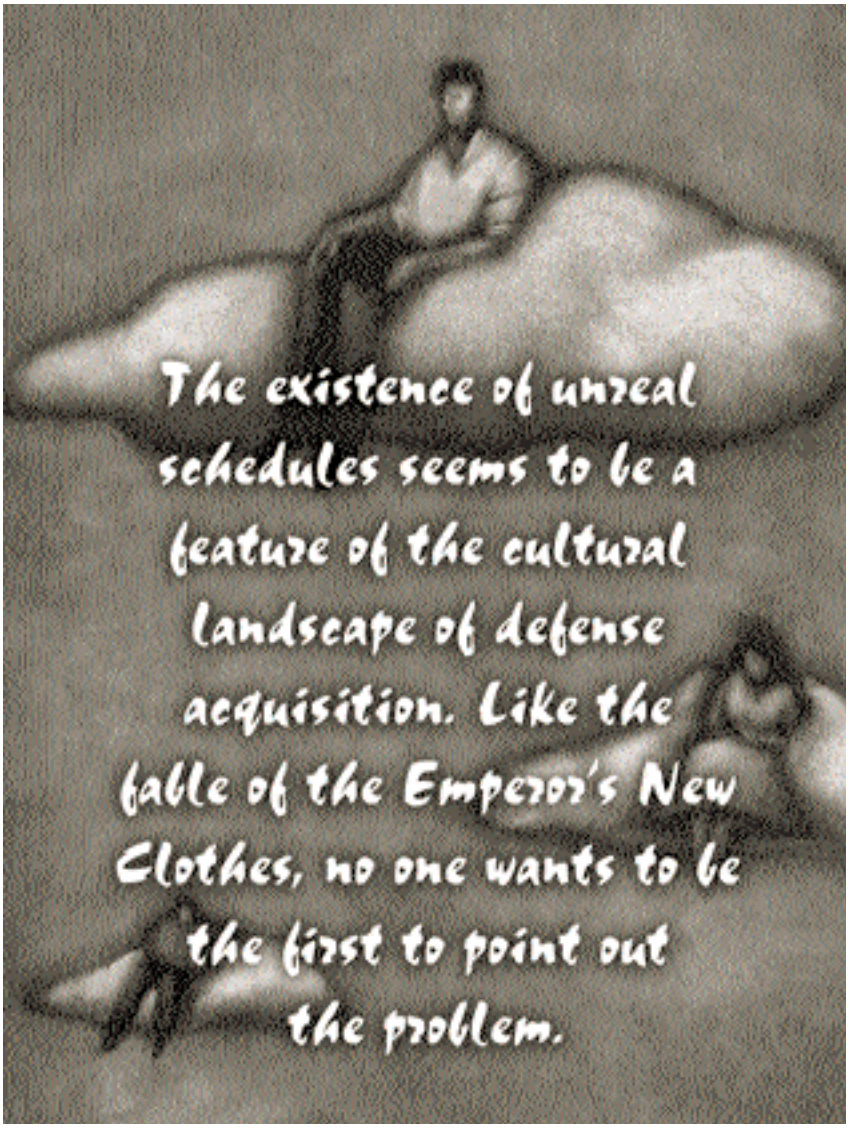
- The program was sold to the leadership at its inception with an unrealistically low cost estimate.
- The user kept changing requirements over the objections of the program manager.

Roman *is a professor of acquisition management at DAU and has held a succession of acquisition jobs in the information technology career field. He has a doctorate in information and decision systems from The George Washington University.*

- Key contractor personnel left the program, despite concerns voiced by the government program manager.

Each of these underlying cultural issues could provoke a classroom discussion in which students think critically about the culture they operate in. Some guiding questions might be: How did this aspect of our culture come about? Whose interests are served? What would be involved in changing it? If it can't be changed, what's the best way for a PM to deal with it?

Through my case writing and teaching experience, I have compiled a list of seven quirks, oddities, and potential dysfunctions that seem present in the cultures of program offices and the overall defense acquisition system. The original purpose of my list was to remind me of things to listen for as I do case interviews. But it later occurred to me that the list could serve as a research agenda for those interested in conducting formal research on acquisition culture. My first three cultural observations follow.



The Reification of Risk

reify \re-e-fi\. To regard something abstract as a material or concrete thing. (Webster)

No matter how often program risks are documented and briefed, they are ultimately a description of what the PM worries about, which is not necessarily what he or she *should* be worrying about. This can become apparent in post-mortem analyses of failed programs; the events that doomed the program are often absent or underemphasized on prior risk charts.

One program manager showed me a PowerPoint® slide depicting a risk matrix for his program. The vertical axis portrayed probability and the horizontal axis severity. Cells on the risk matrix were colored green, yellow, or red to convey the intensity of the particular risk. The PM spoke of the vigorous efforts to attack the red cells on the chart and transform them to at least yellow and, it was hoped, to green.

When I probed the staff, I was told that the probabilities and severities were best guesses, often by people who were no longer with the program. And the risks were a reflection of funding and time constraints. If time and money were increased, most risks would turn green; if time and money were reduced, more risks would turn red.

If one were to start over, asking a different group of informed people to construct a risk matrix, would it come out the same as the one I saw that day? I'm not sure. If one examines the program risks that are highlighted within reports from the Government Accountability Office, one can see that the risks perceived by the GAO analysts often differ from those of the program office. Such differences of opinion are documented in the rebuttal section at the end of the GAO report.

So I think an awareness of the culture should cue us to avoid reifying a given risk chart and help us acknowledge that it's probably not the whole story. Perhaps a truer description of program risks would entail:

- Showing more explicitly the relation between risk and schedule. Three risk matrices could be constructed: the first based on current schedule constraints, the second supposing a six-month schedule extension, the third supposing a 12-month extension. Such a presentation would highlight the notion that risks are

often just statements about the confidence in an underlying schedule.

- Making sure that core risks (problems that actually occurred on prior programs) are included on the risk matrix of future programs. For example, we know from experience that future funding instability is a core risk on virtually all large programs, but it often doesn't make it onto the risk chart. We also know from experience that on virtually all large programs, the requirements will change, but that risk also is often absent. Some PMs have told me that these risks don't warrant inclusion because they are outside of a PM's control. Yet if this is a rule of the culture—don't discuss risks that you cannot control—then the utility of the risk chart as a tool for anticipating problems is limited.

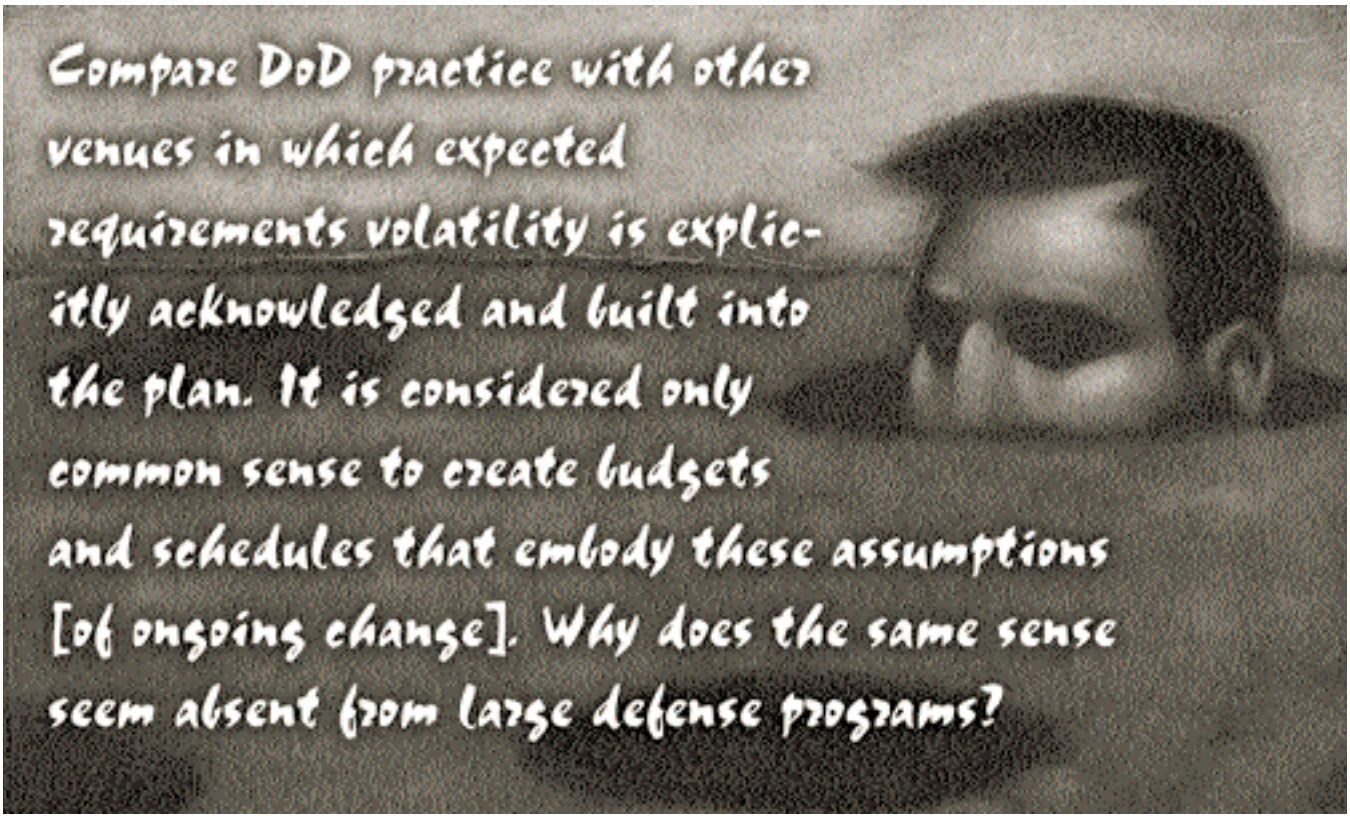
The key point for students in PMT401 is to avoid viewing any given risk chart as ground truth. Key risks have likely been overlooked and others have probably been miscalculated. Because of the inherent subjectivity that went into the construction of any given risk chart, it is probably more art than science—and more a work in progress than a concrete depiction of a program.

An avenue for future acquisition research would be to look at correlation between the risks perceived within a program office, and those perceived by independent experts such as the GAO, the inspectors general, the science boards, etc. To what degree is the risk assessment similar? Is there a pattern to the differences? If there is a pattern to the differences, does it point to any better ways of assessing program risk?

The Unreality of Schedule

Several of our cases deal with milestones for initial operating capability (IOC) that are patently unachievable. During classroom discussion, the students are quick to vilify the protagonist in the case (usually the government PM). Typical student comments are, "He should have raised it up his chain of command a long time ago"; "Bad news doesn't get better with age"; and "He should never have signed up to such a schedule in the first place." But if the facilitator of the case is skillful, it doesn't take long for students to look beyond the protagonist's shortcomings and start to question the underlying culture that produces this phenomenon—again and again.

One PM showed me a succession of Gantt charts for the program she managed (a large automated information system with Acquisition Category (ACAT) 1AM). The Gantt chart from the beginning of the program showed a sequence of development phases based on the idea that lessons learned from one phase would inform the next. Awarding the program contract took much longer than expected, but the mandated date for IOC stayed constant. As a result, the newest Gantt chart showed almost total concurrency for all development phases and substantial schedule compression within each phase. A set of key tasks, originally planned to occur sequentially over two years, were now to occur in parallel over six months. I wondered aloud if the new Gantt chart was feasible and



was told, "It is, because that's my Service's position, and we haven't given up on it."

The existence of such unreal schedules seems to be a feature of the cultural landscape of defense acquisition. Like the fable of the Emperor's New Clothes, no one wants to be the first to point out the problem. This cultural feature is, I believe, related to what Irving Janis calls "victims of groupthink" in his eponymous 1972 book. People can get so committed to a date that to question it is tantamount to sedition. The problem with unreal schedules is, of course, that the bubble will eventually burst, and blame will be meted out.

But I think a secondary problem is more serious: Attempting to compress development schedules, especially for software, can backfire by generating rework cycles and increasing defect rates. In his book *The Mythical Man-Month*, Frederick Brooks famously observed that adding people to a late software project makes it later. A corollary to Brook's Law might be: Compressing an already ambitious software project schedule can make it later.

An interesting avenue for future researchers would be to look at the evolution of program schedules over time. How much compression and overlap occurs as program managers try to keep commitments for IOC? How do they rationalize ambitious schedules? At what point do they acknowledge defeat? And how are they able to evade the earned value management system, which is supposed to provide an early warning system for cost and schedule overruns?

Another avenue for future research is the potential role of critical chain project management within DoD acquisition. Eliyahu Goldratt, in his book *Critical Chain*, suggests that focusing on project buffer consumption rather than task completions can keep schedules more real. A number of defense programs have adopted CCPM, and it would be useful to compare their results against traditional programs and see if claimed benefits are realized.

The Pretense of a Stable Requirements Baseline

The Services and the Department have robust and thorough processes and systems for identifying needed capabilities that drive the acquisition process. Yet once a program is launched, the functions and performance required of the system under development inevitably change. It seems an oddity of the culture that a history-based estimate of requirements volatility isn't folded into the initial estimate of time and cost.

Notwithstanding the fact that virtually every prior program has suffered from requirements volatility, the culture of defense acquisition seems to be to pretend that the current program will be the exception. It is planned, funded, scheduled, and managed as though the initial requirements baseline will stand. Even if the program is constructed as an evolutionary acquisition, there is still an implicit assumption that the requirements for each increment are stable.

When the inevitable requirements changes do come, it causes a shock to the government program office and the supporting contractor organization. The contract has to be revised, new funds identified, and the program has to be replanned. A significant amount of the total time and effort within a large program office is responding to such changes.

As individual program budgets are aggregated into Service and Department plans, the implicit funding gap for future changes grows accordingly. This system-level gap soon creates pressure to cancel some programs in order to fund the rest—a grossly inefficient way of managing funds because sunk costs on cancelled program (opportunity costs) are lost in the process. The sunk costs are rarely accumulated and discussed, and the system-level inefficiency of the entire process is largely unperceived. Future research could contribute to understanding this syndrome by tracking cancelled programs and accumulating both sunk costs and termination costs. How do those costs compare to the funds that are freed to pay for surviving programs? Understanding the system-level inefficiencies might help engender a change to a culture that funds programs based on historical levels of change.

Another avenue for future researchers is to compare DoD practice with other venues in which expected requirements volatility is explicitly acknowledged and built into the plan. This is commonplace, for example, in commercial Web site development. It is assumed that the customer will change his or her mind repeatedly during both the development and the Web site's life. And it is assumed that the underlying Web technologies will turn over numerous times during the life of the site. In that venue, it is considered only common sense to create budgets and schedules that embody these assumptions. Why does the same sense seem absent from large defense programs?

A New Viewpoint

The three cultural features discussed above suggest that classroom attention on a cultural viewpoint of acquisition risks, problems, and issues would be time well spent. The greater challenge, of course, is encouraging the acquisition workforce to consider the cultural view as they make plans and execute programs. In the next issue of *Defense AT&L*, I will present the remaining four elements of my own cultural viewpoint.

The author welcomes comments and questions. Contact him at chris.roman@dau.mil.

Mission Possible … With Good Requirements

Wayne Turk

Suppose that you gave a dozen contractors a single requirement: "Build a vehicle to cross the English Channel." What would you get?

It might be something that would fly—a balloon, a helicopter, an airplane, or a rocket. It might be some kind of a boat or barge. Or it might even be a submarine or something that crosses on the sea bottom. But whatever you get might not be big enough, fast enough, or carry enough people or cargo. It might be easily detectable and too vulnerable to hostile fire. It might be too expensive. It would meet your stated requirement but not all your needs. Why? Because it takes a good comprehensive set of requirements to get the right final product that meets the users' needs.

Requirements That Get Results

- Each requirement must be concise and written in complete sentences.
- Use active voice and good grammar.
- A requirement must stand alone as a complete requirement.
- Requirements must be clear, understandable, and unambiguous.
- Don't combine requirements using words like *and*, *or*, *also*, *with*.
- Avoid using *etc.*, which opens the way for interpretation.
- *Shall*, *will*, and *must* make requirements mandatory.
- Avoid terms that invoke possibilities: *may*, *might*, *could*, *should*, *perhaps*, and *probably*.
- Don't use words like *except*, *if*, *when*, *unless*, or *but*, which provide escape clauses.
- Use defined terms such as *no greater than* or *no less than*. Avoid vague or undefined terms: *greatest extent possible*, *maximum*, *minimum*, *state-of-the-art*, *flexible*, *user-friendly*, *efficient*, *several*, *improved*, *adaptable*, *adequate*, and *simple*.
- Each requirement must be verifiable (think testable, but there are other verification strategies).
- Don't gold plate requirements.
- Avoid wishful thinking or impossible goals.
- Do not design the system or product in the requirements; just give the results required, not how to get those results.
- Use the same level of granularity for each requirement.
- Ensure that requirements are not contradictory or mutually exclusive.
- Ensure that requirements are organized, structured, and numbered.

Nobody would ask for something that is based on a single requirement (although there might be rare times when you could). There are usually hundreds or even thousands of requirements. But given the way that some of those requirements are sometimes submitted, there might as well be only one. Too often, requirements are poorly written. They are ambiguous, vague, or not understandable. There may be contradictory requirements. And there may be ones that are not feasible technically or financially.

Anatomy of a Good Requirement

What constitutes good requirements and how do you develop them? This article cannot be comprehensive, but the following should give you a working knowledge of what constitutes good requirements and how to develop them, whether you are the one who has to write them or the one who must build to them.

Turk *is a retired Air Force lieutenant colonel and a manager with SRA International supporting National Guard Bureau information technology projects and distance learning classrooms. He has supported projects for DoD, other federal agencies, and non-profit organizations. Turk is a frequent contributor to* Defense AT&L.

Be Necessary

The first characteristic of a good requirement is that it is absolutely necessary. With today's fiscal constraints, there is rarely any room for nice-to-have, desired, or frivolous requirements. A requirement like "the gross takeoff weight of the aircraft shall not exceed 160,000 pounds" is imposed for a reason. It might be based on runway surface restrictions, deck restrictions on an aircraft carrier, or some other constraint. Another part of necessity is the need to solve a problem. For example, a requirement to have an individual ID other than a social security number was necessary for DoD's electronic medical record. While the SSN should have been enough, it turned out that there were too many errors and potential problems.

Be Correct

The requirement must be accurate as to what the product needs to deliver. The normal source of information is the customer or end user. Only a knowledgeable user can determine if a requirement is correct. That's why having users and functional experts involved throughout the require-

ments process is a very good idea. It can save a lot of pain and wasted effort. Otherwise you are just guessing.

Be Unambiguous

Requirements must be unambiguous. Multiple readers should come to the same understanding of what each means. If a requirement can be interpreted more than one way, you are in trouble—chances are that the developer or builder will interpret it the wrong way. Terms like "user-friendly," "fast," "easy," "flexible," "state-of-the-art," "maximize," "minimize," or "efficient" mean different things to different people. Avoid them like the plague. Don't allow the customer or user to include them. Get a specific definition of what is really needed—and get it in simple language.

Be Attainable

All requirements must be feasible, attainable, and achievable. These words are almost synonymous and, in this case, mean that the product can be produced with today's technology and with the time and money available. A few years ago, stealth technology or wireless computers were not technically feasible. Advancements in technology rapidly change what can be done, so a little flexibility is needed. Who knows, within the next few years a Star Trek phaser or transporter may be feasible. But don't get ahead of technology.

Be Orderly

The requirements for any project must be prioritized. This priority is normally set by the end user, but the program manager may have a say. That is especially true when the user sets the same priority on a number of requirements. Along with operational needs, other factors can influence priority. For example cost can play a huge role. If meeting one requirement will cause the expenditure of 75 percent of the budget, you are probably not going to have that as your highest priority. Technical risk and schedule impact are other influencing factors. You may have to weigh these factors and work with the users to make them understand the effect on priorities. And if you are the user, be willing to listen. You want the product to be what you need and can use.

Be Measurable

Another necessary characteristic is that all requirements must be quantifiable, measurable, and verifiable in some way—through inspection, analysis, demonstration, simulation, and testing, among others. In most cases, we look toward testing, but that can be very expensive and time-consuming. A requirement for size is a perfect example of one that is easily quantifiable and measurable. Inspection can determine if a tank will fit on an aircraft. A trained soldier could be used to verify by demonstration whether a radio is repairable using the provided documentation and available spare parts. Computer simulation can provide answers without destroying components. Testing may be something as "simple" as firing a missile at a target, or it may require weeks or months, as in the case of integration testing of complex software that has to interact with other software applications. Just remember that every requirement must be verifiable in the most expeditious and least expensive manner possible.

Be Organized

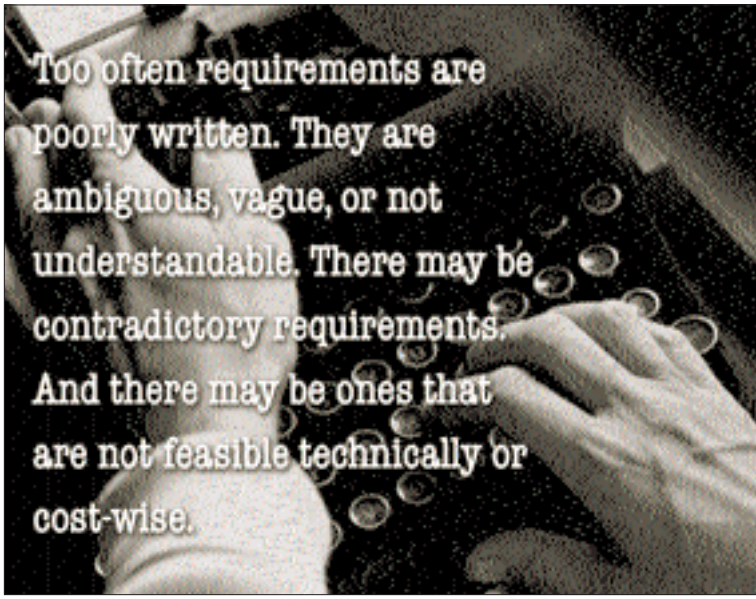
Verifiable is related to traceable. While especially critical in software development, in any project you should be able to trace a requirement from identification through development to verification. Requirements need to be written with the same terminology and the same standards throughout. It also helps for them to be organized and grouped into defined categories. This allows you to find duplications, inconsistencies, and contradictions. For software, linking to the design elements, source code, and test cases can be a time-consuming but important function. If you can't link it from beginning to end, how do you know whether you have met the initial requirement?

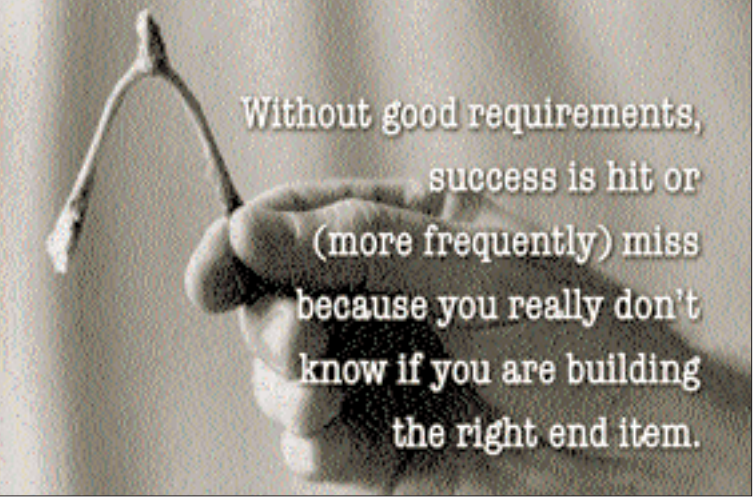
Be Results-Oriented

Finally, requirements must be results-oriented. The objective of the complete requirements package is to provide a product that meets the users' needs and/or solves a problem. It doesn't have to look good, involve the latest technology, or do all kinds of extra things. It must provide the results and the product that are wanted. If a radar system can track a hundred targets of a specified size at a defined distance but can't present the data in a way that is understandable, it doesn't have the results that are needed by the user, and it will be deemed a failure.

The Requirements Package

Some type of a formal requirements package is necessary. In most government agencies, there are specified documents for the task. It may be a system requirements specification, functional requirements document, opera-





tional requirements document, or some other similar document or series of documents. Whatever it is, it will become the bible for the project. As mentioned earlier, it needs to be organized with requirements grouped in some logical fashion.

The project will also need a tool for tracking requirements from initial identification through deployment. Your organization will want to look at what tool best meets your needs—preferably one you already own to avoid incurring extra costs. You want a tool that allows identification and tracking throughout the process and can provide an audit trail of all changes, who made them, and when they were made. It should have the capability to sort in different ways. For a small project, a simple spreadsheet would probably work fine, but for a large and complex program with hundreds or thousands of requirements, you need a tool designed specifically for requirements management. But however you track requirements, keep the audit trail up to date. Keep a record of both current and historical requirements, including any that are deleted because many times requirements resurface.

Scope creep and changing requirements can be slow poison to a project. A simple change here can lead to another there until the project is in deep trouble, and the final product bears only a faint resemblance to what was originally planned. These are insidious problems that can cause schedule slips, cost overruns, and unhappiness for all concerned. Yes, some flexibility is needed, especially with a project that stretches out over time. Needs change, as does technology. Organizations restructure or reorganize. Vendors come and go. Budgets wax and wane. Customers and their level of support may be in flux. All of these things happen, and you must accept some change—but try to keep changes to the *requirements* to a minimum.

Potential Traps

There are a number of obvious and not-so-obvious traps that a requirements writer can fall into. The most obvious is poor word choice, which leads to ambiguity. Does the following requirement say what is *really* meant: "The fire alarm shall sound when smoke is detected, unless the alarm is being tested or the engineer has suppressed the alarm"? That one could lead to a very dangerous situation.

Rambling requirements can also cause confusion, especially when terms are not defined well or they have unclear antecedents. Remember, clarity is your goal. "Provided that the designated data from the specified columns are received in the correct order so that the application is able to differentiate among the data, the resulting summary data shall comply to the required format in section 2.3.1." I give up—what does that mean?

Supplying too much data or being too specific may force the design of the system into a predetermined path and stifle innovation. This happens frequently and is usually marked by naming specific required materials, components, software objects, or database fields. In some cases, requiring a specific component is necessary for compatibility, maintenance, cost savings, or supply capability; but be alert, and don't fall into the trap of requiring something just because you like it or think that it would be a perfect solution.

Beware of wishful thinking. Nothing is 100 percent reliable, able to handle all unexpected failures, able to run on all platforms, or is guaranteed upgradeable to all future versions. You can see the common theme: "all." Just as bad are "none," "zero," and "never." "The brakes will be 100 percent effective in normal situations." "The network shall handle all unexpected errors without crashing." Dream on; it isn't going to happen. While it is possible to write requirements for 100 percent reliability in some products, it will require redundancy (usually multiple redundancy), and they will be expensive to build.

Without good requirements, success is hit or (more frequently) miss because you really don't know if you are building the right end item. Sure, it's time-consuming to write good requirements, but it's well worth the effort because time spent in the beginning can actually save time later. Good requirements writing comes with practice, thoughtful consideration, and plenty of review and discussion. And by following the basic rules, of course:

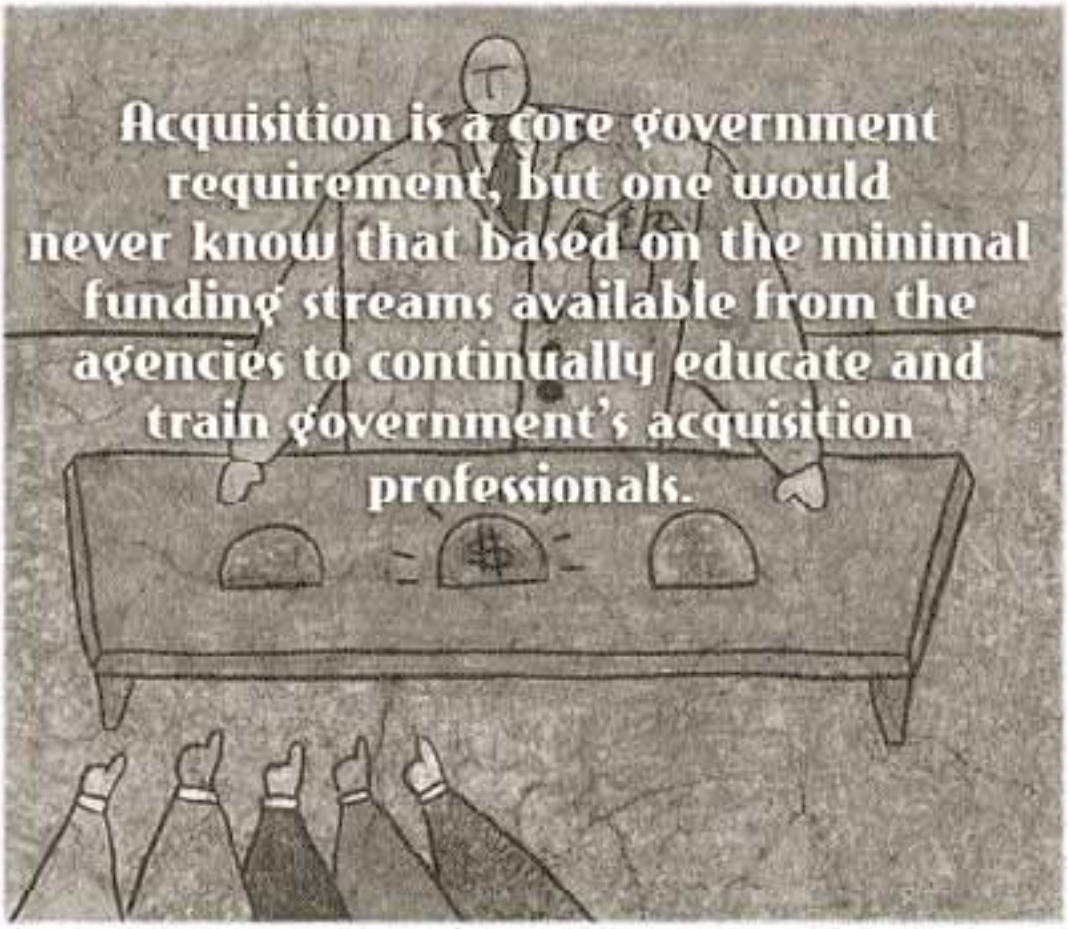
- Keep users involved.
- Develop and refine requirements.
- Define and use consistent terminology.
- Organize requirements.
- Monitor/track development and changes.
- Document all requirements and changes and why they changed.
- Make requirements management one of your repeatable processes.

The author welcomes comments and questions. Contact him at wayne_turk@sra.com.

On Acquisition Training: An Important Next Step

Stan Soloway

Over the last decade, we have seen a gradual elevation of the acquisition profession's stature in civilian agencies. The latest development is an important new policy memo from Federal Procurement Policy Administrator David Safavian that, among other things, directs the establishment of education and certification requirements for civilian agency acquisition professionals. Safavian's initiative is probably the most significant and challenging step yet taken in this process.



Not surprisingly, there is something of a caste system in federal procurement. Defense Department acquisition professionals are subject to statutorily required training and certifications and benefit from the relatively well-funded Defense Acquisition University.

On the other hand, civilian agency acquisition professionals have never had the requisite resources, let alone a statutory mandate that recognizes their centrality to the functioning of government.

The Federal Acquisition Institute has tried valiantly to bridge the gap, and some civilian agencies, such as the Treasury Department, have attempted their own internal organizations. But overall, acquisition workforce development and training is not a budget priority.

That's why Rep. Tom Davis (R-Va.) created the Federal Acquisition Workforce Training Fund in the 2003 Services Acquisition Reform Act. That small fund is slowly growing and is devoted solely to supplementing funding for civilian agency acquisition workforce training, which Safavian's new policy mandates.

However, the training fund is only one part of what should be a broader commitment throughout government to training the acquisition workforce. Acquisition is a core government requirement, but one would never know that based on the minimal funding streams available from the agencies to continually educate and train government's acquisition professionals.

Soloway *is president of the Professional Services Council and former deputy under secretary of defense (acquisition reform).*

Wynne Bids Farewell to Defense Acquisition Workforce

June 3, 2005

I have been relieved by Mr. Ken Krieg as the Under Secretary of Defense for Acquisition, Technology and Logistics. Ken joins us, as many of you know, from his position as Director, Program Analysis and Evaluation for the Office of the Secretary of Defense.

I want to thank each and every one of you for your steadfast support. I know that you will provide that same support to Ken. Our accomplishments in each of the AT&L Goals and Objectives have advanced the interests of both the Warfighter and the Taxpayer. You should be proud of the work you have done.

Whether in the immediate AT&L family, including our direct support agencies, or in the larger Defense Acquisition Workforce, your efforts are known worldwide as professional to a fault and very much appreciated.

Barbara and I wish all of you the best of success in your future endeavors.

Michael W. Wynne

Given the limited potential of the new workforce training fund, the Office of Management and Budget should take the next step by requiring agencies to fence off more funding to train acquisition professionals. How else can agencies effectively deliver the results demanded of them?

Safavian's decision to literally and figuratively align FAI and DAU is also a significant step in the process, but it is only a step. DAU does not have the seat space or financial capacity to provide training to the civilian agency acquisition community. Some Defense components today are already experiencing training shortfalls because of DAU's capacity limitations.

Even as DAU and FAI align their requirements and curricula, other sources of high quality training—including highly capable, experienced companies and professional organizations such as the National Contract Management Association—must be more actively brought into the partnership.

Only through a careful, robust effort by DAU to grant certification equivalencies to courses taught by non-DAU providers can the full training needs of civilian agencies and many Pentagon activities, be met.

DAU President Frank Anderson has done remarkable work in putting DAU on a transformational path. Now is the time to step up the pace of external partnering to ensure that those who need training can get it.

Finally, Safavian faces a formidable challenge in establishing the training and certification requirements for the civilian agency acquisition workforce. Aligning the plethora of disciplines—from contracting to program management and more—with the appropriate educational and certification requirements may be among his greatest, and most important, challenges.

With the ineffable, continued growth in the public-private partnership, development of an increasingly skilled, trusted and innovative government acquisition workforce is absolutely essential. Acquisition is a core government requirement. It's about time that the resources and other support available to the acquisition community reflect that reality.

The author welcomes questions and comments and can be contacted at soloway@pscouncil.org.

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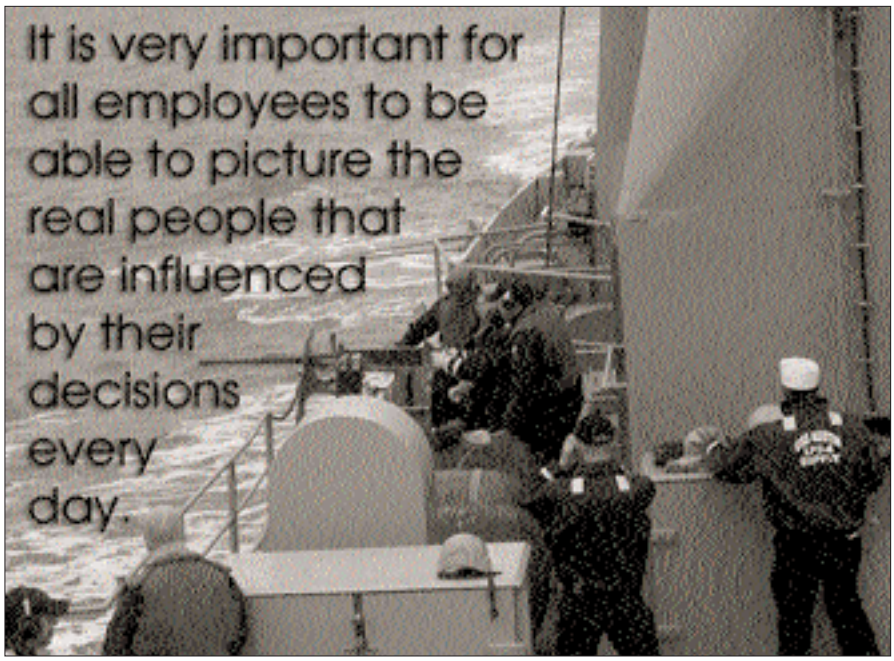
The NAVSEA Scientist to Sea Experience

Matthew Tropiano Jr.

When I did a survey two years ago to evaluate the effectiveness of Naval Sea Systems Command (NAVSEA)'s Systems Engineering Development Program, one of the areas that emerged as profoundly influencing new engineers in the program was the chance to experience situations that gave them direct contact with the sailors. Whether it was a sea trial, a rotation at the shipyard where the engineers directly worked on the equipment, or the Scientist to Sea program, these experiences had memorable and motivating impacts on the engineers.



Engineers Go to Sea

The Scientist to Sea program has been in operation for several years and is directed out of the Office of Naval Research. The purpose is to give civilian personnel who support the Navy an opportunity to learn about life at sea for military personnel and to observe naval equipment and procedures. The scientists are informed that they are not on board to fix anything, nor are they to bring tool kits unless they are in a position to give advice. The scientists visiting the ship are mostly from the warfare centers, laboratories, and headquarters that develop systems, equipment, software, and technical documentation for the Navy. While they may have considerable experience in the Navy technical shore establishment, they are probably experiencing Navy life at sea for the very first time.

Before the experience, participating scientists are required to log onto the security awareness Web site and take the requisite training. They are also informed of what to bring and what not to bring on the trip, and they receive instruction on ship protocols, rules of order, emergency procedures, ship organization, and how to address the sailors and officers. They are also encouraged to record the names, ranks, and positions of those embarked personnel who were especially helpful during the visit.

The sailors are instruced that the Scientist to Sea ship riders are not to be treated as VIPs, but as personnel who want to learn about how the ship works and to experience the working and living environment of the people who operate and maintain the systems that they—the scientists—design. The sailors are encouraged to talk to the scientists about their experiences, the ship, its equipment, and its performance—the point being that an understanding of naval operations, the shipboard environment, and the employment of their systems will enhance the scientists' ability to produce better products for the fleet. As one Naval Surface Warfare Center, Dahlgren Division, scientist said, "We learn more from watching them than we do just testing the equipment inside a lab."

The ship maintains its rigorous schedule while the scientists are on board. The schedule may include exercises from replenishment to man overboard exercises, to full ship fire drills and flight operations. Occasionally, the scientists may have a life-impacting experience. "On our particular trip," said one, "we were on a destroyer. We had the opportunity to witness a variety of drills, including target practice, which was very interesting. We also

Tropiano, *program manager for Naval Sea Systems Command's acquisition intern programs and Dashboard Project, is Scientist to Sea coordinator for NAVSEA Headquarters. He holds a bachelor's degree in electrical engineering, a master's in religious studies, and a master's in business administration.*

Photograph by Bin Wang.

had the opportunity to see a few burial at sea ceremonies, an underway replenishment, and helicopter ops."

The scientists report that the crew members are always helpful and willing to explain when asked questions. After a recent experience, several scientists commented on the demonstrated teamwork and commitment of the crew. "I now have an appreciation of what it takes to man a ship while under way. These men and women do a ton of hard work 24/7. Amazing," was a typical remark. Another representative comment was, "I have realized that all these men and women are constantly surrounded by danger. They don't have to be deployed in far seas to lose a shipmate in an accident; they don't have to be far away to be missed by their family and friends. Their everyday job is difficult and not meant for a lot of people."

Stepping Into the Crew's Shoes

There is clearly no substitute for practical, hands-on experience. "I work with ship designers in order to make ship systems easier to use and better for the sailor," commented one recent participant in the Scientist to Sea program, "so stepping into their shoes for a while has improved my effectiveness as an engineer exponentially." Another scientist commented on the value of actually seeing equipment in situ, saying, "Now when I go back to work, I'll be able to recall the exact compartment where the equipment is located on the ship as opposed to just trying to imagine it."

The experience also gives the scientists a renewed and reinvigorated tangible vision of their own work and its value. "The trip helped me see the importance of my role at NAVSEA and our mission in supporting the fleet … [and] helped me to better understand how the personnel on board a ship interact and operate and how we can apply that to our jobs at NAVSEA," commented one participant.The interaction with crew personalizes the scientist's work. A scientist sums it up: "No amount of discussion with subject matter experts or reading of documents can substitute for this experience. It is very important for all employees to be able to picture the real people that are influenced by their decisions every day. The Scientist to Sea experience has made me feel much more responsible and accountable to the fleet."

In follow-up assessments, 100 percent of the scientists recommended that others participate in the Scientist to Sea program. The experience refocuses scientists' mission and clarifies their vision, something that they are likely to pass on to their coworkers.

The author welcomes comments and questions. Contact him at matthew.tropiano@navy.mil.

Pentagon Procurement Chief Assumes Senior Role at GSA's New Federal Acquisition Service

Deidre Lee, the Defense Department's director of procurement, has assumed a senior role at a newly formed branch of the General Services Administration. On Aug. 8, she became the assistant commissioner for integrated technology services in the GSA's new Federal Acquisition Service.

Lee assumed her position as director of defense procurement and acquisition policy, Office of the Under Secretary of Defense (Acquisition, Technology and Logistics), on Nov. 3, 2002. Before assuming this position, she was the director of defense procurement for two years. During her tenure at the Department of Defense, Lee was responsible for all acquisition and procurement policy matters in DoD and also served as the USD(AT&L)'s principal advisor. She led the department's transformational policy initiatives in the Federal Acquisition Regulation (FAR), Defense FAR Supplement, and the DoD 5000 series acquisition regulations; and she was DoD's advisor for competition, source selection, multiyear contracting, warranties, leasing, and all international contracting matters.

Prior to joining DoD, Lee served as the administrator for the Office of Federal Procurement Policy from July 1998 to June 2000. From March 1993 until July 1998, she served as the associate administrator for procurement at the National Aeronautics and Space Administration. Prior to that, she served as the deputy associate administrator for procurement and the executive officer to the deputy administrator of NASA. She rose through the ranks to become NASA's senior acquisition official and has a distinguished record as a reformer and innovator.

During her tenure at NASA, Lee was awarded the National Aeronautics and Space Administration's Outstanding Leadership Medal and Exceptional Achievement Medal. In 1996 and 2001, she was a recipient of the Senior Executive Service Presidential Rank Award. In March 2001, she received the Honorable Elmer B. Staats Award for Accountability. In August 2004, Lee was honored with the Office of the Secretary of Defense Award for Excellence.

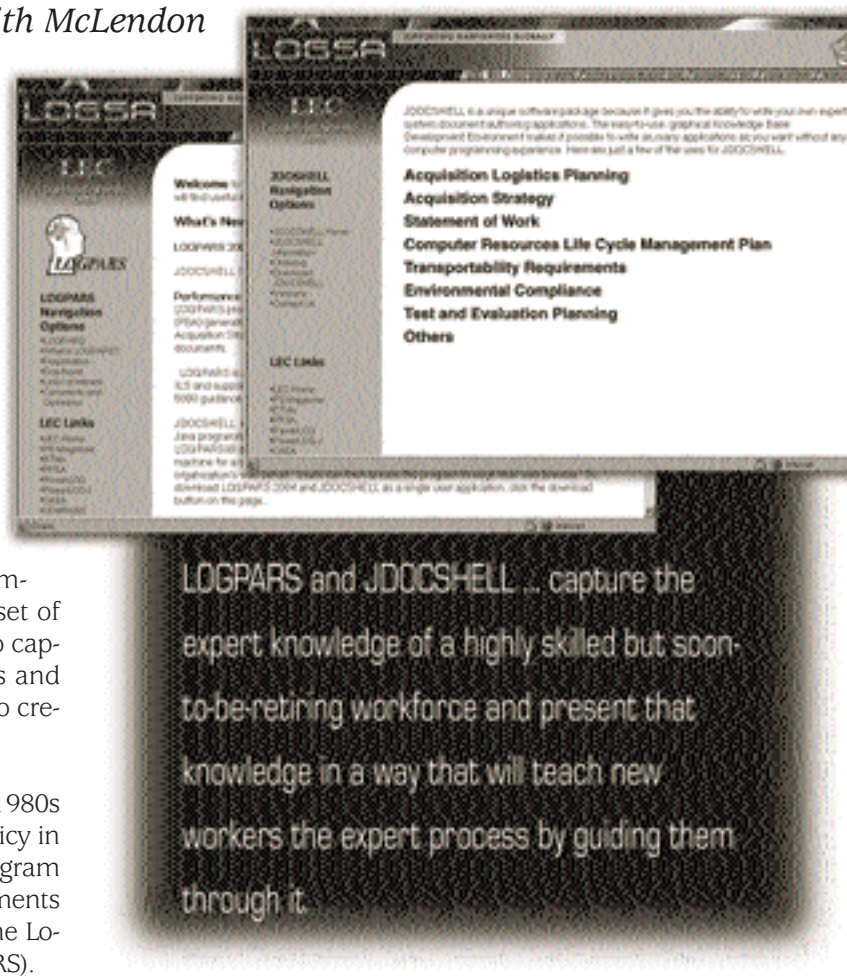
Life Cycle Logistics Planning Comes of Age

Keith McLendon

In the days of soaring defense budgets of the 1980s, acquisition costs were hard to estimate and even harder to control. Bad as this was, support costs for weapon systems were even more out of control. Weapon systems were primarily designed for low acquisition costs, without regard to the impending support cost disaster. The Government Accountability (then General Accounting) Office studied the problem and found that while the U.S. Army had the best integrated logistics support (ILS) policy, it also had the worst execution of that policy.

The Army materiel developers knew that they were supposed to design supportability into new weapon systems, but they didn't quite know how to accomplish it. The new field of Expert Systems as a subset of Artificial Intelligence was, and still is, a great way to capture expert knowledge of complicated procedures and present it to the user in an easy-to-follow manner to create a consistent and high-quality planning process.

The Army developed an ILS Expert System in the late 1980s to help program managers plan and execute ILS policy in a comprehensive and repeatable manner. This program was first named the Logistics Planning and Requirements Simplification System and was later shortened to the Logistics Planning and Requirements System (LOGPARS).



While Army and defense acquisition policies have changed radically since the original LOGPARS was fielded, computer technology and applications have changed even more. The challenge to maintain and update LOGPARS has been twofold: first, keeping the existing documents and expert knowledge base up to date; and second, adapting to new operating systems and programming languages. LOGPARS has kept pace with each new generation of computer technology while adding new document modules and program functionality.

In The Beginning

The first version of LOGPARS was fielded in 1989. That version created an integrated logistics support plan and a warranty advisor. Written in a combination of the C and Prolog programming languages, this initial LOGPARS system was very complex, and even minor changes in documentation output required highly specialized programming knowledge of several different file formats.

The time period from 1989 to 1994 was marked by continuous enhancements to the existing document modules, as well as the addition of new documents based on feedback from the user community. A materiel fielding plan, transportability report, and the ILS portion of the contractual statement of work were added. During this time, the other military services used the core of the LOGPARS systems to develop their own logistics and program documentation generators.

In 1994, two major changes were introduced. First, LOGPARS was reprogrammed to run under Microsoft Win-

McLendon *is the program manager for the LOGPARS software. He has 12 years' experience in software engineering, a bachelor's degree in electrical engineering, and a master's degree in industrial engineering.*

dows® 3.1. The original system ran under MS-DOS, and the LOGPARS user community wanted an updated interface. Second, the document-generating shell (DOCSHELL) and the LOGPARS knowledge base were split into separate products. DOCSHELL is the expert system interpreter that can be used for any planning process to produce any type of document. The LOGPARS knowledge base is the set of logistics support questions and expert knowledge procedures that create the specific logistics and acquisition planning documents.

The split allowed for the creation of non-logistics processes and documents independent of the logistics knowledge contained in LOGPARS. The Federal Aviation Administration, NASA, and even the Department of Agriculture, for example, used DOCSHELL to produce their own planning documents.

Between 1994 and now, LOGPARS and DOCSHELL have been continually modified. The LOGPARS knowledge base changed drastically when acquisition reform was instituted. It is constantly being updated, from changes to names of organizations to large-scale changes such as the current performance-based logistics policy and guidance. Technical updates have facilitated multi-user support and a Web-enabled version.

LOGPARS Today ...

LOGPARS is a great time- and money-saving tool. It produces high quality planning documents that eliminate costly requirements duplication. Another benefit is that it reduces requirements omission through its expert recommendations. This is enough of a benefit to justify its use, but another important benefit is that it ensures a standard planning process. Without the help of an expert system, most programs will find an existing planning document used for a different program and modify it to match their system. That does not lead to a well-planned and executed strategy for weapon system support.

LOGPARS has an impressive array of document generation modules. The current version of LOGPARS will assist in the preparation of the following documents:

- Acquisition strategy (AS)
- Supportability strategy (SS)
- Performance-based logistics (PBL) strategy
- Performance-based agreement (PBA)
- ILS statement of work (SOW)
- ILS performance specification
- Materiel fielding plan (MFP)
- Provisioning plan
- Transportability report
- Warranty advisor
- Life cycle schedule generator.

Most of the above are plans and key management documents that guide program managers in the acquisition and support of their programs. For example, the warranty advisor walks the PM through a series of questions and then recommends if a warranty is in the best interest of the government and, if so, what kind of warranty should be implemented; and the life cycle schedule generator creates a milestone schedule with recommended tasks that can be imported into Microsoft Project.

And Tomorrow

We are constantly updating and improving the existing documents within LOGPARS to incorporate expert feedback and policy changes, and at the same time, we are also developing new documents, often in response to requests from the LOGPARS user community. The next version of LOGPARS will have a simulation support plan that will help programs adhere to the simulation and modeling for acquisition, requirements, and training policy. We will be also adding a business case analysis generator and are considering a test and evaluation master plan generator.

We have only scratched the surface of the amazing potential that a document-generating expert system can provide. Any form or document can be created with the JDOCSHELL tool (the updated version of DOCSHELL). For example, a time sheet generator was developed to automatically create and fill in employee time sheets originally executed in Microsoft Excel. The JDOCSHELL file output format can be either HTML or plain ASCII text. Since all Microsoft Office tools can save data in the latter format, it is easy to create files that can be imported into Word, Excel, or PowerPoint. The HTML can also be used to create XML, an industry standard for exchanging data.

LOGPARS and JDOCSHELL provide a way of standardizing and enforcing a planning process. They capture the expert knowledge of a highly skilled but soon-to-be-retiring workforce and present that knowledge in a way that will teach new workers the expert process by guiding them through it. They also provide a way to produce high quality documents and forms in a fraction of the time typically required.

As acquisition and supportability policy changes from lowest price contracts to performance-based contracts and beyond, and as computer programs become more distributed and integrated, LOGPARS is changing to let program managers and ILS managers do more high quality planning with fewer resources in a shorter time.

For additional information on LOGPARS, check the official LOGPARS Web site at <https://www.logsa.army.mil/alc/logpars> or e-mail logpars@logsa.army.mil.

The author welcomes comments and questions. He can be reached at keith.mclendon@us.army.mil.

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DAU Performance-Based Logistics Resources

Steve Brown ▪ Jerry Cothran

Who says you can't get something valuable for nothing? Maybe there's no such thing as a free lunch, but the old axiom doesn't ring true when it comes to professional logistics development. During the past 12 months, more than 10,000 people have taken advantage of free performance-based logistics (PBL) education and training resources available through the Defense Acquisition University. In addition to offering onsite classroom experiences upon which the university's reputation was built, DAU offers a variety of offsite and online learning opportunities. The smorgasbord of learning resources currently includes certification training courses; a continuous learning module; performance support; online knowledge sharing; and research. All these popular learning resources to help transform defense systems support are available to the defense acquisition, technology, and logistics workforce at no charge.

Louis Kratz, assistant deputy under secretary of defense, logistics plans and programs—the Pentagon's leading champion of PBL—says, "DAU has played a critical role in providing our AT&L workforce with the skills and tools necessary to implement PBL." While the majority of university customers are logisticians working for a military service or defense agency, hundreds of DoD professionals in other career fields, personnel from other government agencies, and members of the U.S. defense industry have also benefited from these PBL resources.

DoD policy is clear that PBL is the preferred approach for supporting weapons systems.

PBL Training Courses

Over 4,000 government and industry professionals have graduated from PBL classroom and online certification courses. The LOG 235B course is the "five-course meal" of the PBL resources. This five-day classroom course starts with a review of PBL concepts and DoD policies. During the remainder of the week, students are challenged to plan, implement, and evaluate PBL support strategies for new and legacy systems. The curriculum is designed to allow students to practice PBL key activities for multiple levels, including platform (i.e., aircraft or ground vehicle); sub-system (i.e., engine or avionics); and major assembly (i.e., radio or actuator).

Since LOG 235B was fielded nationwide in March 2004, over 1,400 students have completed the course at one of 15 locations across the country. More than a dozen DAU faculty members from all five DAU regional campuses serve as instructors. Graduates include civilians, military officers, and enlisted members from each of the Services, DoD agencies, and the OSD staff. Employees of other government agencies and over 50 from the defense industry have also completed the course.

Graduate feedback indicates the varied small team exercises based upon DoD systems are popular. The course currently includes cases based upon fielded Air Force, Army, and Navy weapons systems, plus the Joint Strike Fighter program.

Highlights of the course are the DoD and defense industry guest speakers, who bring PBL examples into the classroom. Distinguished Pentagon leaders like Kratz have provided dynamic presentations about the importance of implementing PBL. Military service acquisition and support commands have provided powerful lessons learned from awarding and managing performance-based agreements. U.S. defense industry partners have also been highly supportive of the course. Executives from Lockheed-Martin, Boeing, Raytheon,

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Parker Aerospace, and AAI Corporation have all shared their PBL experiences; other world-class companies like Caterpillar and IBM have also provided classroom speakers. Individuals interested in speaking in one of the 45 to 50 annual LOG 235B offerings are encouraged to contact the course manager at steve.brown@dau.mil.

The "soup and salad" of university PBL resources is the LOG 235A online course. To date, over 3,000 students have completed this self-paced Web-based curriculum. The distance learning course currently includes 17 modules and computer-graded exams covering the following nine topics:

- Performance-Based Logistics
- Reliability, Maintainability, Supportability
- Supply Chain Management
- Configuration Management
- Commercial Military Integration
- System Support Options
- Business Case Analysis
- Continuous Modernization
- Enterprise Integration.

The over 50 hours of online content include dozens of interactive review questions. While the course gets good feedback from students, additional improvements to navigation features and updates to content will continue.

Although it's recommended that students complete DAU logistics and acquisition management 100- and 200-level courses before enrolling in PBL courses, there are no mandatory prerequisites to take LOG 235A. Students can register for both the classroom and online PBL courses at <www.dau.mil/registrar>. Both the LOG 235A and B courses are required for DoD members pursuing Defense Acquisition Workforce Improvement Act Level II Certification in Life-Cycle Logistics Management. Additional information about both courses and DAWIA certification can be found in the DAU *Catalog*, at <www.dau.mil/catalog>.

PBL Continuous Learning Module

For those interested in a PBL "appetizer," the online Continuous Learning Module is available to anyone at any time of day. The three-hour Web-based tutorial provides an introduction to PBL concepts and DoD policy. Since the module was launched in 2002, there have been nearly 1,700 graduates, according to Bob Faulk, director of the DAU Continuous Learning Center. Faulk's records indicate that the PBL module received over 800 hits last year.

DoD members who register and complete the module receive three Continuous Learning Points.

PBL Performance Support

Through DAU performance support activities, nearly 3,000 individuals have participated in PBL roadshows and customized workshops provided by DAU faculty at sites around the country. These events may be described as the "sampler plates" of PBL resources, since each contains an assortment of key concepts, policy, and practices. PBL performance support events are tailored to the audience but typically include an introduction to key implementation activities and examples of new and legacy DoD systems.

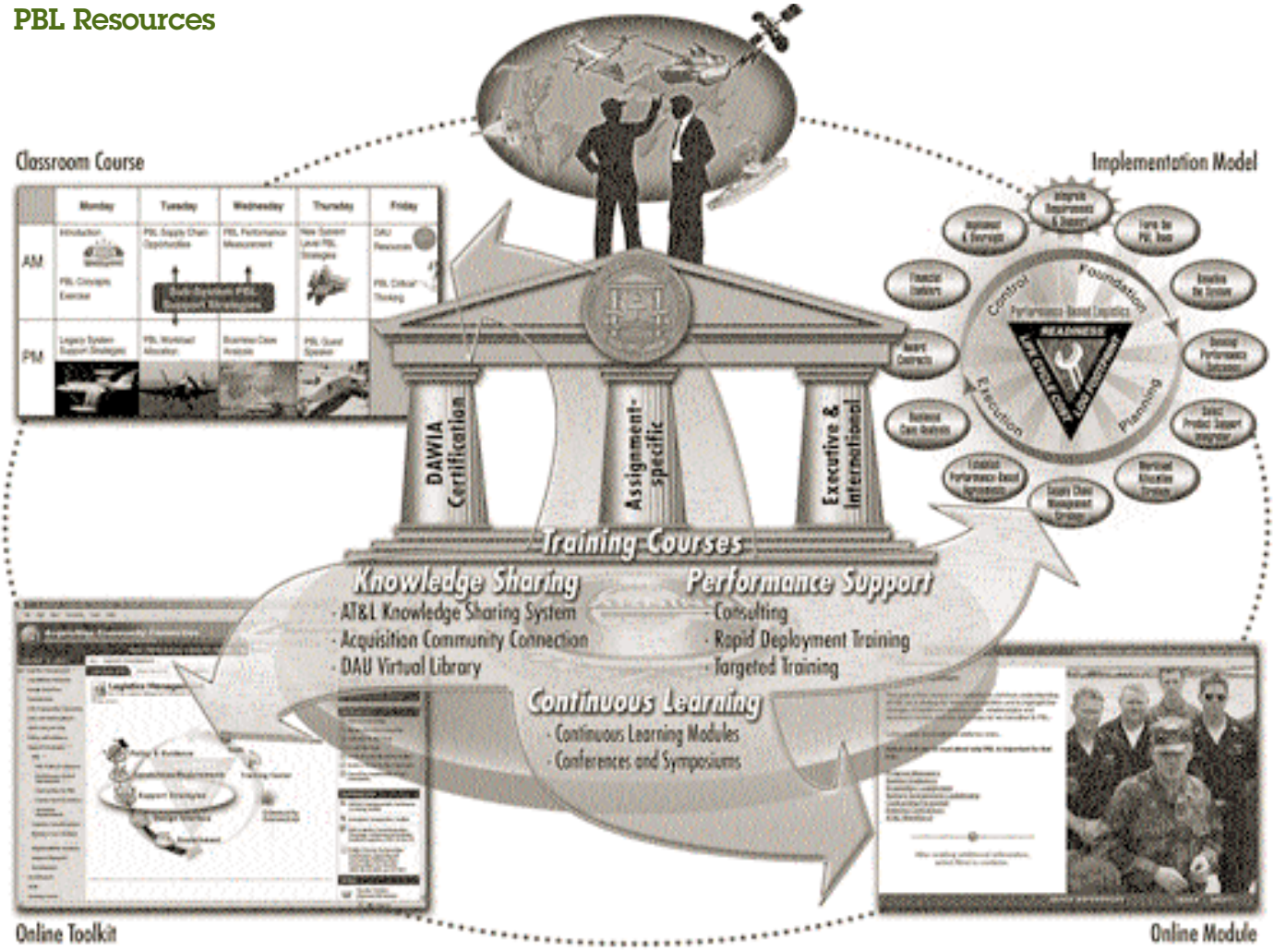
The half-day PBL roadshows are designed for large DoD audiences and are usually hosted by a military service or DoD agency for its workforce. The events often include presentations from the host organization about its PBL implementation policy and practice. By contrast, PBL workshops are designed for smaller groups of logisticians with appetites for more interactive learning. Each workshop is generally four to eight hours in length and is tailored for the host organization. Workshop sponsors have included professional logistics organizations like the International Society of Logistics (formerly known as SOLE) and the Reliability, Maintainability, Supportability Partnership.

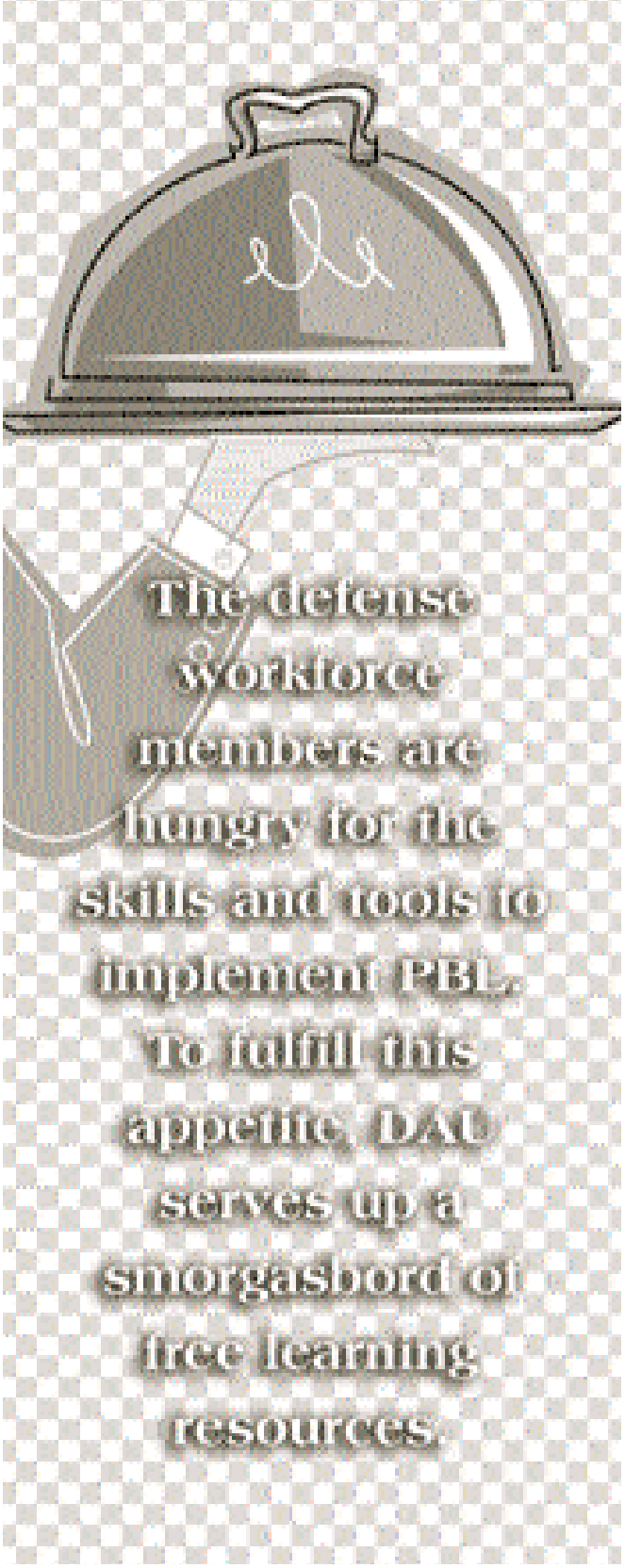
DAU faculty have also provided presentations for consortia of industry, government, and academia including the Aerospace Industry Association, the Lean Aerospace Initiative, and the Institute for Defense and Government Advancement. Organizations interested in scheduling a PBL roadshow, a workshop, or consulting should contact the DAU program director at jerry.cothran@dau.mil.

PBL Online Knowledge Sharing

The self-serve cafeteria of PBL resources is the Logistics Management Community of Practice (LOG CoP)—point your browser to <log.dau.mil>. This DAU-sponsored Web site contains hundreds of documents, examples, presentations, links, and tools about DoD logistics management. The site is the premier online resource for logisticians looking for help with defense system acquisition and sustainment tasks. LOG CoP averages over 10,000 page views monthly, according to Jill Garcia, DAU knowledge project officer. As an example of the power of the Web site, Gar-

PBL Resources





cia notes that the DoD PBL guide, *A Program Manager's Product Support Guide*, is viewed hundreds of times each month. This key document can also be downloaded from the DAU publications Web site at <www.dau.mil/pubs>.

Also being added to the Web site is a user-friendly PBL toolkit that will leverage the 12-step PBL implementation model described in the guide as a framework to organize PBL online resources.

PBL Research

"DAU faculty have invested thousands of hours performing PBL-related performance support and research," says Randy Fowler, DAU director for logistics and sustainment. He highlights two recently published papers and a pair of ongoing applied research projects. An article by DAU professor Dr. Hank DeVries, "Performance-Based Logistics—Barriers and Enablers to Effective Implementation," in the *Defense Acquisition Review Journal* (Vol. 11, No. 3, Dec. 2004 – March 2005) underscores the paradigm shift needed in the way DoD views system life cycles and supportability. A white paper by author Cothran, to be found on the LOG CoP, "The Product Support Integration Function in a Performance Based Logistics Strategy," describes frameworks for system support integration, contracting strategies, and incentives key to implementing PBL.

The OSD staff has enlisted DAU faculty to help research the history, foundation, and implementation of PBL. Dean Newman, DAU professor, is currently documenting the growth of PBL from the mid-1990s to present, to include congressional interest, department policy/guidance, and application in the military services. His research will highlight benefits realized in system reliability and maintainability, and impacts on increasing operational readiness and reducing sustainment costs. A long-term team research project led by Dr. Tony Scafati, DAU professor, is examining the correlation between PBL performance measures, contract incentives, and improvements in weapons system support.

Fowler is enthusiastic about a clearinghouse with the University of Tennessee and initiatives with other academic and corporate universities to broaden development of PBL resources and to "share curriculum development workload via collaboration to collectively benefit DoD and the defense industry workforce."

Supporting DoD PBL Policy

DoD policy is clear that PBL is the preferred approach for supporting weapons systems. DoD 5000 directs that "Program Managers shall develop and implement Performance-Based Logistics strategies." Defense workforce members, including logisticians in government and industry, are hungry for the skills and tools to implement PBL. DAU serves up a smorgasbord of free learning resources of which Kratz has said, "The link between DAU and DoD policy for PBL is the exemplar model for rapidly implementing life cycle business transformation."

The authors welcome comments and questions, which may be addressed to steve.brown@dau.mil.

Sensing Beyond the Visible

Combat-Enabling Technologies Increase Warfighter Safety in Iraq

Christina Cavoli ▪ Maj. Fritzgerald McNair, USA

Effective acquisition command, a unique relationship with the Army's Night Vision and Electronic Sensors Directorate (NVESD) at Ft. Belvoir, Va., rapid integration of cutting-edge technology, and dedication to providing the warfighter with the ability to "see beyond the visible"—the combination has resulted in three unique battlefield revolutions.

Driver's Vision Enhancer provides thermal imagery to increase drivers' vision and, therefore, mobility in low-visibility conditions of all kinds. On the left, the view at night as seen with the naked eye; on the right, the DVE-assisted view. U.S. Army photographs.

Product Manager Forward Looking Infrared (PM FLIR), located at Ft. Belvoir, is the product management office under the Program Manager Night Vision/RSTA responsible for providing infrared (IR) imaging sensors for DoD combat platforms. The goal of PM FLIR is to enable "sensing beyond the visible" to reveal threats that might otherwise remain unseen or blended into the environment. When soldiers are in harm's way, these technologies give them the ability to see what is really out there and protect themselves like never before.

Of the 14 different programs currently managed by PM FLIR, three are of particular note as capabilities that have been proven combat enablers, have enhanced mission capability, and provide both force protection and a distinct advantage over the bad guys: Second Generation FLIR (SGF); Long Range Advanced Scout Surveillance System (LRAS3); and Driver's Vision Enhancer (DVE).

Second Generation FLIR Tops 2,000 Fieldings

The SGF program provides enhanced reconnaissance, surveillance, and target acquisition capabilities. It is particularly effective when other systems fail as a result of reduced visibility from poor atmospheric conditions or in the presence of battlefield obscurants. The Army's Horizontal Technology Integration (HTI) Second Generation FLIR (SGF) systems provide a common battlefield scene to armor, mechanized infantry, and reconnaissance forces, and allow warfighters to see more clearly and farther than ever before.

The Army's Second Generation Forward Looking Infrared (FLIR) via the HTI concept, or commonality of design, involves insertion of a common second-generation thermal sensor, known as the B-Kit, into the Army's highest priority ground-based platforms: the M1A2 SEP Abrams tank, the M2A3/M3A3 Bradley Fighting Vehicle, M707 Knight Vehicle, M1114 Up-Armored HMMWV, the next generation M1151 Armored HMMWV, the Stryker Brigade Combat Team's Reconnaissance and Fire Support Variant (RV/FSV), and the Navy's PHALANX Weapon Systems (CIWS), Close-In Weapons Systems. The B-Kit is integrated into each platform through the use of platform-unique integration A-Kits.

Since the fielding of the 1,000th SGF in September 2002, another 1,000 SGFs have been fielded to U.S. combat vehicles. On Jan. 27, 2005, PM FLIR fielded their 2,000th SGF to combat vehicles in the 1st Battalion, 8th Infantry (Fighting Eagles), 3rd Brigade Combat Team at Fort Carson, Colo.

Cavoli *is* Defense AT&L *contributing editor.* **McNair** *is assistant product manager for the Driver's Vision Enhancer program and was a liaison officer to the multi-national corps in Iraq during Operation Iraqi Freedom 2.*

Greater Capability, Lower Cost

SGF now provides warfighting forces worldwide with greatly increased probability of target detection, recognition, and identification at longer ranges than the first generation FLIR. The SGF program provides M1A2 SEP tanks and M2/M3A3 Bradley Fighting Vehicles with a "hunter-killer" capability that allows the vehicle commander to scan for threats while the gunner engages targets. SGF doubles combat identification ranges previously achieved with first generation FLIR.

An impressive aspect of the SGF B-Kit is that the improved design comes with a lower price tag. It has continually been reduced in unit price over the duration of the production phase for a total savings of over 119 percent. This is particularly significant in that the product management office has continuously maintained two qualified suppliers who have greatly enabled industrial base responsiveness throughout the fluctuating demands of wartime production.

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LRAS3 Saves Lives in Iraq

The LRAS3 provides U.S. Army armor and infantry scout platoons with a long-range reconnaissance and surveillance sensor system whose capability is significantly enhanced when compared to the previously fielded AN/TAS-6, Night Observation Device, Long Range (NODLR). The LRAS3 permits scouts to detect targets at ranges in excess of three times the NODLR system's capabilities, enabling them to operate well outside the range of currently fielded threat direct fire and sensor systems. The line-of-sight, multi-sensor suite provides real-time target detection, recognition, and identification capability with 24-hour and adverse-weather operation. The LRAS3 also determines far-target location coordinates. The LRAS3 operates in both mounted and dismounted configurations.

The LRAS3 consists of an SGF with long-range optics, an eye-safe laser rangefinder, a day video camera, and a global positioning system (GPS) with altitude determination. The LRAS3 is a digital system, allowing it to export targeting information to the Army Battle Command System (ABCS). The LRAS3 exports far-target location coordinates to the Force XXI Battle Command, Brigade-and-Below (FBCB2) System.

Positive Feedback

Prior to having LRAS3, soldiers would maneuver vehicles along the low ground to avoid detection by enemy forces. Because of the system's long-range target acquisition capabilities, after receiving LRAS3, soldiers have increased flexibility in their tactics, techniques, and procedures to allow maneuverability along the high ground. This allows the crew greater opportunity to acquire more enemy targets without having to assume unnecessary, higher-risk courses of action. The range capability and image clarity provided by LRAS3 are credited with preventing several fratricides in Iraq because operators could distinguish between enemy and friendly vehicles beyond the ranges of other conventional systems.

Feedback from the field is positive. Infantry scouts interviewed from D/9 Cavalry (Dark Horse), 1CD, attested that "now, when we use it [LRAS3], we can tell the difference between a man planting a bomb and children playing several miles away on a moonless night. We love it! We could not have done our jobs without it and it has definitely saved lives."

Training Opportunity

In February 2005, PM FLIR, in concert with Raytheon Co., NVESD, PM Light Tactical Vehicles, and O'Gara-Hess/Armor Holdings Co., successfully conducted critical LRAS3 installation training on an M1114 Up-Armored HMMWV in rapid response to operational requirements from combat units in Iraq. This was a rare and valuable training opportunity, since there are currently only a handful of M1114s in the continental United States, as most of the fleet is in operation overseas. Also, PM FLIR and the Raytheon installation team were able to rapidly deploy as a combined product improvement team to Iraq in March 2005 in support of OIF 3, where they installed numerous LRAS3 vehicle installation kits on combat vehicles for the 3ID(M).

The training allowed key players to validate the materials, tools, equipment, and time necessary to complete an up-armored HMMWV installation. This crucial materiel-

readiness exercise was successfully conducted under austere and hostile conditions in a theater where resources are extremely scarce. Additionally, the event allowed managers, engineers, and technicians from multiple organizations to network together, paving the way for future teamwork, coordination, and problem solving for upcoming LRAS3 fieldings on up-armored vehicles.

The LRAS3 program also produces a specialized system variant known as the Fire Support Sensor System (FS3) featuring a modular laser designator that is integrated on the LRAS3. FS3 provides field artillery fire support teams the capability to detect, recognize, locate, and designate targets, and to send digital self/target location data to fire-support computers. FS3 enables the commander to attack targets with a variety of conventional and precision (GPS- and laser-guided) munitions at extended ranges, with increased accuracy, and in both day and night operations.

DVE Reveals the Invisible

The DVE program provides U.S. armed forces a thermal imaging system for use on combat vehicles and tactical wheeled vehicles, allowing for safer movement in support of fast-paced combat operations. DVE provides thermal imagery that greatly increases the operator's mobility in rain, snow, or fog, either day or night, and in battlefield obscurants (dust, sand, and smoke). DVE provides for situational awareness, vehicle tracking, and allows combat and combat-support elements to move as an integrated force. DVE greatly enhances force projection operations for watercraft as well as ground vehicles.

The DVE sensor module uses second-generation uncooled (lowest-cost) thermal imaging technology. The driver uses a state-of-the-art flat-panel display and control module that provides easy access to interface controls. Power for DVE is provided from the vehicle electrical system. DVE video imagery may be distributed to other vehicle crewmembers, and as a designated HTI system, the DVE can be easily adapted to any current or future U.S. or NATO combat and tactical wheeled vehicle.

The DVE system cost is very low compared to other FLIR sensors. The sensor module is a state-of-the-art second-generation FLIR with high resolution and fidelity. The display screen consists of a high-quality commercial flat-panel display and control module. The system is driver-friendly and easy to use on wheeled and tracked vehicles alike.

Fielding the System

In support of the Department of the Army's accelerated priority fielding to the 82nd Airborne Division for the DVE system and the division's operational requirement for thermal night vision driving capability, PM FLIR fielded DVE systems to all Improved Target Acquisition Systems companies within the division's infantry battalions. The fielding also supports the 82nd's combat readiness for rapid deployment to combat theaters.

As part of the fielding, PM FLIR's new equipment training team provided soldiers with hands-on, train-the-trainer-level instructions on complete operations and maintenance of the DVE system, including driver's training. As a result, soldiers who are current operators/maintainers within the division are now certified to serve as instructors for sustainment training within each unit.

Just prior to the DVE fielding to the 82nd Airborne Division, PM FLIR worked intensively from March through May 2004 with the U.S. Army Operational Test Command's Airborne Special Operations Test Directorate for Airborne Drop Testing. The DVE system survived the series of tests and left the Normandy drop zone with the coveted all-American seal of approval in the form of an airborne drop test certification. This major milestone authorized the DVE system to be fielded to all U.S. Army Airborne and Special Operations Units.

DVE now provides the 82nd ABN Division the same combat-tested and proved enhanced capability to perform maneuver operations, reconnaissance, and security missions with greater speed, safety, and survivability by means of a 24-hour, all-weather driving capability that the heavier Stryker Brigade Combat Teams have successfully employed in OIF. Additionally, since 2002, the United States Marine Corps has fielded 2,248 DVE Systems with PM FLIR for its M1A1 tanks, light armored vehicles, and amphibious assault vehicles.

Co-author Maj. Fritzgerald F.S. McNair, the assistant product manager for DVE and a liaison officer to the multi-national corps in Iraq during OIF 2 says, "Our [DVE] product team conducts after-action reviews with units and crews as often as possible. We've successfully worked over the past 12 years of the DVE program translating troop feedback into system improvements for our product line that have directly increased troop survivability and effectiveness in the most harsh and hostile combat environments."

DVE Passes Muster

During OIF1, the 2nd Transportation Company was attached to 4th Infantry Division with a mission to move combat equipment on a 24-hour basis. According to the unit commander, "This technology [DVE] is a true combat multiplier. Just as the combat arms require the ability to maneuver in adverse conditions in order to gain the edge over enemy forces, this technology allows the 'supporters' to gain the edge and maneuver the warfighter into the theater in order to do their jobs. The technology, coupled with experience, allowed the 2nd Transportation Heavy Equipment Transport (HET) Company to lead the

To sustain its edge in sensing beyond the visible in a hostile world, the U.S. Army is pursuing revolutionary developments in sensor hardware and software to preserve our warfighters' technical superiority.

way in moving the 4ID, 3ACR, 1AD, 2ACR into the fight and then the retrograde of 3ID."

DVE was equally lauded by combat arms troops. McNair, citing one Marine Corps OIF consolidated field report, says, "Tank crews stated that the DVE had an excellent picture. It was a plus to be able to see through dust and smoke. Crewman felt that the DVE was far superior to the older night optical device. USMC Scout and TOW units requested HMMWV mounts for DVEs similar to ones used on U.S. Army platforms."

The DVE fielding to the 82nd Airborne Division was the first to U.S. Army Light Infantry Forces. Because of growing operational demand for low-cost infrared sensors on the battlefield, DVEs are scheduled to be fielded to all brigade combat teams in all Army divisions starting in January 2006. "DVE and PM FLIR products allow ground troops in combat to 'See First, Understand First, and React Sooner.' Soldiers are our best sensors and the best in the world. We strive to provide the warfighter who leads the charge with the very best acquisition corps support possible. This way, the best continues to support the best.

The next version of DVE, currently under development, will feature an ability to export data for linkage to the digital battlefield. The current DVE version is in full-rate production, and over 4,500 DVEs have been fielded to Army, DoD, and U.S. government agencies. DVEs have also been installed on the following watercraft: the Army's Theater Support Vessel; the U.S. Coast Guard 26-foot patrol boat; and the city of Los Angeles Harbor Department 31-foot patrol boat.

A Formula for Success

Several factors account for the success of PM FLIR programs. The collocation of PM FLIR and PM NV/RSTA headquarters with the Army's Night Vision and Electronic Sensors Directorate (NVESD) at Ft. Belvoir has allowed for a close and symbiotic professional relationship to develop over the past eight years. This synergy also leverages NVESD's 51-year history as the premiere night vision research and development institution in the world, directly responsible for U.S. forces' pre-eminence in owning the night. This scientific and business partnership enables PM FLIR to provide the best night vision technology to soldiers at the possible best value.

PM FLIR has further demonstrated acquisition excellence thought its rapid and effective ability for spiral development in taking new technology research, development, and design and turning them corporately into cost-effective solutions for warfighters that yield tangible results—saving lives. PM FLIR is effectively responding to the rising demand for inexpensive infrared sensors on the battlefield for a growing population of DoD maneuver platforms. The bottom line remains that improved IR sensors = greater situational awareness + greater combat identification + greater combat effectiveness + fratricide reduction. PM FLIR continually strives to meet these validated joint/coalition requirements through operationally relevant evaluations, improving and implementing combat-ready material solutions, and effectively managing life cycle costs.

On the horizon is 3rd generation FLIR. To sustain its edge in sensing beyond the visible in a hostile world, the U.S. Army is pursuing revolutionary developments in sensor hardware and software to preserve our warfighters' technical superiority. The suite of emerging technologies promises the warfighter increased lethality and survivability by allowing troops to rapidly detect targets and subsequently engage them at ranges double those that are currently possible. Exploiting the advantages of multiple infrared wave bands in a single, state-of-the-art thermal detector housing will enhance target acquisition of even obscured targets and overmatch enemy countermeasures (such as camouflaged targets, smoke, electromagnetic interference). The 3rd Generation FLIR will be a critical element in maintaining the warfighting dominance of U.S. current and future forces as the eyes of the battlefield.

For more information, contact fritzgerald.mcnair@belvoir.army.mil.

"Adopting Joint"

Interoperability Through Convergence

Lt. Col. Jim Smith, USA ▪ Lt. Col. Mike Sweeney, USMC

"Born joint"—developing new systems to meet joint capabilities—is the preferred way of ensuring future systems, especially C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) systems, are interoperable. However, if the systems are already developed and in the field, two options exist to break Service stovepipes. Systems can be made interoperable by providing additional functionality to enable the required information exchange. This option is especially viable when the systems provide distinct/unique capability to the warfighter. If the systems provide a similar capability, the better option may be to converge to one. When a system already exists, a Service can "adopt joint." The Army, Marine Corps, and to a limited extent, Special Operations Command (SOCOM), have recently made the decision to adopt each other's tactical command and control (C2) and situational awareness (SA) systems of record in order to improve interoperability for the ground force. In this article we will lay out the process. Our purpose is not to recommend a how-to approach or to discuss in detail the technical challenges faced, but to provide a case study of the process and to discuss key enablers to overcoming obstacles.

The Army, Marine Corps, and to a limited extent, Special Operations Command have recently made the decision to adopt each other's tactical command and control and situational awareness systems of record in order to improve interoperability for the ground force.

Defining the Problem with Authority

Operation Iraqi Freedom highlighted the limiting fact that Army and Marine Corps C2/SA systems at the tactical level were not interoperable. As the Army moved towards Baghdad on the west side of the Tigris/Euphrates Valley, it could not "see" or effectively exchange digital information with the Marine Corps units moving north on the east side. The Army's systems of record were Maneuver Control System at the tactical operations center (TOC) level and Force XXI battle command brigade and below (FBCB2) at the platform level. The Marine Corps systems of record were Tactical Combat Operations for its operations centers and Digital Automated Computer Terminal at the platform level. Both Tactical Combat Operations and Digital Automated Computer Terminal shared C2 Personal Computer as their base software (also known as the Joint Tactical Common Operational Picture Workstation (JTCW)). The Army and Marine Corps systems were interoperable with the global command and control system (GCCS), which allowed for information exchange at higher echelons; however, these tactical systems were not designed to be interoperable with each other.

This limitation was well-known before initiation of combat operations and was mitigated to some extent by the limited use of FBCB2 blue force tracking within the Marine Corps, as well as other efforts to improve integration of the common operational picture at the theater level. These fixes were based on operational necessity but did not solve the long-term problem from a system or programmatic level. In fact, the problem is still present in theater today. The task organization for the recent offensive operations in Fallujah required a force mix of seven Marine Corps battalions and two Army battalions. During execution, none of these battalions could exchange digital information with the others.

The Services recognized the need to improve, at a minimum, the extent to which each could see the others' blue force tracking information (the location and identification of friendly units) and so took steps to solve the prob-

Smith *and* **Sweeney** *served in HQDA G8-FDT and HQMC C4 respectively during this convergence effort. Smith is currently PM Sensors and Lasers, PEO Soldier. Sweeney commands the 8th Communications Battalion, II MEF.*

"Adopting Joint" Process and Key Enablers

- **Define the Problem**
  - Authoritative direction
  - Service support
- **Identify Key Facts and Assumptions/Develop Courses of Action**
  - User defined/approved capabilities
  - Participation from subject matter experts across full breadth of problem
- **Choose Course of Action**
  - Empowered decision body with ability to provide resources
- **Execute Course of Action**
  - Documented agreement approved at the senior level providing how convergence will be executed

lem. Real momentum began when the Joint Requirements Oversight Council issued JROC Memorandum 161-03 (June 13, 2003), which requested that the vice chief of staff of the Army and the assistant commandant of the Marine Corps provide an integrated briefing on converging efforts for achieving a single joint capability. Joint Forces Command OIF Lessons Learned Change Recommendation also captured the need to improve. Authoritative direction (such as from the Joint Staff) and JFCOM support are the first key enablers in adopting joint.

Vision and Direction

Armed with the direction from the Joint Staff and feedback from the warfighter, it was now incumbent upon both Services' headquarters staff to provide direction to their respective Service on how best to meet the intent of JROCM 161-03. As with any problem-solving process, a key first step is listing facts and assumptions. The key fact bearing on this problem was that preliminary reports from both Services in theater indicated that the Marine Corps' C2 personal computer and the Army's FBCB2 had performed well during combat operations. Initial direction from both headquarters staffs was based on the premise that the best method for converging the ground force toward a single capability was to use the same systems. This assertion became the vision for the joint effort: Adopting the same systems—specifically JTCW for command posts and FBCB2 for platforms—would provide the most efficient path towards interoperability from a performance, schedule, and life cycle cost standpoint. Both Services were invested in their current systems of record. A clear definition of the problem and direction from the Services' headquarters staff provided the next key enabler.

JROCM 161-03 provided broad direction. The Services worked with the Joint Staff to develop a more effective problem statement. First, although the JROCM was addressed specifically to the Army and Marine Corps, it became clear that a ground solution needed to include the Special Operations community. Air Force and Navy involvement was desirable, but this initial effort would focus solely on the ground, with the understanding that a converged ground solution would provide a far improved baseline for follow-on air-to-ground interoperability efforts. Next, the JROCM specified only blue force tracking as a capability; however, to operate effectively in close proximity, the ground force required not only knowledge of each other's blue locations, but also the ability to share additional SA, such as reported enemy locations and obstacles, and to exchange C2 messages. Finally, the JROCM did not provide a timeline for convergence, but given the ongoing operations in support of operations Enduring Freedom and Iraqi Freedom, it was understood that schedule would be a major driver for the effort. The resultant problem statement was to develop a single capability for the exchange of C2 and SA information within the ground force as soon as possible. This problem statement also effectively bounded the problem by limiting the effort to the ground force, focusing on C2 and SA exchange at the tactical echelon and establishing schedule as a driver.

Organize to Solve the Problem

Given the vision of convergence with schedule as a metric, the effort moved towards developing courses of action to solve the problem statement. First, we divided the problem in two: the battalion and above (BAA)/command post team had the mission to investigate converging the Marine Corps' JTCW and the Army's maneuver control system to the JTCW; the brigade and below (BAB)/platform team had the mission of investigating converging the Army's FBCB2 and the Marine Corps' Digital Automated Computer Terminal to FBCB2. We then further divided these two teams into three workgroups each: capabilities, technical/architecture, and programmatics. Converging was a complex, multi-Service problem. Developing several workgroups had the benefits of breaking the problem into interdependent segments that could fully develop courses of action involving Army, Marine Corps, and SOCOM subject matter experts from multiple disciplines. However, the separation of BAA and BAB would prove awkward as the convergence effort progressed, as we shall see later.

Importance of the Capabilities Workgroup

We initially made the mistake of underplaying the importance of the capabilities workgroup by assuming that since the systems in question were already fielded, the

requirements would be well-known. In retrospect, however, this workgroup provided the absolutely critical first step of ensuring that any materiel solution meets the warfighter's capability needs. Combat developers from the Army, the Marine Corps, and SOCOM scrubbed the existing requirements documents and found a very large degree of overlap between the two Services' operational requirement documents for the command post systems and the two Service ORDs for the platform systems. This analysis from the combat developers provided further validation that convergence was a viable course of action. The combat developers then discussed must-have capabilities required for one Service to accept the other Service's system. Finally, the capabilities workgroup established early on that the converged solution was unlikely to meet special operations forces blue force tracking capability requirements for some elements of the special operations forces community. In order to keep the overall convergence on timeline and provide a capability to the majority of users, interoperability with those special operations forces elements was deemed outside the scope of this problem and approached by different means.

The efficiency of the capabilities workgroup depended on several factors. First, the combat developers remained capability-focused and systems-agnostic. Neither Service based its analysis on what its current system *could do*, but on what it *needed to do*. Equally important, the combat developers adopted the positions of no new capabilities beyond what was in the current Service ORDs and of joint interoperability as the ultimate goal. New requirements would have put the schedule at risk, added cost, and were not within the scope of what we were asked to investigate. The next key enabler for adopting joint is support of the user, both from the Services' combat developers and the combatant commands as represented by JFCOM.

Technical/Architecture Workgroups Uncover Key Issues

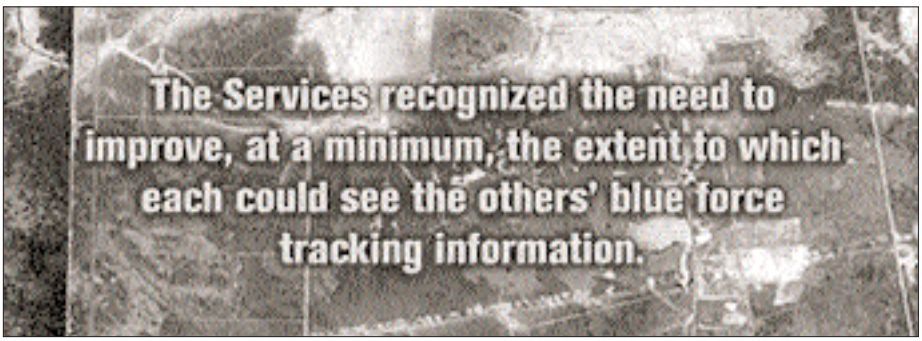
Provided with known capabilities and each Service's must-haves, the technical/architecture workgroups for BAA and BAB began developing technical solutions. The architectures developed for this effort were, in many cases, the first joint views of how C2 and SA are exchanged currently and how they could be exchanged after convergence at tactical echelons. This workgroup was the first to uncover one of the flaws in our process to date. Up to this point we were focused on applications only, converging one Service to JTCW hardware and software and the other Service to FBCB2 hardware and software. The architecture effort uncovered the second- and third-order effects of exchanging applications and the other layers that would need to be addressed to ensure interoperability. The most salient issues uncovered were:

- The Army and Marine Corps had very different communications architectures; even after converging applications, data would not be exchanged until a communications bridge between the architectures was developed and fielded.
- The Army, Marine Corps and SOCOM had different policies for the classification of SA information; data would not be exchanged until these policy differences were resolved.
- The Services had different methods of managing data; data management schema would need to be aligned to allow for exchange.

Communications architecture, security, and unit reference number management workgroups were formed to address these issues. In each case, JFCOM played an important role by leading the workgroups and providing a neutral viewpoint. For the purpose of analyzing courses of action, the technical/architecture workgroup analyzed what additional development was necessary for JTCW and FBCB2 to meet both Services' ORDs and must-haves. Ensuring that the full problem is understood—including materiel, standards, and policy implications— by a multi-discipline team of neutral subject matter experts involved is also a key enabler.

Programmatics Workgroup Develop Cost and Schedule

Armed with this initial estimate of the scope of effort required to develop the converged solution, the programmatics workgroup developed a proposed cost and schedule, ensuring that only "delta costs" associated with convergence were considered in the course of action development. In other words, both Services had an existing funding stream for their system of record. That funding included, in some cases, hardware refresh, software sustainment, testing, and training resources. For instance, both the Marine Corps' JTCW and the Army's maneuver control system software was Microsoft Windows®-based and hosted on a laptop in the command post. Refresh of laptops was not a cost included in the convergence cost because the Army would need to resource this requirement regardless of convergence. Conversely, providing additional functionality to JTCW to en-



sure it met the Army's capabilities was included. The programmatics workgroup also identified the schedule that would quantify the "soonest" in the problem statement. They identified contributing external schedule drivers and development, testing, and fielding timelines. The most important external drivers were OIF rotation dates, scheduled hardware refresh dates for the Marine Corps Digital Automated Computer Terminal, and the Army software blocking milestones. This workgroup provided the associated cost and schedule for the courses of action we would brief for decision.

Providing Governance: The Army Marine Corps Board

With courses of action developed that included cost, schedule, and performance implications, the next step was to select one course for execution. The key enabler here is to have a body with the authority to make that decision and enforce it. We were extremely fortunate in this case to have the recently established Army Marine Corps Board available. The AMCB was chartered in January 2004 to "identify, develop, review, and resolve issues with Army/Marine Corps concepts, capabilities, Service-approved requirements and programs." The Army deputy chief of staff G-8 and the Marine Corps deputy commandant, programs and resources, serve as co-chair with permanent membership from Army and Marine Corps operations, combat developers, and materiel developers. The AMCB meets monthly at the 06 level, the one- to two-star flag officer level, and the three-star flag officer level. This board, expanded as required with SOCOM representation, was extremely well-suited not only for approving the convergence plan but also for directing the budgeting of required resources to accomplish the development of the joint solutions.

Through 2004, we briefed the AMCB on three separate occasions to obtain decisions in support of the BAA convergence, the BAB convergence, and a strategy to resolve the security policy differences between the Services. We were now ready to return to the JROC, per JROCM 161-03, and respond on how the Services would resolve the blue force tracking issue. The JROCM provided the final endorsement in JROCM 163-04, which stated: "The JROCM approved the Army-Marine Corps convergence plan to achieve a single capability based on existing Service capabilities documents. The Army will adopt the JTCW application for tactical command posts and the Marine Corps will adopt FBCB2 for both platforms and dismounted applications."

JROCM 163-04 and the minutes from each of the three-star AMCBs provided a written record of the decision to converge. However, memoranda of agreement (MOAs) between the Services were necessary so both Services could understand and agree to the details of their proposed cooperation in the joint development and who had lead for each effort. The appropriate combat developer and materiel developer in the Army, Marine Corps, and SOCOM signed the MOAs at the two- to three-star flag officer level. The MOAs established a joint operational requirements workgroup and a joint configuration control board for BAA and BAB, and they identified the AMCB as the final authority for adjudicating any problems that could not be resolved by these two bodies. Again, the existence of the AMCB greatly facilitated overcoming challenges to convergence. The final key enabler is documentation through minutes and memoranda signed at an appropriately senior level to ensure the agreement holds over the life of the process, since there will invariably be changes in leadership.

Expectation Management

The decision to converge and how to converge are required initial steps. Now, perhaps, the most difficult steps can begin, further complicated by the large number of stakeholders. Not only are the typical players involved from both Services and SOCOM, but also, as a result of the high-profile nature of converging, the development has the interest of the Office of the Secretary of Defense, DoD, and the Joint Staff. Already some issues have arisen during the early development.

As stated earlier, the separation of BAA and BAB, while useful early on to develop decision-quality information, is now proving to be dysfunctional. To ensure the development of a truly seamless solution for the tactical echelons, the BAA and BAB joint configuration control boards are converging into one board to ensure interoperability between the command post and the platform. Additionally, there is concern that the joint materiel solutions, although based on legacy requirements documents, must be developed to satisfy emerging capabilities such as net centricity and compatibility with the joint C2 program.

Much work remains. To bring the "adoption" analogy full circle, difficult as the decision and process to adopt a child are, they are by no means an end state. Raising children after adoption tends to have second- and third-order consequences of its own. Similarly, the decision to converge to a single capability will have challenges of its own throughout development and fielding. However, the decision and process for converging materiel solutions among Services opens lines of communication and creates healthy dependencies—and the corresponding trust—to continue movement towards meeting the combatant commander's requirement for joint forces equipped with interoperable systems.

The authors welcome comments and questions and can be contacted at james.henry.smith@us.army.mil and sweeneymm@hqmc.usmc.mil.

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In the News

ARMY NEWS SERVICE (APRIL 5, 2005)
ARMY ANNOUNCES BUSINESS RESTRUCTURING OF THE FCS PROGRAM

After two months of review, Secretary of the Army Dr. Francis J. Harvey today announced a restructuring of the business aspects of the Future Combat Systems program. The changes are comprehensive and include contractual, programmatic, and managerial improvements.

The improvements will formally link the FCS program to the Army Modular Force Initiative through a Future Combat Force Strategy that establishes a framework for the continuous progression of the current modular force into the future one. The Future Combat Force Strategy provides for the spiraling of FCS-based technologies into the current modular force; integration of current combat lessons in areas of doctrine, organization, equipment, and other key elements, and into the force; and eventual incorporation of advanced manned combat platforms developed in the FCS program.

Harvey directed that the current FCS Other Transaction Agreement (OTA) with the lead system integrator (The Boeing Co./SAIC) be changed from an OTA to a Federal Acquisition Regulation-based contract that would include the Truth in Negotiations Act, the Procurement Integrity Act, Cost Accountability Standards, and an Organizational Conflicts of Interest clause.

"The OTA was appropriate for the earlier phases of FCS, but with the implementation of the Army Modular Force Initiative and last summer's programmatic restructuring of the FCS program, we need a contractual arrangement that best ensures FCS is properly positioned in the Modular Force and that its technologies are spiraled in as soon as possible," Harvey said.

To ensure the management approach is fully aligned with Chief of Staff Gen. Peter Schoomaker's policy decision last year to programmatically restructure FCS, Harvey also directed the establishment of the Army Modular Force Integration Office to ensure that technologies are spiraled into the current force as soon as they are ready, and integration and coordination of the program with co-evolution of joint warfighting doctrine and the Army's emerging global communication and information infrastructure. The Acting Under Secretary of the Army, Raymond Dubois, and the Army Vice Chief of Staff, General Richard Cody, will oversee this office.

Harvey and Schoomaker will conduct an in-depth review of the program a minimum of three times a year. Harvey, in close consultation with Schoomaker, will also serve as the Army lead for all major changes to the program.

As an additional oversight measure, the Army Audit Agency, the Army Science Board, and an outside panel of advisors will conduct periodic independent cost, schedule, and technical viability assessments.

AMERICAN FORCES PRESS SERVICE (APRIL 25, 2005)
ARMY GENERAL: AIR FORCE HELPED LOGISTICS SUCCESS IN IRAQ

Gerry J. Gilmore

WASHINGTON (AFPN)—The U.S. military's task to supply troops serving in Iraq during the past year "was one of the most complex and challenging missions in our history," a senior Army general said April 20.

Yet logisticians "proved successful in supporting a force of (about) 165,000 soldiers, airmen, Marines, and civilians serving in a country the size of California," Army Lt. Gen. Thomas F. Metz said. He recently returned stateside after a year as commander of Multinational Corps Iraq and is the commander of the Army's 3rd Corps at Fort Hood, Texas.

The general said supply specialists in Iraq "distributed an average of 1.2 million gallons of fuel, 55,000 cases of bottled water, 13,000 cases of Meals, Ready to Eat, 60 short tons of ammunition, and 200 pallets of repair parts" each day to U.S. forces during his tour.

Yet, Metz said, he recalled a time early in his tour when the logistics pipeline in Iraq did not operate so smoothly. In April 2004, insurgents staged attacks throughout Iraq and targeted U.S. supply centers and truck convoy routes, he said.

Supply specialists reacted quickly and shifted "from a centralized distribution system to decentralized regional hubs," Metz said. This change increased supply-system flexibility and "helped us to better assess civilian convoy routes on the battlefield and avoid risk when possible through the highest threat areas," he said.

Another lesson was that military logisticians on convoy duty in Iraq "must have the training, confidence, and weapons skills to conduct supply missions," he said.

Metz also highlighted "the Air Force's contribution to the safety and success of our resupply efforts" in Iraq. The

implementation of aerial supply routes in some high-threat regions "helped keep (about) 40 additional trucks off the road per day" and kept "at least 80 soldiers" out of harm's way on a daily basis, he said.

The use of aerial resupply also helped deliver parts and other items from the United States "directly to remote locations like Quyarrah West and al Taqaddum," Metz said.

Daily patrol requirements and engagements with the enemy in Iraq caused "massive logistics requirements during the deployment," he said. Yet, supply centers in the United States, Germany, and Kuwait "did a tremendous job in supporting the corps," he said.

Metz said he "was pleased and proud of the monumental logistics operations and accomplishments during our deployment."

ARMY NEWS SERVICE (APRIL 26, 2005)
NEW TECHNOLOGY HELPS CLEAR AWAY UNEXPLODED ORDNANCE

Mary Bodine

FORT A.P. HILL, Va.—New technology now being used at Fort A.P. Hill, Va., promises to revolutionize unexploded ordnance removal and even generate revenue from recycling the material.

The Lightweight Ordnance and Armaments Demilitarization System, or LOADS, is a mobile machine designed to crush or cut inert ordnance and make it acceptable for salvage or recycling, said John J. Stine, director of Demilitarization Services Division, UXB International, Inc. —the company that designed LOADS.

LOADS is being used on Fort A.P. Hill to remove about two tons of inert ordnance—some dated from the 1940s—for a range upgrade project, said Gregory Quimby, project manager, AMEC Earth and Environmental, Inc., the company responsible for the range design, construction, and its environmental remediation. The range is being converted from an anti-armor range to a multipurpose machine gun range. UXO clearance on the range was necessary for new construction, he added.

"We took the construction footprint for the range modifications and conducted a surface clearance," Quimby said. "If the UXO was live, we flagged it for detonation, which will be done with explosives; if it was nonhazardous UXO, we collected it and consolidated it in a central location for LOADS processing."

John Kierepka, a contractor with UXB International, Inc., shows Hank Hanrahan, Fort A.P. Hill's director of Plans, Training, Mobilization and Security, how effectively LOADS breaks a 40-mm round, making it acceptable for recycling. U.S. Army photograph by Mary Bodine.

AMEC also used electromagnetic scanning and geophysical surveys to clear 10 acres of UXOs buried less than two feet in the ground, Quimby added. About 30 acres of surface land were cleared for the project.

Once the ordnance is processed through LOADS, it will be collected, smelted, and recycled, Stine said. Revenue generated from recycling is credited to the client's account, resulting in a cost-savings for the military, he added.

Traditional methods of UXO removal were burying or burning munitions on the range, Stine said.

"We knew there had to be a better way of removing UXOs from training areas," he added. "From blank paper to operation, it only took 18 months to build LOADS. We began testing it in late 2002 and started using it immediately after that. There have been four modifications on the system, expanding the types and sizes of munitions it can handle."

On the Fort A.P. Hill project, LOADS will cut or crush 40-mm grenades, 60-mm mortars, 81-mm mortars, 3.5-inch rockets, and other munitions remnants, Quimby said.

"This technology will enhance the way ranges are cleared in the future," he said. "Because it is mobile, we will be able to clear more ranges, more safely. Although the machine is not designed to process live ordnance—everything has to be inert—by passing it through the machine, you can be sure that it is rendered safe. If there is a live round, the machine can certainly absorb the impact better than the human body."

The LOADS system has revolutionized UXO clearance and eventually will replace the "bury or burn" method altogether, Stine said.

Bodine serves with Fort A.P. Hill Public Affairs. Fort A.P. Hill is a 76,000-acre installation specializing in training and maneuver, and live-fire operations.

AIR FORCE SPACE COMMAND NEWS SERVICE (APRIL 27, 2005)
SPACE, AIR WARFARE CENTERS INTEGRATE CAPABILITIES

Lt. Gen. W. M. Fraser III, USAF

PETERSON AIR FORCE BASE, Colo.—The Air Force is integrating some forces to better manage air, space, and information operations combat capabilities to support missions worldwide, Air Force officials announced April 26.

Elements of Air Force Space Command's Space Warfare Center at Schriever Air Force Base, Colo., will integrate with the Air Warfare Center at Nellis AFB, Nev., to become the U.S. Air Force Warfare Center. Air Force officials also are looking at what information warfare capabilities might fit into the integration. Located at Nellis, the new center will fall under Air Combat Command's control.

Details of the transformation will be coordinated by officials from both commands who said they hope the integration will be completed by Oct. 1. No physical movement of units or closing down of facilities is currently planned.

"Integrating elements of the [centers] consolidates key Air Force warfighting assets into one organization, which will create a warfighting synergy that increases combat effectiveness and peacetime efficiencies," said Gen. Lance W. Lord, AFSPC commander. "This integration will better meet operational requirements for air, space, and information operations, ensuring the Air Force continues to provide quality stewardship for America's warfighting assets."

As the consolidation progresses, there will be no interruption to air, space, and information operations support to the joint warfighter, General Lord said.

"This integration is another step we're taking to ensure the Air Force has the right mix of air, space, and (information operations) capabilities for training and supporting our combat forces," said Lt. Gen. William M. Fraser III, ACC vice commander. "Doing this now will make us even more ready to meet current and future challenges."

ARMY NEWS SERVICE (APRIL 26, 2005)
HARVEY EXAMINES AVIATION TRANSFORMATION, NEW CRC

Staff Sgt. Carmen L Burgess, USA

FORT RUCKER, Ala.—Secretary of the Army Francis Harvey praised units at Fort Rucker, Ala., for improving training and introducing initiatives to keep soldiers safe while performing their duties.

Harvey visited the installation April 26, receiving briefings on Army aviation transformation and the strides being made by the Combat Readiness Center to keep soldiers informed and safe.

Army Aviation

"We are a huge contributor to the battlefield," Brig. Gen. E.J. Sinclair, Fort Rucker commanding general, told Harvey. With flight paths covering an area the size of South Carolina, Fort Rucker has trained more than 58,000 U.S. and 460 foreign aviators on what has become the busiest airfield worldwide.

Sinclair went on to tell the secretary how Army transformation and changing battlefield scenarios have

prompted adaptations in gunnery tactics, proficiency requirements, and maneuvering flight. He said that there have been many warfighting initiatives introduced within the last year that have resulted in positive feedback from the field.

"All the stuff we buy, all the equipment we field—[our success] really comes down to the soldier," Sinclair said. "There are so many great stories and great soldiers in our units."

The secretary echoed that sentiment during a speech he gave that evening at the National Defense Industrial Association seminar in Atlanta as he highlighted the resilience of soldiers like Blackhawk pilot Maj. Tammy Duckworth. Although she was seriously wounded while flying in Iraq and ended up losing both of her legs, she safely landed her disabled aircraft, saving the lives of her crew.

The secretary told the audience that Duckworth wants to continue serving as a pilot and had told him that "no Iraqi with a [rocket-propelled grenade] is going to dictate how I live my life."

"Though the [U.S.] Army is very busy, it is still the best in the world, and it is primarily the best because of the courageous men and women who proudly wear the uniform of the American soldier," Harvey told the audience.

After touring Rucker's Seneff Aviation Warfighting Simulation Center and aviation combined arms tactical trainer, where he fired a missile from the cockpit of a simulated Apache, the secretary voiced his approval of the technologies used to familiarize new pilots with equipment before they fly real aircraft.

"I'm very impressed with the training and hours that aviation soldiers put in," he said.

Combat Readiness

Before leaving the installation, Harvey met with staff members at the Combat Readiness Center, formerly known as the U.S. Army Safety Center, where he received updates on improvements being made to enhance soldier safety.

Brig. Gen. Joseph Smith, CRC director, told the secretary that regardless of how the Army loses a soldier, whether in combat or by accident, CRC staff want to know why and how. He said their mission is to reduce the number of casualties across the Army.

While at the SENEFF Aviation Warfighting Simulation Center at Fort Rucker, Ala., April 26, Secretary of the Army Francis Harvey fires a Hellfire missile from the mock cockpit of an Apache helicopter.
U.S. Army photograph by Staff Sgt. Carmen Burgess, USA.

The center is focused on soldier safety through investigations and predictive analysis of losses, so the Army can better manage risk and improve combat readiness. CRC has developed a Web site, complete with risk assessment tools and modern safety messages, to drive the message home to soldiers.

"We understand this technology is the future," said Smith. "We're about messaging, tools, and education."

The secretary told employees at the center that he appreciated their efforts in taking care of soldiers.

"I think what you're doing is very important," he said. "The safety and well-being of our soldiers is my No. 1 concern."

ARMY NEWS SERVICE (APRIL 29, 2005)
ARMY TO PURCHASE NEW LIGHTWEIGHT HOWITZERS

Martin Kane

PICATINNY ARSENAL, N.J.—A joint-service program office at Picatinny Arsenal has completed development and is managing the purchase of 589 new lightweight 155mm howitzers for the Army and Marine Corps.

An $843-million, four-year contract has been awarded to BAE Systems of Barrow-in-Furness in the United Kingdom, to manufacture the weapons and 94 digital fire-

Soldiers fire the new M777A1 lightweight howitzer during operational testing. U.S. Army photograph.

control retrofit kits, according to Jim Shields, deputy program manager for the lightweight 155mm howitzer program.

Shields said that the howitzer is known as the M-777A1 howitzer in the Services' inventories.

"The M-777A1 will replace all of the corps' current M-198 towed howitzers and will be the artillery system for the Army's Stryker Brigade Combat Teams," he said.

As the first ground combat system to make extensive use of titanium in its major structures to trim weight, the M777A1 is 7,000 pounds lighter than the weapon it replaces.

The weight reduction improves transportability and mobility without impacting range or accuracy, Shields said, adding that the system is compatible with the entire family of 155mm ammunition.

The new howitzer is transportable by the Marine Corps' MV-22 tilt-rotor aircraft, and two can fit on the C-130.

Currently, BAE Systems is manufacturing 94 howitzers under a low-rate initial production contract, Shields said.

The first 94 weapon systems will be equipped with an optical fire control system that will be upgraded to incorporate digital fire control under the full production contract, he said.

All 495 full-production units will be manufactured with digital fire control systems also known as towed artillery digitization or TAD.

The 3rd Battalion, 11th Marine Regiment, located at Twentynine Palms, Calif., will be the first unit fully equipped with the weapon.

Shields said that BAE Systems facility in Hattiesburg, Miss., is assembling the howitzer.

"Approximately 80 percent of the howitzer's components are built in the U.S.," Shields said. "We utilize a supply chain that spreads across 10 states, the U.K., Canada, and Italy."

The Army's Watervliet Arsenal in New York manufactures the cannon assembly, he said.

The howitzer system underwent a successful joint-service operational test during October 2004 at Twentynine Palms, Shields said. During the four-week test, nearly 12,000 artillery rounds were fired by four M777A1s.

The system demonstrated high reliability, met or exceeded all its operational requirements, and a team of independent evaluators determined the M777A1 was both operationally suitable and effective.

The M777A1 will be capable of firing the Army's Excalibur precision-guided projectile that is also under development at Picatinny Arsenal.

Excalibur will be fired out to a range of 40 kilometers from the M777A1, and because of its Global Positioning System and inertial navigation guidance, will deliver precision-strike capability (less than 10 meters Circular Error of Probability) at all ranges.

Excalibur is scheduled to be fielded in late 2006 when the Army starts taking delivery of its first M777A1s.

Kane works for the U.S. Army's Armament Research, Development and Engineering Center (ARDEC) Public Affairs.

AMERICAN FORCES PRESS SERVICE (MAY 2, 2005)
DIGITAL ADVANCES PRODUCE IMPROVED UNMANNED AERIAL VEHICLES

Gerry J. Gilmore

WASHINGTON, May 2, 2005—One day on a gray-painted aircraft carrier tossed by turbulent seas, a grizzled Navy commander awaits the arrival of a new pilot.

A teeny knock pings from the outside of the officer's watertight steel door.

"Come in," the commander growls. The door swings open and a squat, cylindrical object negotiates itself over the threshold and then trundles into the officer's quarters.

In a metallic voice the robot cheerfully announces: "R2-D2 reporting for duty, sir!"

Although R2-D2 of Star Wars fame is imaginary, Defense Advanced Research Projects Agency researcher John S. Bay predicts that fully automated unmanned aerial vehicles will be commonplace in the not-so-distant future, as human warfighters rely more and more on flying R2-D2s.

Bay said Defense Secretary Donald H. Rumsfeld and Air Force Chief of Staff Gen. John P. Jumper "have both set high goals for automation in UAVs."

An electrical engineer by training, Bay has for the past four years worked on a special DoD-endorsed project—the Software Enabled Control program—that marries cutting-edge computer technology with robotics to produce improved fixed- and rotary-winged unmanned aerial vehicles.

"The goal of the program is to improve the level of automation for air vehicles," to include unmanned and manned systems, Bay explained. This, he said, involves the implementation of "innovative control systems" that take advantage of recent breakthroughs in computer software.

SEC technology has already been applied to pilot "a UAV from the backseat of an F-15," Bay said. Lessons learned, he noted, will likely be used one day to produce "aerial robots" that like R2-D2 of Star Wars fame, would act as "an automated wingman" for human pilots.

Bay said the new technology underwent a series of experiments in August 2004 at Fort Benning, Ga., using a Yamaha-sourced radio-controlled miniature helicopter, the type flown as a crop duster in Japan.

The Fort Benning trials were fully successful, Bay said, noting the 150-pound helicopter completed all of the experiments without crashing. The flying capabilities of the little helicopter were improved by installing updated computing equipment and sensors, Bay said, as part of efforts to make it behave more appropriately for military missions.

Those tasks, he noted, could include low-altitude reconnaissance work in urban environments, landing in confined or geographically challenged areas, rapid landings and takeoffs, "nap-of-the-earth" concealed flying tactics, and more.

"The control systems that we are building expand the flight envelope for the vehicle," Bay observed, noting SEC technology allows unmanned aerial vehicles "to fly closer to the ground at higher speeds with more aggressive maneuvers."

Although a human operator stood by as a fail-safe during the Fort Benning tests, the SEC-enhanced helicopter performed pre-programmed flights all by itself.

"It was totally automatic," Bay explained, noting, "We gave it a starting point and an ending point and told it to avoid things in between." Other SEC testing, he said, includes the use of a full-sized automated helicopter.

Bay explained that most military UAVs in use today are operated at higher altitudes "where there's nothing to run into." SEC-enhanced UAVs, he pointed out, can fly around buildings and other vehicles.

Onboard sensors assist SEC-enhanced UAVs in avoiding buildings and helping with bad landings in difficult terrain, Bay noted.

Application of software-enabled control technology, Bay said, will enable UAVs to conduct different types of reconnaissance tasks. It's also feasible, he added, that future UAVs may be used to pick up and deliver supplies or perform combat search-and-rescue missions to "pull a downed or injured pilot out of harm's way."

DARPA is the Defense Department's premier research and development agency. It manages and directs selected DoD research and development projects that may produce dramatic advances for traditional military roles and missions.

AMERICAN FORCES PRESS SERVICE (MAY 17, 2005)

DOD PREPARES BIOMETRIC ID SYSTEM FOR U.S. BASES IN IRAQ

Gerry J. Gilmore

WASHINGTON (AFPN)—The Defense Department is fine-tuning a $75 million biometric identification system designed to improve force protection at U.S. military bases in Iraq, said officials involved with the project.

At a recent demonstration, DoD officials said the state-of-the-art system will use biographical data, facial photographs, fingerprints, and iris scans collected from Iraqis and other non-U.S. citizens who want to work on U.S. bases in Iraq to develop ID cards that cannot be counterfeited.

Biometrics are measurable physical or behavioral characteristics that can be used to identify people.

Work on the new biometrics-based system began in late January when Paul Wolfowitz, then-deputy secretary of defense, pushed for an improved base-access system to provide better protection for U.S. troops in Iraq.

The need for a better way to screen people coming onto U.S. bases in Iraq was illustrated by the Dec. 21, 2004, bombing of a military dining facility in Mosul. That blast killed 22 people, including 14 U.S. soldiers, and wounded at least 50. It was first thought the dining facility had been hit by a rocket attack.

Further investigation of the Mosul bombing pointed to the likelihood that a suicide bomber had infiltrated the base—one non-U.S. person killed could not be identified—and set off the explosion.

"This is a force-protection initiative," said a DoD official at the system demonstration. He said the new ID cards contain embedded information that cannot be altered.

"This badge will be able to uniquely identify that person as the right person. You can't counterfeit it; you can't tamper with it."

Base employees who are issued new biometric ID cards will be required to pass through security-control points where the badges will be electronically checked, he said.

During the demonstration project, managers showed how fingerprints and iris scans are gathered and the data put into computers, how ID cards are printed, and how new ID cards are checked and verified by stationary and mobile scanners.

Employee information gathered at enrollment points will be forwarded to self-contained control stations. The control stations feature independent power, heating, and air-conditioning systems—all a necessity in an austere, forward-deployed environment like Iraq. The control stations will process the enrollment data to produce the biometrically enabled ID card.

"DoD is trying to develop an identification capability so that we can identify unknowns [and] terrorists," said Steve Hooks, a former FBI special agent and biometric project consultant. "These individuals applying for an ID card will have background checks based on those conducted for U.S. military personnel and DoD civil servants."

The biometric ID system has been developed to protect servicemembers and save lives, said Army Maj. Gen. Conrad Ponder, the chief integration officer for the Army's chief information office.

"We're developing a significant new capability for force protection," he said. "This prototype is a solid first step,

and we'll continue improving the systems as we get closer to fielding [the system]."

Project managers are now working closely with U.S. Central Command officials who attended the briefing to resolve any remaining issues. The new system will be implemented in Iraq as soon as possible, officials said.

AMERICAN FORCES PRESS SERVICE (MAY 19, 2005)
DOD EXAMINES HIGH OPERATIONAL TEMPO'S EFFECT ON EQUIPMENT

Jim Garamone

WASHINGTON (AFPN)—Equipment that servicemembers are using in Iraq and Afghanistan is getting years' worth of use in just one year on the ground, and the Defense Department is taking steps to ensure the tanks, Bradleys, Strykers, Humvees, helicopters, and unmanned aerial vehicles stay in a high state of readiness.

No one is going into combat in substandard equipment, a DoD report concluded.

The report—"Ground Force Equipment Repair, Replacement, and Recapitalization Requirements Resulting from Sustained Combat Operations"—went to Congress recently.

Department officials were concerned about the effect prolonged combat would have on equipment even before Congress asked for the issue to be examined.

"Equipment is being used at a much higher rate than it is in peacetime—two to eight times higher, depending on the piece of equipment you are talking about," said Mark Franklin Cancian, director of the land forces division of DoD's office of program analysis and evaluation. "As a result, it needs a lot more maintenance."

In addition, problems caused by the high operational tempo are further aggravated by the harsh environmental conditions. Equipment operating in Iraq and Afghanistan faces problems from dust, dirt, and heat, Cancian said. Other equipment, especially trucks and Humvees, are running with added armor, which taxes the engines, springs, and brakes.

The Abrams tank is a perfect example of the extent of the problem. In peacetime, Abrams tanks drive about 65 miles a month. In Iraq, soldiers are driving them about 325 miles each month.

Other pieces of equipment have similar statistics. Humvees are being driven more than twice as far each month as in peacetime. Armored security vehicles are being driven about eight times as much, and Bradley fighting vehicles about five times their peacetime aver-

Four M-1 Abrams tanks are in various stages of upgrade on the reassembly line at Anniston Army Depot Combat Vehicle Facility. The The Abrams tank is a perfect example of a high operational tempo's effect on equipment maintenance and repair. In peacetime, Abrams tanks drive about 65 miles a month. In Iraq, soldiers are driving them about 325 miles each month.

U.S. Army photograph.

age. Helicopters are being flown about twice as much as in peacetime.

"The question we asked was, 'What's the long-term effect of combat operations on our equipment?'" Cancian said.

DoD used the results of the study to help inform officials for the fiscal 2005 supplemental budget request. That request funds all the work that can be accomplished this fiscal year to repair or replace equipment. Portions of the $82 billion request fund depot maintenance and procurement actions

Cancian said a lot of maintenance is done in theater. Most equipment does not have to be shipped back to the states for major overhauls. When equipment does get shipped back, some maintenance is done in the units and some in depots. The depots have "all the funding and capacity to do the work," he said.

There are some equipment washouts, and there is procurement money in the supplemental to cover pieces of equipment that are not economical to fix. These washouts are mostly trucks. Combat losses also need to be replaced, Cancian said.

Most procurements can be handled by current production lines, Cancian said. But some, such as the OH-58D Kiowa Warrior observation helicopter, have been discontinued. The Army will accept some risk in using this helicopter until a replacement comes online in fiscal 2007 or 2008.

"The risk isn't that we can't fight a war," he said. "It means units may have to rotate more quickly than they otherwise would."

ARMY NEWS SERVICE (MAY 19, 2005)
DETECTION DEVICE TO REVOLUTIONIZE BIOLOGICAL WARFARE

Elaine Wilson

FORT SAM HOUSTON, Texas—The Joint Biological Agent Identification and Diagnostic System (JBAIDS), a 40-pound device small enough to slip into a rucksack, is designed to vastly increase the speed and accuracy of biological warfare agent detection.

"JBAIDS will fill a vital role in providing accurate, rapid identification capability for detecting a threat or an attack," said Donna Boston, JBAIDS program manager.

U.S. Army Spc. Paul Miller, from the 9th Area Medical Laboratory at Aberdeen Proving Ground, Md., loads the Joint Biological Agent Identification and Diagnostic System analyzer carousel with samples. It takes 40 minutes to process a sample once the extraction process of a suspect biological warfare agent specimen is complete.

U.S. Army photograph by Jerry Stillwagon.

Prior to JBAIDS, it took the military two to four days back in a microbiology laboratory to accurately identify the presence of a biological warfare agent. JBAIDS can do it on the spot in 40 minutes.

"With rapid identification of a threat, we can be armed with information to fight bioterrorism," Boston said. "It offers so many advantages. The quicker we can identify an agent, the quicker a doctor can make an accurate diagnosis and commanders can start taking action."

The Joint Program Executive Office for Chemical and Biological Defense, a joint service office in Falls Church, Va., found the technology in 2002 while seeking a quicker way to detect biological warfare agents in the wake of Sept. 11, 2001, and later anthrax scares.

Idaho Technology, Inc., from Salt Lake City, Utah, stepped forward with JBAIDS, the latest in biological warfare technology.

The device looks deceptively simple, just a laptop connected to an analyzer.

Lab technicians load suspect samples into a carousel within the analyzer where they're "cooked and cooled" repeatedly so strands of DNA break apart and replicate to make copies of themselves.

Each time heating and cooling occur, more DNA copies are formed, which takes something from undetectable to identifiable.

The device can simultaneously identify up to 10 different biological warfare agents in a given sample, including smallpox, anthrax, plague, and encephalitis.

"If something is there that threatens the health of our military force, you will be able to detect it much sooner," said Maj. Harry Whitlock II, Army Medical Department Center and School combat developer. "This is the 'new' gold standard. Other rapid diagnostic methods, like handheld assays, don't have nearly the same sensitivity."

JBAIDS' sensitivity, or ability to accurately identify specimens containing an agent, is averaging at least 85 percent per test, and its specificity, or accuracy in pinpointing the percentage of specimens without an agent, has averaged at least 90 percent.

The result is a higher confidence in the accuracy of information for military leaders. "Everyone in the scientific community is excited because JBAIDS allows detection of a very minute level, and commanders are excited because the troops will be better protected," said Whitlock.

JBAIDS' size enables the device to travel with servicemembers into war, eliminating the need to send samples to a laboratory stateside, which delays diagnosis and treatment of affected people. DoD began a joint-service testing of the device in 2003 to ensure the civilian-made system could be as effective in war as in a stateside lab.

"JBAIDS has been through a long series of developmental tests," Boston said. "Government labs went through thousands of samples of biological warfare organisms. The data are still being evaluated, but the system and test assay kits have performed very well so far."

The latest was a two-week operational test at Brooks City-Base, which wrapped up March 18, 2005. Air Force, Army, Navy, and Marine Corps lab technicians and program developers traveled to San Antonio to make sure the device met DoD specifications.

The Air Force Operational Test and Evaluation Center, based at Kirtland Air Force Base, N.M., took the lead on the exercise, while the Army Medical Department provided ongoing training and technical assistance.

Army Chemical Corps personnel collected irradiated or "dead" samples from the field and delivered them to lab technicians from the Army's 1st and 9th Area Medical Laboratories from Aberdeen Proving Ground, Md.

The technicians set up shop in portable "ISO-shelters," which can be packed up and shipped worldwide, then extracted a test sample for analysis from environmental, food, and clinical specimens such as blood and sputum.

"This was the first major joint-service test (for this equipment)," Boston said. "It took more than a year of constant planning to get to this point. We're working as fast as we can to get this technology out there quickly."

After validation by a joint-service Data Authentication Group, the operational test results will be forwarded to the Joint Program Executive Office for Chemical and Biological Defense for a final green light. If approved, JBAIDS will enter full-rate production in September, and the DoD will distribute 450 systems throughout the services over the next three years.

In the meantime, Idaho Technology will seek Food and Drug Administration approval, something that will help launch JBAIDS into civilian and military fixed and deployable medical facilities as a diagnostic tool and into DoD veterinary food labs for testing of food and water supplies.

The modifiable JBAIDS will continue to evolve over the next several years. The next step is the addition of toxin detection this summer, and later, development and testing of a handheld version, Boston said.

"JBAIDS is a reliable, well-tested technology that will have a huge impact on military and civilian sectors," Boston said. "It's sad to think we live in a world where bio-threats are a reality, but it's better to be prepared and have answers; JBAIDS will ensure we have the right ones."

Wilson is with the Fort Sam Houston Public Information Office.

AIR MOBILITY COMMAND NEWS SERVICE (MAY 24, 2005)

OFFICIALS UNVEIL NEW GENERATION COMMAND AND CONTROL SYSTEM

1st Lt. Leslie Brown, USAF

SCOTT AIR FORCE BASE, Ill. (AFPN)—A new generation command and control system was unveiled recently when Air Mobility Command officials began fielding a new system that provides unit-level and force-level mission planning, scheduling, and tracking of all mobility airlift and air refueling missions.

The global decision support system will allow AMC officials to more effectively fulfill the global mobility mission by integrating about 40 systems into one modernized, fully integrated global AMC command and control system.

"[It] is the most complex and comprehensive [command and control] system fielded in the Air Force," said Col. Earl Matthews, AMC director of communications and information.

It combines unit- and force-level planning tools into a single system.

"Operating on unclassified and classified networks, [the system] will be AMC's one-stop-shop [command and control] system, providing unprecedented visibility of aircrews, cargo aircraft, and ongoing missions regardless of their location," Matthews said.

The implementation will continue AMC's operational evolution to a technology-centric environment. The new system features a powerful set of decision-making tools, enterprise data and information fusion technologies, as well as integrated information displays that allow users to monitor and manage global mobility missions, officials said.

It will provide a common and consistent operational command and control framework across the mobility air forces.

Also, the new system incorporates a crew management application that allows mobility air forces commanders to plan and schedule aircrew training, operational missions, and other ground events in a standardized application. It also will introduce many new capabilities including a global-sequence-of-events function that provides a common platform to share visibility on the generation, execution, and recovery of aircraft missions.

Currently, all of the systems are managed separately, which has become uneconomical to sustain, and with current advances in technology, AMC leaders said, it is the proper time to integrate these systems.

Airmen here will provide classroom and hands-on training that will take about two to three weeks per location. The system is used at Scott and at McChord Air Force Base, Wash., and is currently under way at Dover AFB, Del. Installation is scheduled to continue throughout the command through August 2006.

Brown is with Air Mobility Command Public Affairs.

ARMY NEWS SERVICE (JUNE 2, 2005)

EXPERTS SAY TRAINING TRANSFORMATION PREPARES ARMY TO WORK IN JOINT ENVIRONMENT

Jennifer J. Albert

WASHINGTON—Soldiers will continue to train with members of other services as the Army works to transform its training and to improve its ability to work in a joint environment, Pentagon training experts said this week.

"Training transformation is about making sure that we are focused on training the way we actually fight," said Dr. Paul W. Mayberry, deputy under secretary of defense for readiness. "That is, as a joint team with the other Services, as part of a joint multinational force, with interagencies such as the Departments of Justice and Homeland Security and intergovernmental agencies such as county and local police."

He said one of the Department of Defense's transformation goals is ultimately to create a more joint force to meet the needs of the combatant commander, and that transforming DoD training is a key element to achieving that goal.

As Operation Iraqi Freedom and Operation Enduring Freedom continue, the demands are that we have an armed force that is flexible and adaptable, said Mayberry. The Army's 2004 Posture Statement said one of the Army's goals for transformation is to provide relevant and ready land power for combat commanders in a joint force.

Mayberry said training transformation is a means by which the Army can accomplish that objective.

"Maintaining a ready current force today and achieving a transformed future force tomorrow requires a shift in the way units train for joint operations," according to the posture statement. "Our Army's Training Transformation Initiative, which supports the June 2004 Defense Department Training Transformation Implementation Plan, provides dynamic, capabilities-based training and mission rehearsal in a joint context."

Three capabilities form the foundation for training transformation: Joint Knowledge Development and Distribution Capability, Joint National Training Capability, and Joint Assessment and Enabling Capability, Mayberry said. Combatant commanders, through these capabilities, will receive better prepared forces that will be more aligned with their joint needs.

Mayberry said the JKDDC is designed to be a library of training courses available through various online outlets that can be taken "just-in-time" or when a soldier is assigned to a unit in which the training is required.

JKDDC is developing courses that originated through the JKDDC working group, Mayberry said. More than 35 organizations, including Army, are represented on the working group. The courses will better prepare individuals for assignment to the combatant command staffs.

Future joint force leaders must strive to reach new joint education and training standards by continually improving individual knowledge, skills, and abilities to achieve desired effects in decisive operations, according to the Department Of Defense Training Transformation Implementation Plan.

For example, cultural and language training is being implemented into current Army deployment workups, said Mayberry. The incorporation of foreign speakers is being done to be able to present answers to tactical-level problems to the individuals.

The Army, through its force rebalancing efforts, has begun taking individuals with field artillery backgrounds and sending them to Fort Dix, N.J., for military police training, said Mayberry. There is not a great deal of demand for field artillery currently, so those individuals are being cross-trained to fill the need for military police.

"This will meet the drive of individuals managing their own careers and focusing on self development," said Mayberry. "It will also get individuals cross-trained in other areas to broaden the base for which they deploy."

The Joint National Training Capability will provide the ability for all the Services to participate in real-time, simulated training, said Mayberry.

"The idea is to make Service-specific events more joint in character," said Mayberry. "We can't have everyone in one place at one time. This will give them the means to plug into the event from their home station."

Mayberry said the JNTC will give command staffs and units a live, virtual (person in a simulator) and constructive (computer-generated) environment that will eventually be available globally. Active and reserve component members from all Services will be able to train in this realistic venue.

Eventually it will incorporate a larger training audience that includes coalition partners and federal, state, local, and nongovernmental agencies, also noted Mayberry.

The last facet, Joint Assessment and Enabling Capability, focuses on the process of anticipating and evaluating the development of the training transformation.

This process includes the use of performance assessment tools, techniques, policies, and metrics in support of national security requirements, according to the DoD transformation plan. It will give leaders the guidance necessary to achieve transparency between training and operations and ultimately make the force more adaptable.

The Army's posture statement indicates the objective is to increase the ability to think and act jointly, and to provide soldiers with the latest and most relevant techniques, procedures, and equipment that will make them successful on the battlefield.

Training transformation improves joint force readiness by enabling personnel to think in terms of the joint concepts and build upon Service education and training, said Mayberry. "As the Army goes through its modularity, its modernization and fielding of its future combat systems, training transformation must really be ahead of that to be sure these training enablers are in place," said Mayberry. "We must support future concepts from a joint perspective and not just from a single-Service perspective."

For more information on Army transformation, visit <http://www.army.mil>;for information about the Department of Defense training transformation, visit <http://www.t2net.org>.

NAVAL SEA SYSTEMS COMMAND (JUNE 3, 2005)

KEEL LAID FOR FIRST LITTORAL COMBAT SHIP, *USS FREEDOM*

MARINETTE, Wis. (NNS)—The keel was laid and authenticated for the Navy's first Littoral Combat Ship (LCS) June 2 at Marinette Marine here. The 378-foot LCS will be the first U.S. ship to carry this class designation.

"LCS represents the cutting edge of a new Navy, the likes of which we have never seen before," said Chief of Naval Operations Adm. Vern Clark during his remarks at the ceremony. "It is a great personal privilege to confirm this keel on such a brave and bold future for our Navy," the CNO said.

The future *USS Freedom* (LCS 1) acknowledges the enduring foundation of the nation and honors American communities from coast to coast that bear the name Freedom. States having towns named Freedom range from New York to California, and include Indiana, Maine, New Hampshire, Oklahoma, Pennsylvania, Wisconsin, and Wyoming.

"It strikes me that since freedom is what we are all about as a nation, this is a perfect name for LCS 1," said Clark.

Serving as ship's sponsor is Birgit Smith, the widow of Army Sgt. 1st Class Paul Ray Smith, who died in Operation Iraqi Freedom and was posthumously awarded the Congressional Medal of Honor. Smith and the CNO authenticated the keel by having their initials welded to the hull by veteran welder Jim Renner.

Freedom, the first of two dramatically different LCS seaframes being produced, will be optimized for littoral or coastal missions, focusing on high-speed maneuverability, agility, and sprint speed. Designed to operate quickly in a shallow-water environment, the LCS is capable of speeds up to 45 knots and can operate in water less than 20 feet deep.

The LCS class will act as a platform for launch and recovery of manned and unmanned vehicles. Its modular design will support interchangeable mission packages, allowing the ship to be reconfigured for antisubmarine warfare, mine warfare, or surface warfare missions on an as-needed basis. LCS will be able to swap out mission packages pierside in a matter of hours, adapting as the tactical situation demands. These ships will also feature advanced networking capability to share tactical information with other Navy aircraft, ships, submarines, and joint units.

Marinette, Wisc. (June 2, 2005)—Chief of Naval Operations Adm. Vern Clark, left, and Birgit Smith, right—ship's sponsor of the first Littoral Combat Ship, Freedom—watch as a welder permanently etches Smith's initials on a plaque that will be permanently attached to the ship. Smith is the widow of the late U.S. Army Sgt. Paul Ray Smith, who was killed in action in Iraq and was recently awarded a posthumous Medal of Honor. LCS is a new class of ship designed to be a fast, agile, and networked warship. U.S. Navy photograph by Chief Photographer's Mate Johnny Bivera.

"This idea —this ship—revolutionizes the capability of our nation and our Navy," said Clark.

In May 2004, the Department of the Navy awarded both Lockheed Martin and General Dynamics–Bath Iron Works, Bath, Maine, separate contract options for final system design with options for detail design and construction of up to two LCS ships. In December, the Navy awarded Lockheed Martin Corp., Maritime Systems & Sensors, Moorestown, N.J., a contract for detail design and construction of the first LCS. Lockheed Martin's teammates include Gibbs & Cox, Arlington, Va.; Marinette Marine, Marinette, Wis.; and Bollinger Shipyards, Lockport, La. Production at Marinette is expected to culminate in late 2006 when the ship is scheduled to be delivered to the Navy.

Editor's note: For more information on the Littoral Combat Ship, visit the LCS Web site at <http://peoships.crane.navy.mil/lcs/>. For related news, visit the Naval Sea Systems Command Navy NewsStand page at <http://www.news.navy.mil/local/navsea/>.

ARMY NEWS SERVICE (JUNE 20, 2005)
CROWS KEEPS GUNNERS OUT OF HARM'S WAY

Sgt. Daniel W Bailey, USA

BALAD, Iraq—Soldiers of Forward Operating Base O'Ryan, Troop K, Task Force 1-128, have instituted new measures to ensure the safety of their gunners from enemy combatants during vehicle-led patrols. The Common Remotely Operated Weapon Station, a remotely operated weapon mounted on top of a vehicle and controlled from a command center within it, has become a safer means for soldiers to patrol main and alternate supply routes, providing security and searching for improvised explosive devices (IEDs)

"The primary purpose of the CROWS is to get the gunner out of the turret, where he is exposed to enemy fire and fragmentation, and get him down inside the vehicle for protection," said Sgt. 1st Class Sam Cottrell, CROWS Fielding Center noncommissioned officer in charge. In a CROWS-equipped vehicle, the gunner now sits safely inside the armored vehicle, looks at a computer screen, and controls the weapon with the use of a joystick. "In addition, CROWS gives the gunner a powerful color day camera, a Generation 2 forward-looking infrared camera, and a laser range finder," Cottrell said.

All the gunner has to do now is tell the computer where to fire the weapon and the computer does the rest. "Once a target's been identified, the computer builds a ballistic solution, taking into account distance, elevation, and the type of weapon, and puts the rounds on the target," said Kendall Hargis, CROWS operator, Troop K, 3rd Battalion, 278th Armored Cavalry Regiment.

The M-2 .50-caliber machine gun, M-240B medium machine gun, MK-19 automatic grenade launcher and the M-249 squad automatic weapon can all be mounted on the CROWS.

Centrally fielded and serviced from Logistical Support Area Anaconda, the CROWS were rolled out to units in Iraq in April 2005. Several hundred will be fielded in the next year and a half, according to Cottrell. Troop K received the 10th unit in Iraq, sent four gunners through the two-week certification course, and now uses the CROWS daily during combat patrols of the MSRs and ASRs.

"The CROWS system is an excellent tool," said Sgt. 1st Class Craig Bailey, Company C, 1st Battalion, 128th Infantry Regiment. "The advantages are obviously its optics, zoom, and thermal capabilities. It's able to see things a lot farther in advance. It's excellent to have a thermal system mounted right on the vehicle to use at night or in daytime."

"The CROWs is great for the MSR patrols because with the FLIR [forward-looking infrared] it sees things that are out of place," Hargis said, "even spotting IEDs in the road prior to coming up to them. But I think the most rewarding thing I can do is catch some of these guys laying the IEDs."

Task Force 1-128 is composed of Headquarters and Headquarters Company and Company A, 1st Battalion, 128th Infantry Regiment, from the Wisconsin Army National Guard; and Troop K, 3rd Battalion, 278th Armored Cavalry Regiment, from the Tennessee Army National Guard.

Career Development

DAU PROFESSORS HELP TRAIN IRAQIS

PROJECT MANAGEMENT • PROCUREMENT • DEMOCRACY • HUMAN RELATIONS

Army Lt. Col. Steve Cummings and Wayne Glass, both professors of systems acquisition management at the Defense Acquisition University, Fort Belvoir, Va., recently returned from Baghdad where they trained Iraqi personnel supporting coalition and Iraqi missions. The students came from every part of Iraq to Baghdad for the training, which was a combination of project management and procurement subjects. Cummings and Glass taught the project management lessons, which made up most of the course, and Air Force Maj. Mark Milan from the Air Force Judge Advocate General School, Maxwell Air Force Base, Ala., taught the procurement subjects.

Teaching project management and procurement during a recent trip to Iraq were from left: Air Force Maj. Mark Milan from the Air Force Judge Advocate General School, Maxwell Air Force Base, Ala.; federal civilian Wayne Glass, professor of systems acquisition management and director for strategic partnerships at DAU's Fort Belvoir campus; and Army Lt. Col. Steve Cummings, also a professor of systems acquisition management at DAU's Fort Belvoir campus. U.S. Army photograph.

The training was sponsored by the Multi-National Security Transition Command-Iraq (MNSTC-I), which is commanded by Army Lt. Gen. Dave Petreus. MNSTC-I and the Iraqi students, Cummings and Glass noted, were extremely appreciative of the training.

"It is 1775-1776 in Iraq … and we were involved in training the folks who are responsible for making things happen in Iraq and getting the country on its feet," said Glass. "It was the most important and personally rewarding work I have done in a long while. There is something very special about being on the ground, working with the people who are helping to get their country back up and running after years of tyrannical rule."

While PM/Procurement training was the mission, democracy training and human relations building were a big part of the effort as well. The majority of the Iraqi students represented the Ministry of Defense and the Ministry of Interior. They are responsible for electric power, petroleum production, the Iraq military, and all infrastructure programs. Many work directly with U.S. and other coalition forces, while a few are industry personnel. They are very courageous, Cummings and Glass noted, and took significant risks to participate in this training.

"It was interesting to hear from students that they had never worked in a group setting on projects," Cummings reflected. "It was very good for them to hear each other's perspective and to see different solutions to the same problem."

Glass and Cummings also met with Army Maj. Gen. John Urias, dual-hatted as head of contracting activity and commander of the Joint Contracting Command–Iraq; members of his staff attended several of the classes, as did representatives from the Army Corps of Engineers. The two DAU professors recommended that the univer-

sity support follow-on training missions in Iraq. It is training the Iraqis need, it is well received, and it is important for the future of Iraq, they concluded.

Cummings will soon depart DAU to become a project manager in Huntsville, Ala.; Glass will continue his dual-hatted responsibilities at DAU as a professor of systems acquisition management and director for strategic partnerships.

DTIC LAUNCHES RESEARCH AND ENGINEERING PORTAL

Fort Belvoir, Va.—On May 4, 2005, the Office of the Director, Defense Research & Engineering (DDR&E) and the Defense Technical Information Center (DTIC) announced the availability of the Research and Engineering Portal to Department of Defense employees and their contractors. The portal provides one-stop access to current and historical R&E information, including DTIC technical data resources.

The portal brings together Web applications that support DDR&E strategic planning and the congressional reporting process. Consolidated information on R&D projects, provided by the Services, can also be found in the portal. A working research tool, the R&E Portal includes an enhanced query capability that displays the results of text searches within the context of a selected taxonomy. It also offers a customized search tool designed specifically for analysis. The new e-Gov database, created to consolidate and submit R&D data in support of the e-Government Act of 2002, provides a centralized view of federally funded R&D projects.

The R&E Portal can be found at <https://rdte.osd.mil>. Access is controlled by the DTIC registration process: <https://register.dtic.mil/DTIC>. For more information about the R&E Portal, contact rdte_help@dtic.mil.

For in-depth information about DTIC, see "The Information Business: A Profile of the Defense Technical Information Center," *Defense AT&L*, July-August 2005.

MANAGEMENT MENTOR MODULES AVAILABLE FALL 2005
DAU PARTNERS WITH HARVARD BUSINESS SCHOOL

In January, the Defense Acquisition University partnered with Harvard Business School Publishing to procure the Harvard Business School ManageMentor modules. These 37 HBS modules will strengthen the softskills for the AT&L workforce, for select members of the private sector who have attended DAU courses, and for students who receive training through the Federal Acquisition Institute/DAU partnership.

When deployed in October 2005, the Harvard ManageMentor modules will be an easy-to-use online performance support tool that provides information and materials on more than 37 topics fundamental to managerial success. Topics will range from running an effective meeting or managing a project to more complex tasks such as negotiating or keeping a team on target. For each topic, practical information will be presented using the following methods:

- Core concepts
- Tips and tools
- Action steps
- Resources
- Test yourself
- Interactive practices
- Exercises focused on questions like, What would you do? Where should you focus?

To take advantage of these modules, look for publication of the Management Mentor Modules Web site in the November-December issue of *Defense AT&L* under "Career Development." For questions or more information on AT&L-wide deployment of the modules, please contact Rebecca Clark at Rebecca.clark@dau.mil.

DAU'S PERFORMANCE BASED LOGISTICS COURSE KEEPS PACE WITH POLICY AND PRACTICES

LOG 235, the Defense Acquisition University's Performance Based Logistics (PBL) final Level II certification course, has undergone significant revisions this year to keep pace with the dynamic evolution of both PBL policy and actual program implementation practices. PBL was mandated as DoD's "preferred" product support strategy in the 2003 revision of the DoD 5000 Series.

LOG 235 is a hybrid course, with LOG 235A comprising a 50-hour distance learning course consisting of 17 lessons focusing primarily on PBL concepts and their relationship to and effect on DoD traditional support functions and processes. LOG 235B is a one-week classroom course that uses case studies and exercises to provide students the opportunity to accomplish practical application of the concepts learned in LOG 235A.

In its first iteration, fielded in March 2004, there were few fully implemented PBL programs; consequently, a significant portion of the course continued to focus on the conceptual application of PBL processes. However, over the last year, more than 150 programs have either implemented PBL or are well along in the implementation process. Using this real-world PBL information, approximately 60 percent of the course content has been revised to reflect actual PBL implementation practices.

As a result, LOG 235B is now much more of a practical tools- and skills-based course, providing students tangible knowledge they can readily apply upon returning to the workplace.

Initial feedback on the changes has been very positive, and corresponding updates to LOG 235A are in development, with completion expected in early fiscal 2006.

NAVAL NEWS SERVICE (MAY 18, 2005)
NAVY KNOWLEDGE ONLINE ANNOUNCES IMPROVEMENTS

Jon Gagne

PENSACOLA, Fla. (NNS)—Navy Knowledge Online (NKO), the Navy's premier interactive education and training tool for Sea Warriors, is moving into another phase of service to the fleet.

The Web site is a one-stop knowledge location for Navy education, training, and professional growth management.

Unprecedented growth over the last 12 months prompted a redesign to improve usability and ease navigation for individual users searching for content specific to their needs. There are now more than 480,000 worldwide users of NKO.

"Our cutover to the redesigned NKO requires transitioning the original NKO site with the same functionality and capabilities to new servers, using new and current portal technology, and migrating more than 20 gigabytes of data, content, and courses," said Peg David, the NKO program manager for the Naval Education and Training Command (NETC) in Pensacola. "It has been a huge undertaking, but will prove to be well worth the effort."

Vice Adm. Kevin Moran, NETC commander and the Navy's chief learning officer, noted the NKO update was based on sailor input.

"The upgrades resulted from months of evaluation and extensive input from fleet sailors throughout the world," said Moran. "Users will find a more intuitive display with detailed help instructions and will be able to find relevant content with fewer mouse clicks. The new layout focuses on content related to the individual, based on location in NKO and the user's status, whether active duty, reserve, or civilian."

With the launch of the new phase of NKO in June of this year, sailors are be able to use all of the functions they have become familiar with over the last several months, including white pages, message boards, notifications, administrator functions, and a fully integrated NKO library. All user-specific tabs and bookmarks will be retained under the upgrade.

Several additional upgrades are in progress to provide better support to the fleet.

"A combined Sea Warrior afloat working group is making steady progress to integrate NKO afloat with several programs, such as the Job Advertising and Selection System and 5 Vector Model via the NAVSEA (Naval Sea Systems Command) distance support portal," said David. "More details will follow later this year."

Sailors can learn more about NKO's redesign functionalities and capabilities by exploring the links on the NKO home page. Detailed instructions, user guides, and tutorials can be found under the "Inside NKO" tab. These links and learning tools will be updated as the redesign cutover approaches and will be found on the NKO home page under "About NKO."

For more information about Navy Knowledge Online or to jumpstart your career educational planning, visit the Navy Knowledge Online Web site at <http://www.nko.navy.mil>.

For related news, visit the Naval Education and Training Command Navy NewsStand page at <http://www.news.navy.mil/local/cnet/>.

Gagne is with the Naval Education and Training Command Public Affairs Office.

WEBSTER UNIVERSITY OFFERS COOPERATIVE MASTER'S DEGREE TO AABC GRADS AT FORT BELVOIR

The U.S. Army Logistics Management College (ALMC) and Webster University established a cooperative master's degree program to allow U.S. Army Acquisition Basic Course (AABC) graduates to complete a master's degree with Webster University through shared academic credits. The ALMC/Webster University cooperative degree program was developed in accordance with the American Council on Education's Joint Statement on the transfer and award of credit.
Approved cooperative degree programs are:

- Master of Business Administration
- Master of Arts in Computer Resources and Information Management
- Master of Arts in Procurement and Acquisitions Management.

To apply to Webster University, AABC graduates must have completed a bachelor's degree at a regionally accredited institution and must submit an official transcript from the institution at which the degree was conferred. Neither the Graduate Management Admissions Test nor Graduate Record Examination is required for admission. If students have already completed a previous graduate degree, they may be eligible to complete a sequential degree in one of the aforementioned fields.

This opportunity is beneficial to students and to agencies that provide tuition assistance because they may save up to $3,850 for course credits earned through AABC. Students can learn more about this cooperative agreement by contacting Webster University at (703) 781-7942 or belvoir@webster.edu. Webster University at Fort Belvoir is located in Room 143 of the Barden Education Center. The Webster University Web site is <http://www.webster.edu/belvoir>.

NATIONAL SECURITY PERSONNEL SYSTEM (NSPS) AND BASE REALIGNMENT AND CLOSURE (BRAC) INFORMATION

In November 2003, Congress granted the Department authority to establish a new civilian human resources management system to better support its critical national security mission. The National Security Personnel System (NSPS) is the resulting system to implement this authority. Employees wishing to learn more about NSPS should visit the Web site <http://www.cpms.osd.mil/nsps/> where the latest information is posted. A new NSPS video "NSPS: Towards a Mission-Centered Workforce" explains the purpose of NSPS and advantages and is available at <http://www.cpms.osd.mil/nsps/video.html>.

Also on the NSPS Web site is a link to the DoD Employee Transition Assistance Web site <http://www.cpms.osd.mil/bractransition>. This Web site provides the latest information on BRAC and the variety of transition assistance programs offered by the Department of Defense. In addition, it links to Web sites that will help you learn more about BRAC and employment opportunities. The site provides answers to FAQs on general BRAC issues and a reference section containing guidance for displaced employees and policy issuances on transition assistance programs.

NATIONAL-LOUIS UNIVERSITY PARTNERS WITH DEFENSE ACQUISITION UNIVERSITY

On March 18, 2005, National-Louis University (NLU) signed a Memorandum of Understanding (MOU) with DAU. The ceremony was officiated by Wayne Glass, professor, systems engineering, logistics and program management and director for strategic partnerships. Signing the MOU were Dr. James McMichael, vice president, DAU, and Dean Rich Magner, College of Management and Business, NLU.

The MOU formally recognizes that NLU and DAU will cooperate in providing educational opportunities for currently enrolled and potential students of each institution. This understanding requires a commitment by both institutions to facilitate the transfer of DAU course credits that have been certified by the American Council on Education toward NLU degree or certificate programs.

"We're particularly proud," said Magner, "to sign this agreement as a continuing symbol of National-Louis University's commitment to serving the military community now and into the future." McMichael commented on the long relationship NLU has had with the military community.

National-Louis University is a private, non-profit university founded in 1886 with central headquarters in Chicago, Ill. The university is regionally accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools and has campuses in Chicago; Washington, D.C.; Northern Virginia; Florida; Wisconsin; and Poland. To learn more about NLU go to <http://www.nl.edu>. Information on DAU can be found at <http://www.dau.mil>.

AMERICAN FORCES PRESS SERVICE (APRIL 27, 2005)

DOD SEEKING 'DEMONSTRATION AUTHORITY' FOR CHANGES TO OFFICER MANAGEMENT

Kathleen T. Rhem

WASHINGTON—Defense officials are requesting that Congress give the department permission to experiment with some changes to officer personnel management.

Officials have requested "demonstration authority" to test changes in compensation, promotions, and retention in four limited categories of military officers—Army foreign area officers, Navy engineering officers, Navy aviation engineering duty officers, and Navy acquisition officers—explained Bill Carr, acting deputy under secretary of defense for military personnel policy.

Carr explained that the war on terrorism has brought to light limitations to officer personnel management that officials just hadn't contemplated. Yet military leaders and congressional oversight committees are wary of implementing sweeping changes without proof that the changes would work.

"One way to … see if you can test some transformational ideas before you go online full time is to try a demonstration authority," he said during a media roundtable in his Pentagon office earlier this month.

The Office of Management and Budget has approved the demonstration plan, and the Defense Department's request for this authority now lies with Congress.

The military faces unique personnel challenges because the manpower pool is "bottom-fed," Carr said. "We grow from the bottom. We recruit at year one and then [personnel] grow up."

This is different from government and private-sector civilian organizations who allow lateral entry at any point up or down the scale.

"If we did that, it would open up a whole range of options that we don't have. The reason we don't do it is as much cultural as it is pragmatic," Carr said. "To earn the right to supervise soldiers, one must have grown up as a soldier, and that's held … as a part of the military ethos."

Officials have had demonstration authority to experiment with federal-civilian personnel policies for several years. Civilian demonstration programs are generally limited to a fairly small group of individuals, but the authority to do so for such programs "pretty much says you may waive law as it relates to promotion and pay and other major variables, and you can determine whether or not a new approach would be more effective," Carr said.

Defense officials are simply requesting the same flexibility to test changes to policies governing military officers, he said.

"Nobody is more interested in holding down manpower costs than is the Defense Department, and nobody is more interested in readiness than is the Defense Department," Carr said. "We're saying, 'Empower us so that we can experiment with good ideas and offer you provably good ideas.'"

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

DAU and the National Defense Industrial Association will sponsor offerings of the Defense Systems Acquisition Management (DSAM) course for interested industry managers Sept.19 – 23, at the Hyatt Regency in New Orleans, La. DSAM presents the same acquisition policy information provided to DoD students who attend the Defense Acquisition University courses for formal acquisition certification. 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>. In-

dustry students contact Christina Buck at (703) 247-9478 or e-mail cbuck@ndia.org. A few 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 prior to registering with NDIA.

Online registration is available at: <http://register.ndia.org/interview/register.ndia?#July2005>.

NEW MASTER OF SCIENCE IN MANAGEMENT WITH LOGISTICS SPECIALTY

The Embry-Riddle Aeronautical University Huntsville Center is now offering a master of science in management degree program at Redstone Arsenal, Ala. Students applying for admission to the program may choose from specializations in management of integrated logistics; aviation/aerospace industrial management; air transportation management; aviation and aerospace security; aviation enterprises in a global environment; and a general management option. Courses will be offered in nine-week terms starting Aug. 8 on post, and are available online as well.

For more information visit the ERAU Web site at <http://www.erau.edu/huntsville>, or e-mail the center at huntsville.center@erau.edu. A graduate-level certificate in logistics is also available for those students who do not wish to pursue a degree.

DAU ANNOUNCES THE LAUNCH OF UNIQUE IDENTIFICATION (UID) SPECIAL INTEREST AREA

The Acquisition Community Connection Web team announces the launch of their newest special interest area, *Unique Identification*. UID—a DoD strategic imperative—is a program to mark items owned by the Department of Defense with unique, machine-readable item identifier data elements that distinguish an item from all other like and unlike items. For information and discussions on UID implementation including policies and references, contracting, engineering, training, and solution providers, go to the UID Web site at <https://acc.dau.mil/simplify/ev.php?ID=18058_201&ID2=DO_TOPIC>.

OVERVIEW OF USD(AT&L) CONTINUOUS LEARNING POLICY

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 Continuous Learning Policy requirements issued by the USD(AT&L) on Sept. 13, 2002. Continuous learning augments minimum education, training, and experience standards. Participating in continuous learning will enhance your career by helping you to:

- Stay current in acquisition functional areas, acquisition and logistics excellence-related subjects, and emerging acquisition policy
- Complete mandatory and assignment-specific training required for higher levels of DAWIA certification
- Complete "desired" training in your career field
- Cross-train to become familiar with, or certified in, multiple acquisition career fields
- Complete your undergraduate or advanced degree
- Learn by experience
- Develop your leadership and management skills.

A point is generally equivalent to one hour of education, training, or developmental activity. Continuous learning points build quickly when you attend training courses, conferences, and seminars; complete leadership training courses at colleges/universities; participate in professional activities; or pursue training through distance learning. Continuous learning points are assigned to distance learning courses <http://clc.dau.mil> based on their academic credits or continuing education units. Other activities—such as satellite broadcasts, viewing a video tape, listening to an audio presentation, or working through a CD-ROM or Internet course—can earn continuous learning points on the basis of 1 point per 1 hour of time devoted to the activity. On-the-job training assignments, intra- and inter-organizational, rotational, broadening, and development assignments may also qualify toward meeting the continuous learning standards.

DEPARTMENT OF DEFENSE EDUCATION GATEWAY

The Department of Defense Education Gateway (EduGateway) Web site at <http://web.lmi.org/edugate/> provides general information about science, mathematics, and engineering (SME) educational programs sponsored in whole or in part by the DoD. Sponsored and funded by the director of defense research and engineering, the site was originally intended to display information about programs with science, mathematics, or engineering content. The Web site is now open to any and all genuine educational efforts supported by the Department that knowledgeable members of the DoD family wish to report.

Policy & Legislation

DEFENSE FAR SUPPLEMENT (DFARS) CHANGE NOTICE 20050505

DoD published the following changes and proposed changes to the DFARS on May 5, 2005. Access the Federal Register notice for these changes through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm >.

Final Rules

Contractor Personnel Supporting a Force Deployed Outside the United States (DFARS Case 2003-D087)

Adds policy to address situations that require contractor personnel to deploy with, or otherwise provide support in the theater of operations to, U.S. military forces deployed outside the United States in contingency operations, humanitarian or peacekeeping operations, or other military operations or exercises designated by the combatant commander. The DFARS changes enable contracting officers to consistently address the issues associated with these operations through use of a standard contract clause. These changes will become effective on June 6, 2005, and will be incorporated into the DFARS companion resource, *Procedures, Guidance, and Information* (PGI) on that date.

Proposed Rules—DFARS Transformation

Authorization for Continued Contracts (DFARS Case 2003-D052)

Proposed change permits contracting activities to assign an additional identification number to an existing contract, by issuing a separate "continued" contract, when continued performance under the existing contract number is not practical for administrative reasons. The continued contract would incorporate all prices, terms, and conditions of the predecessor contract. Use of this procedure is expected to be limited but will help to simplify administration, payment, and closeout of lengthy, complex contracts; and will help in situations where a contracting activity has exhausted its assigned series of identification numbers for orders placed against another activity's contract.

Contract Financing (DFARS Case 2003-D043)

Proposed change clarifies requirements for establishing due dates for contract financing payments; deletes text that is unnecessary or duplicative of FAR/DFARS policy on financial consultation matters, contract payment instructions, and use of the governmentwide commercial purchase card; and relocates to PGI, text on department/agency contract financing offices, approvals for advance payments or unusual progress payments, debt collection procedures, and bankruptcy reporting.

DFARS CHANGE NOTICE 20050509

DoD published the following change to the DFARS on May 9, 2005. Access the Federal Register notice for this change through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm >.

Interim Rule

Multiyear Contracting (DFARS Case 2004-D024)

Amends multiyear contracting policy to implement Section 8008 of the Defense Appropriations Act for Fiscal Year 2005 (Public Law 108-287) and Section 814 of the National Defense Authorization Act for Fiscal Year 2005 (Public Law 108-375). Section 814 requires DoD to provide notice and supporting rationale to Congress before awarding a multiyear contract containing a cancellation ceiling exceeding $100 million that is not fully funded. Section 8008 places the following conditions on the award of a multiyear contract using fiscal year 2005 funds: (1) DoD must have submitted a budget request to Congress for full funding of the units to be procured; (2) contract cancellation provisions must not include consideration of recurring costs associated with the production of unfunded units; (3) payments under the contract must not be made in advance of incurred costs on funded units; and (4) the contract must not provide for a price adjustment based on a failure to award a follow-on contract. In addition, text from DFARS 217.173(b) has been relocated to 217.172(e) to more closely align with the structure of 10 U.S.C. 2306b(h).

DFARS CHANGE NOTICE 20050524

DoD published the following interim and proposed changes to the DFARS on May 24, 2005. Access the Federal Register notices for these changes through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm >.

Interim Rules

DoD Pilot Mentor-Protégé Program (DFARS Case 2004-D028)

Amends the DoD Pilot Mentor-Protégé Program to extend, through Sept. 30, 2010, the period during which companies may enter into agreements under the program; and to permit service-disabled veteran-owned small business concerns and HUBZone small business concerns to participate in the program as protégé firms. The program provides incentives for DoD contractors to assist protégé firms in enhancing their capabilities and increasing their participation in government and commercial contracts. The changes to the program implement Sections 841 and 842 of the National Defense Authorization Act for Fiscal Year 2005.

Approval of Service Contracts and Task and Delivery Orders/ Proper Use of Non-DoD Contracts (DFARS Case 2002-D024)

Requires departments and agencies to comply with review and approval requirements when acquiring supplies or services through the use of non-DoD contracts in amounts exceeding the simplified acquisition threshold. Amends the interim rule published on Oct. 1, 2003 (DFARS Change Notice 20031001), which contained approval requirements for the acquisition of services. This second interim rule contains more comprehensive review and approval requirements and applies to the acquisition of both supplies and services. The rule implements Section 801 of the National Defense Authorization Act for Fiscal Year 2002; Section 854 of the National Defense Authorization Act for Fiscal Year 2005; and the USD(AT&L)/PDUSD(C) policy memorandum of Oct. 29, 2004, on proper use of non-DoD contracts, which became effective on Jan. 1, 2005.

Incentive Program for Purchase of Capital Assets Manufactured in the United States (DFARS Case 2005-D003)

Adds requirements for consideration of the use of capital assets (including machine tools) manufactured in the United States, when conducting source selections and making award fee determinations for major defense acquisition programs. Implements Section 822 of the National Defense Authorization Act for Fiscal Year 2004.

Proposed Rule—DFARS Transformation

Quality Assurance (DFARS Case 2003-D027)

Updates and clarifies requirements for government contract quality assurance and use of warranties; deletes unnecessary definitions and unnecessary text on technical requirements matters, responsibilities of contract administration offices, and material inspection and receiving reports; and relocates to PGI, procedures for preparation of quality assurance instructions, procedures for use of quality inspection approval stamps, and information on types of quality evaluation data.

DFARS CHANGE NOTICE 20050602

DoD published the following proposed DFARS change on June 2, 2005. Access the Federal Register notices for this change through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm >.

Proposed Rule

Competition Requirements for Federal Supply Schedules and Multiple Award Contracts (DFARS Case 2004-D009)

Updates and clarifies requirements for competition in the placement of orders for supplies or services under Federal Supply Schedules or multiple award contracts. The proposed changes:

- Establish approval requirements for noncompetitive orders exceeding $100,000, consistent with the approval requirements found in the FAR
- Add PGI guidance on the appropriate use of exceptions to competition requirements
- Relocate procedural requirements for use of Federal Supply Schedules to PGI
- Make additional changes for consistency with current FAR requirements for use of Federal Supply Schedules.

DFARS CHANGE NOTICE 20050524

DoD published the following interim and proposed changes to the DFARS on May 24, 2005. Access the Federal Register notices for these changes through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm >.

Interim Rules

DoD Pilot Mentor-Protégé Program (DFARS Case 2004-D028)

Amends the DoD Pilot Mentor-Protégé Program to extend, through Sept. 30, 2010 , the period during which companies may enter into agreements under the Program; and to permit service-disabled veteran-owned small business concerns and HUBZone small business concerns to participate in the program as protégé firms. The program provides incentives for DoD contractors to assist protégé firms in enhancing their capabilities and increasing their participation in government and com-

mercial contracts. The changes to the program implement Sections 841 and 842 of the National Defense Authorization Act for Fiscal Year 2005.

Approval of Service Contracts and Task and Delivery Orders/ Proper Use of Non-DoD Contracts (DFARS Case 2002-D024)

Requires departments and agencies to comply with review and approval requirements when acquiring supplies or services through the use of non-DoD contracts in amounts exceeding the simplified acquisition threshold. Amends the interim rule published on Oct. 1, 2003 (DFARS Change Notice 20031001), which contained approval requirements for the acquisition of services. This second interim rule contains more comprehensive review and approval requirements and applies to the acquisition of both supplies and services. The rule implements Section 801 of the National Defense Authorization Act for Fiscal Year 2002; Section 854 of the National Defense Authorization Act for Fiscal Year 2005; and the USD(AT&L)/PDUSD(C) policy memorandum of Oct. 29, 2004, on proper use of non-DoD contracts, which became effective on Jan. 1, 2005.

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Proposed Rule—DFARS Transformation

Quality Assurance (DFARS Case 2003-D027)

Updates and clarifies requirements for Government contract quality assurance and use of warranties; deletes unnecessary definitions and unnecessary text on technical requirements matters, responsibilities of contract administration offices, and material inspection and receiving reports; and relocates to PGI, procedures for preparation of quality assurance instructions, procedures for use of quality inspection approval stamps, and information on types of quality evaluation data.

DFARS CHANGE NOTICE 20050602

DoD published the following final and proposed change to the DFARS on June 2, 2005. Access the Federal Register notice for this change through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm>.

Proposed Rule

Competition Requirements for Federal Supply Schedules and Multiple Award Contracts (DFARS Case 2004-D009)

Updates and clarifies requirements for competition in the placement of orders for supplies or services under Federal Supply Schedules or multiple award contracts. The proposed changes—

- Establish approval requirements for noncompetitive orders exceeding $100,000, consistent with the approval requirements found in the FAR;
- Add PGI guidance on the appropriate use of exceptions to competition requirements;
- Relocate procedural requirements for use of Federal Supply Schedules to PGI; and
- Make additional changes for consistency with current FAR requirements for use of Federal Supply Schedules.

DFARS CHANGE NOTICE 20050621

DoD published the following final and proposed changes to the DFARS on June 21, 2005. Access the Federal Register notices for these changes through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm>.

Final Rules

Geographic Use of the Term "United States" (DFARS Case 2001-D003)

Updates references to the "United States" and other geographic terms throughout the DFARS to clarify the meaning of these terms and to provide consistency with the definitions found in FAR 2.101.

Proposed Rules

Combating Trafficking in Persons (DFARS Case 2004-D017)

Proposed change implements DoD policy prohibiting any activities on the part of DoD contractor employees that support or promote trafficking in persons. The proposed change includes a clause for use in contracts requiring performance outside the United States. The proposed clause requires the contractor to establish policy and procedures for combating trafficking in persons and to notify the contracting officer of any violations and the corrective action taken.

Describing Agency Needs (DFARS Case 2003-D073)

Proposed change updates references to the DoD 5000 series publications and the DoD database for specifications and standards; and relocates to PGI, procedures for use of specifications and standards and for encouraging the use of Single Process Initiative processes instead of military or federal specifications and standards.

Contractor Insurance/Pension Reviews (DFARS Case 2003-D050)

Proposed change clarifies responsibilities of administrative contracting officers and auditors in conducting reviews of a contractor's insurance programs, pension plans, and other deferred compensation plans; and updates and relocates procedures for these reviews to PGI.

Construction Contracting (DFARS Case 2003-D034)

Proposed change updates requirements for contracting for construction services; and relocates to PGI, procedures for distribution and use of contractor performance reports, handling of government estimates of construction costs, use of bid schedules with additive or deductive items, and technical working agreements with foreign governments.

DFARS CHANGE NOTICE 20050606

DoD published the following final and proposed change to the DFARS on June 21, 2005. Access the Federal Register notice for this change through links on the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm>.

Final Rule

Contractor Personnel Supporting a Force Deployed Outside the United States (DFARS Case 2003-D087)

The DFARS has been updated to incorporate the changes published in DFARS Change Notice 20050505 that became effective on June 6, 2005. The changes address situations that require contractor personnel to deploy with, or otherwise provide support in the theater of operations to, U.S. military forces deployed outside the United States.

UPDATE TO JCIDS INSTRUCTION SIGNED MAY 11, 2005

The chairman of the Joint Chiefs of Staff (J-8) has announced the signature and approval of the update to the Joint Capabilities Integration and Development System CJCS Instruction 3170.01E and accompanying CJCS Manual 3170.01B.

The purpose of this instruction is to establish the policies and procedures of the Joint Capabilities Integration and Development System (JCIDS). The procedures established in the JCIDS support the chairman of the Joint Chiefs of Staff and the Joint Requirements Oversight Council (JROC) in identifying, assessing, and prioritizing joint military capability needs. This instruction also provides joint policy, guidance, and procedures for recommending changes to existing joint resources when such changes are not associated with a new defense acquisition program.

The instruction sets forth guidance on the conduct of JCIDS analyses, the development of key performance parameters, and the JCIDS staffing process. It also contains procedures and instructions regarding the staffing and development of joint capabilities documents (JCDs), initial capabilities documents (ICDs), capability development documents (CDDs), capability production documents (CPDs), and joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) change recommendations (DCRs).

A summary of the changes to the CJCSI 3170-.1E and CJCSM 3170.01B can be viewed at <https://acc.dau.mil/simplify/ev_en.php?ID=74807_201&ID2=DO_TOPIC>.

DEPARTMENT OF DEFENSE PRESS RELEASE (JUNE 1, 2005)
INSPECTOR GENERAL ACCOUNTABILITY REPORT COMPLETED

The Department of Defense inspector general has completed an extensive and detailed review of personnel involved in the Boeing KC-767A tanker program.

The report makes several recommendations involving changes and revisions in acquisition, leasing, procurement, and management procedures and policies. Many of the issues raised in this report have already been identified and are being addressed. Additionally, the department has temporarily established direct oversight of major Air Force programs during this leadership transition period in the Air Force.

Other reviews, undertaken at the initiative of officials within the department to improve procurement procedures, include two Defense Science Board studies (a study of tanker recapitalization requirements and a study of the department's acquisition management structure and procedures); the National Defense University's study of lessons learned from the proposed lease of KC-767 tanker

aircraft; the Defense Acquisition University's review of acquisition regulations and other acquisition-related authorities; two audits of the proposed lease of tanker aircraft, by the Office of the Inspector General, at the request of the acting under secretary of defense (acquisition, technology and logistics); and a review of all contract actions in which Darleen Druyun was involved as a member of the Air Force secretariat, from 1993 to 2002. These initiatives, as well as others, will greatly improve the management and cost-effectiveness of the DoD acquisition process.

DoD continues to monitor aggressively and, when necessary, to upgrade and revise its acquisition process to ensure that taxpayer dollars are efficiently and effectively used to the benefit of American warfighters.

DSB REPORT ON MANAGEMENT OVERSIGHT IN ACQUISITION ORGANIZATIONS

A March 2005 Defense Science Board report finds that while current acquisition practices make ethics violations on the scale of the Darleen Druyun case unlikely, there are currently no structural or policy mandates in place that would prevent such a situation from recurring. Read the report at <http://www.acq.osd.mil/dsb/reports/2005-03-MOAO_Report_Final.pdf >.

AIR FORCE ACQUISITION PROCESSES POLICY MEMO (MAY 12, 2005)

Blaise J. Durante, deputy assistant secretary of acquisition integration, Office of the Assistant Secretary of the Air Force (Acquisition), has published policy guidance that establishes/reiterates the processes for the Milestone Decision and Acquisition Strategy Panel (ASP) reviews. His memorandum, dated May 12, 2005, describes the Air Force Milestone decision process and a new one-phased ASP to replace the former two-phased approach. The program execution review process, according to the memorandum, is also being revised and additional policy will follow.

The point of contact for the new policy is Mike McWilliams, SAF/AQXA at 588-7107 or joseph.mcwilliams@pentagon.af.mil. View the new AF Milestone Decision approval process and ASP process at <https://www.safaq.hq.af.mil/mil/policy/documents/Air%20Force%20MDA%20ASP%20Processes.pdf >.

GAO REPORTS

The following Government Accountability Office (GAO) reports may be downloaded from the GAO Web site at <http://www.gao.gov >.

National Defense

DoD's High-Risk Areas: Successful Business Transformation Requires Sound Strategic Planning and Sustained Leadership, GAO-05-520T, April 13, 2005

Air Force Procurement: Protests Challenging Role of Biased Official Sustained, GAO-05-436T, April 14, 2005

Defense Management: Key Elements Needed to Successfully Transform DoD Business Operations, GAO-05-629T, April 28, 2005

Interagency Contracting: Problems with DoD's and Interior's Orders to Support Military Operations, GAO-05-201, April 29, 2005

DoD Business Systems Modernization: Billions Being Invested without Adequate Oversight, GAO-05-381, April 29, 2005

Defense Ethics Program: Opportunities Exist to Strengthen Safeguards for Procurement Integrity, GAO-05-341, April 29, 2005

Department of Defense Initiatives on High Energy Lasers Have Been Responsive to Congressional Direction, GAO-05-545R, May 18, 2005

Military Training: Better Planning and Funding Priority Needed to Improve Conditions of Military Training Ranges, GAO-05-534, June 10, 2005

Progress of the DD(X) Destroyer Program, GAO-05-752R, June 14, 2005

Defense Technology Development: Management Process Can Be Strengthened for New Technology Transition Programs, GAO-05-480, June 17, 2005

Military Training: Actions Needed to Enhance DoD's Program to Transform Joint Training, GAO-05-548, June 21, 2005

Defense Acquisitions: Incentives and Pressures That Drive Problems Affecting Satellite and Related Acquisitions, GAO-05-570R, June 23, 2005

Science, Space, and Technology

NASA: More Knowledge Needed to Determine Best Alternatives to Provide Space Station Logistics Support, GAO-05-488, May 18, 2005

Advanced Technology Program: Inherent Factors in Selection Process Are Likely to Limit Identification of Similar Research, GAO-05-759T, May 26, 2005

THE DEPUTY SECRETARY OF DEFENSE
WASHINGTON, DC 20301

MAY 2 2005

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTOR, NET ASSESSMENT
DIRECTOR, FORCE TRANSFORMATION
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Establishment of the Defense Reconstruction Support Office

Effective today, I have approved the establishment of the Defense Reconstruction Support Office (DRSO) to provide a single DoD focus for the coordination of the Department's operational support of U.S. reconstruction activities in Afghanistan and Iraq. This office incorporates the functions of the Afghanistan Reachback Office and the Defense Support Office-Iraq. The Director of the DRSO will report directly to me.

Your full cooperation with and support of the DRSO is essential to ensuring that we continue to provide well coordinated and responsive support for the DoD and other U.S. government elements engaged in meeting U.S. objectives in Afghanistan and Iraq. The DRSO will, among other things, represent the Department in interagency fora on pertinent operational matters and will provide support to senior officials for meetings, briefings, and testimony before Congress on matters pertaining to Afghanistan and Iraq. The DRSO will reside in Washington Headquarters Services and the Director, Administration and Management, will provide administrative and logistical support.

Paul Wolfowitz

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION, LOGISTICS AND TECHNOLOGY
103 ARMY PENTAGON
WASHINGTON, DC 20310-0103

21 APR 2005

SAAL-ZSA

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Army Systems Acquisition Review Council (ASARC)

As the Chairman of the ASARC, I have conducted a review of the ASARC membership and operating procedures and decided to make changes that will enhance the efficiency and effectiveness of this deliberative body. In the future the ASARC will be a three and four-star level body (Enclosure) that concentrates upon resolving issues that remain outstanding after major Army programs proceed through the Integrated Product Team (IPT) process.

An Army-level Overarching Integrated Product Team (OIPT) (Enclosure) will be established to provide two-star level oversight to the IPT process. The Deputy Assistant Secretary for Acquisition and Systems Management will chair the Army OIPT for all Acquisition Category (ACAT) ID, IC, and II systems. The Principal Director for Enterprise Integration in the Deputy Chief of Staff and Chief Information Officer/G-6 will chair the Army OIPT for ACAT IAM and IAC systems. The goal for all Army programs is the successful resolution of all issues at the two-star and below level, and a recommendation from the OIPT for a "paper" ASARC (i.e., the signing of the decision documents without the conduct of an ASARC).

An updated template for presentations to the Army OIPT will be posted to the Acquisition Information Management (AIM) system. Additions for System of Systems considerations and Systems Engineering have been made. The slides for System Metrics, Termination Criteria, and Earned Value are mandatory. Presentations to the ASARC will be focused on the issues remaining after the conclusion of the OIPT.

An updated ASARC procedural guide will be distributed to all ASARC member organizations and the Acquisition community shortly, by posting on AIM. If you have any questions, my Point of Contact for the ASARC is the ASARC Executive Secretary, Susan F. Byrne, (703) 692-1838.

Claude M. Bolton, Jr.
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)

Enclosure

Editor's note: View the enclosure to this memorandum at <http://library.saalt.army.mil/cfml/searchresult.cfm >.

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
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103 ARMY PENTAGON
WASHINGTON, DC 20310-0103

22 APR 2005

SAAL-PA

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Acquisition Integrity and Ethics

At the request of the Under Secretary of Defense (Acquisition, Technology and Logistics) (USD(AT&L)), a Defense Science Board (DSB) task force recently completed a study entitled "Management Oversight in Acquisition Organizations." Its preliminary recommendations cover two broad areas: immediate changes to processes and oversight and enduring changes in cultivating leadership and people.

In December 2004, as part of the DSB study, I conducted a self-assessment of management oversight in the Army acquisition organization. This assessment concluded that an effective set of policies and procedures currently is in place and providing effective management oversight of Army acquisition. As a result, I have determined that no immediate changes to current policies and procedures are necessary.

I would like to take this opportunity to thank you, as the U.S. Army's Senior Acquisition Leadership, for the high standards that you have set. Your efforts are a primary reason why current Army policies and procedures have been successful. Nevertheless, in this constantly changing, fast paced environment in which we work, we must never lose sight of our obligation to the American people or of the U.S. Army values of integrity and selfless service that ground us. It is imperative that all acquisition leaders continue to put ethics and integrity at the forefront of their endeavors as we support our Army at War.

In this spirit, I am pleased to provide you with the enclosed memorandum from the USD(AT&L), and I ask that you distribute it to all acquisition leaders within your organizations.

Claude M. Bolton, Jr.
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)

Enclosure

Editor's note: View the enclosure to this memorandum on the AT&L Knowledge Sharing System Web site at <http://akss.dau.mil/servlet/ActionController?screen=Policies&Organization=21 >. Click on "USD Memo Ethics & Integrity."

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

APRIL 11 2005

MEMORANDUM FOR DIRECTORS, DEFENSE AGENCIES
DEPUTY ASSISTANT SECRETARY OF THE ARMY (POLICY AND PROCUREMENT), ASA(ALT)
DEPUTY ASSISTANT SECRETARY OF THE NAVY (ACQUISITION MANAGEMENT), ASN(RDA)
DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE (CONTRACTING), SAF/AQC
DEPUTY DIRECTOR FOR LOGISTICS OPERATIONS (DLA)
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, ARMY CONTRACTING AGENCY

SUBJECT: Two-Year Extension of Warranty Claims Recovery Pilot Program

Section 391 of the National Defense Authorization Act for Fiscal Year 1998 (Public Law 105-85), as amended, authorizes the Secretary of Defense to carry out a pilot program to use commercial sources of services to improve the collection of the Department of Defense claims under aircraft engine warranties and to enter into contracts under the pilot program for collection-related services. Section 391 also provides guidance with regard to the payment of contractor fees and the retention of recovered funds. Finally, section 391 includes a reporting requirement, which (1) identifies the extent to which commercial firms have been used for collection-related services under this pilot program; (2) describes any problems that have limited the ability of the Secretary of Defense to procure such services under the pilot program; and (3) any recommendations the Secretary may have regarding whether the pilot program should be made permanent or extended beyond the specified date in section 391.

The Fiscal Year 2005 Authorization Act extended the authority for the pilot program to September 30, 2006. The report on the program is due to Congress in February 2006. (A conformed copy of the law is enclosed.)

Request that you identify any contracts entered into under this pilot program for collection-related services as identified in section 391(b), and provide me with the information required for the report, along with points of contact for follow-up discussions on these pilot programs. This data should be provided no later than June 30, 2005. If you have not utilized the authority provided under section 391, please provide a negative response and a brief summary as to why. My point of contact for this matter is Susan Hildner, (703) 695-4258, susan.hildner@osd.mil.

Deidre A. Lee
Director, Defense Procurement
and Acquisition Policy

Enclosure:
As stated

Editor's note: View the attachment to this memorandum at <http://www.acq.osd.mil/dpap/policy/policyvault/2005-0453-DPAP2.pdf>.

OFFICE OF THE UNDER SECRETARY OF DEFENSE
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WASHINGTON, D.C. 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

APR 22 2005

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
(ATTN: ACQUISITION EXECUTIVES)
COMMANDER, USSOCOM (ATTN: ACQUISITION EXECUTIVE)
COMMANDER, USTRANSCOM (ATTN: ACQUISITION EXECUTIVE)
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTORS, DEFENSE AGENCIES
DIRECTORS, DOD FIELD ACTIVITIES

SUBJECT: Acquisition of Services Policy Review

Sections 801 and 803 of the National Defense Authorization Act for Fiscal Year 2002 established a series of requirements intended to regulate the acquisition of services in the Department of Defense. Those requirements were satisfied and institutionalized by an Acquisition of Services policy letter issued by the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) on May 31, 2002.

Nearly three years have passed since the policy was issued. Given our steadily increasing investment in this category of acquisition, the USD(AT&L) has directed me to conduct a formal acquisition of services policy review. The review will assess compliance with Department policy while soliciting your views on ways to improve that policy. The review will be conducted in two phases:

- Phase 1 is a data call. Agencies will submit a copy of their acquisition of services policy and a chart illustrating the agency oversight function. The chart should depict the agency decision authority, any delegated authorities and associated dollar thresholds, and the key decision points in the agency's acquisition of services oversight process. In addition, the data required to be collected by the May 31, 2002, USD(AT&L) policy letter will be submitted for the top 20 acquisitions initiated since the policy was promulgated. Attachment 1 of this letter is an image of the spreadsheet to be used to collect and submit this information. An electronic version of the spreadsheet is available at http://www.acq.osd.mil/dpap/paic/ServicesPolicy.htm. The Phase 1 information will be submitted by June 1, 2005.

- Phase 2 will require a briefing to include the items listed in attachment 2. The briefing will be required for each military service and Washington Headquarters Services. Other agencies will be selected to brief based on a review of the information submitted in Phase 1.

As a result of the review, I will provide an implementation summary to the USD(AT&L) with recommendations for policy improvements and adjustments to current delegation authority consistent with the management practice reported during the review.

Please provide the name of your Point of Contact to Mr. Skip Hawthorne [skip.hawthorne@osd.mil or (703) 692-9556], by April 30, 2005. He will respond to your questions and assist with necessary scheduling. Phase 1 information wil be submitted electronically to bob.miglin.ctr@osd.mil.

I look forward to your support for and active participation in this important review. Together, we can thoughtfully consider our policy and ensure effective management of these important acquisitions.

Deidre A. Lee
Director, Defense Procurement
and Acquisition Policy

Attachments:
As stated

Editor's note: View the attachments to this memorandum at <http://www.acq.osd.mil/dpap/policy/policyvault/paic_1.htm>.

OFFICE OF THE UNDER SECRETARY OF DEFENSE
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WASHINGTON, D.C. 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

JUN 15 2005

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
(ATTN: ACQUISITION EXECUTIVES)
DIRECTORS, DEFENSE AGENCIES

SUBJECT: Release of Purchase Card Data to the Public Domain

In response to the terrorist attacks on the United States in the Fall of 2001, the Department revised its policies which implement the Freedom of Information Act. At that time, the decision was made to withhold lists of names and other personally identifying information of Department personnel in response to requests under the FOIA. In terms of the Department's purchase card program, this policy revision meant that the names of all program officials (to include cardholders, billing officials, and agency program coordinators) would not be released under a FOIA request.

However, this policy revision did not address the potential exposure of classified programs and organizations within the Department through non-name-specific FOIA requests. In May of 2003, I requested a review by the Office of the Under Secretary of Defense for Intelligence to determine if the public availability of the organizational names and telephone numbers of all Departmental cardholders could pose a security risk to classified operations. The August 7, 2003, response provided by the Deputy Assistant Secretary of Defense (Security and Information Operations), attached, makes a persuasive case regarding the Operational Security risk posed by the release of detailed aggregated purchase card information provided by the Office of the Secretary of Defense.

Notwithstanding this guidance, the Department has a legal responsibility to provide a limited amount of publicly accessible information associated with each Departmental purchase card account. To this end, this memorandum authorizes the release of a limited amount of purchase card transactional detail to the public domain. Effective immediately, the Purchase Card Program Office is authorized to release the following transactional data at the installation, base, or activity level for non-classified card accounts:

- merchant category code
- transaction amount
- merchant name
- merchant city, state, zip, and phone
- transaction date (releasable 90 days after date)

The transaction date is not to be released until 90 days have passed from this date. This mirrors identical Department policy governing the release of DD350 data to FPDS.

Additionally, base commanders are reminded of the security risk created if unnecessary personnel information (e.g., cardholder's names) is publicly available. If you have any questions, my point of contact for this matter is Mr. Dennis Hudner and he can be reached at dennis.hudner@hqda.army.mil or (703) 681-3315.

Deidre A. Lee
Director, Defense Procurement
and Acquisition Policy

Attachment
As Stated

Editor's note: View the attachment to this memorandum at <http://www.acq.osd.mil/dpap/policy/policyvault/pcard_1.htm>.

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

JUN 15 2005

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Proper Use of Non-DoD Contracts

The attached October 29, 2004, memorandum on the "Proper Use of Non-DoD Contracts" required you to establish procedures to help ensure that non-DoD contracts are used properly. This requirement and the corresponding implementation procedures have led some individuals and activities to conclude that they may no longer purchase from GSA's Multiple Award Schedule Contracts, Government-wide Acquisition Contracts, or other non-DoD Multiple Award Contracts. Some have also interpreted the October 29, 2004, memorandum as precluding the ability to utilize the services of "Assisting Agencies" to meet DoD requirements. These interpretations are incorrect.

As stated in the "Proper Use of Non-DoD Contracts" policy memo, "the use of non-DoD contracts is encouraged when it is the best method of procurement to meet DoD requirements." The Department of Defense continues to work with the General Services Administration and other "Assisting Agencies" to ensure that all acquisitions made by and on behalf of the Department comply with applicable statutes and regulations.

My POC on this subject is Michael Canales, and he can be reached at 703-695-8571 or via e-mail at michael.canales@osd.mil.

Deidre A. Lee
Director, Defense Procurement
and Acquisition Policy

Attachment:
As stated

Editor's note: View the attachment to this memorandum at <http://www.acq.osd.mil/dpap/specificpolicy/Use%20of%20Non%20DoD%20Contract%20Vehicles.pdf>.

Conferences, Workshops & Symposia

ARMY NEWS SERVICE (APRIL 4, 2005)

SCIENCE ON THE BATTLEFIELD

Staff Sgt. Lorie Jewell, USA

Armed robots, liquid body armor, bendable computer screens, and uniforms with virtual-reality capabilities—what once could have been fodder for science fiction novels is now shaping how future soldiers will fight.

Many of the ideas and technologies already being used on today's battlefield or due to arrive soon were being displayed and discussed at this year's Army Science Conference.

One such system, the Special Weapons Observation Reconnaissance Detection System, or SWORDS, will be joining Stryker Brigade Soldiers in Iraq after final testing, said Army Staff Sgt. Santiago Tordillos of the Explosive Ordnance Disposal Technology Directorate of the Army's Armament Research, Development and Engineering Center at Picatinny Arsenal, N.J.

"We're hoping to have these systems in Iraq by early 2005," Tordillos said. "The soldiers I've talked to want them yesterday."

A New Robot Fighter

The SWORDS system consists of a weapon system mounted on a Talon robot, a product of the engineering and technology development firm Foster-Miller. The Talon began helping with military operations in Bosnia in 2000, deployed to Afghanistan in early 2002, and has been in Iraq since the war started, assisting with improvised explosive device detection and removal. Talon robots have been used in about 20,000 missions in Iraq and Afghanistan, according to Foster-Miller reports.

"It's not a new invention, it's just bringing together existing systems," said Tordillos, who has been involved with the project since its inception about a year and a half ago.

Different weapons can be interchanged on the system—the M-16, the M-2, M-240, and M-249 machine guns, or the M-202A1 with a 66mm rocket launcher. Soldiers operate the SWORDS by remote control from up to 1,000 meters away.

With a weapons platform mounted on a Talon robot, the SWORDS system allows soldiers to fire small arms by remote control from as far away as 1,000 meters. The system may soon be used in Iraq.
U.S. Army photographs by Staff Sgt. Lorie Jewell, USA.

"In testing, it's hit bulls eyes from as far as 2,000 meters away. The only margin of error has been in sighting," Tordillos said.

The system uses AC power, lithium batteries, or SINCGARS rechargeable batteries. The control box weighs about 30 pounds, and has a daylight-viewable screen and two joysticks that control the robot platform and the weapon.

Four SWORDS currently exist and 18 have been requested for service in Iraq, Tordillos said. Each system costs about $230,000 to produce, said Bob Quinn, lead integrator for the project. When they go into production, Quinn estimates the cost per unit will drop to $150,000 to $180,000.

Tordillos fielded a variety of questions while showing off the system at the conference. Soldiers wanted to know

what MOS they need in order to work with the system. There is no specific MOS for it, Tordillos said.

Others asked if Tordillos envisions a time when armed robots will outnumber humans on the battlefield.

"You'll never be able to eliminate the soldier on the ground," he said. "There will be a mix, but there will certainly always be soldiers out there."

Sensor-based Soldiers

Thermal sensors woven into the fabric of the uniform control its temperature, based on the soldier's environment. An on-board respirator, tethered to the soldier's back, provides a continuous supply of fresh air—eliminating the need for a protective mask. Should the soldier have the visor up or the helmet off and breathe in some kind of harmful agent, the uniform sensor would immediately detect it, release tiny embedded capsules to counter it, and inject treatment into the soldier's body.

From the waist down, a skeletal system will allow soldiers to carry two or three times their body weight.

Shear thickening fluid, sometimes known as liquid body armor, is made of tiny glass particles and polyethylene glycol.

Liquid Armor Protection

The uniform might be made out of fabric treated with another technology featured during the conference—shear thickening fluid. Unofficially referred to by some as liquid body armor, STF is made of equal parts polyethylene glycol (an inert, nontoxic thickening agent used in a variety of common products, including ice cream) and miniscule glass particles, said Eric Wetzel, who heads the STF project team in the Weapons and Materials Research Directorate of the U.S. Army Research Laboratory.

In a small glass vial, the light blue liquid is easily stirred with a small plastic stick, as long as the stick is moving in slow, easy motion. When rapid or forceful motion is applied, the liquid instantly hardens, preventing any movement.

STF has been applied to regular Kevlar material, Wetzel said. The fabric's texture doesn't change; it looks and feels the same as if it hadn't been treated. Using a test swatch of four layers of untreated Kevlar—the normal thickness of body armor—Wetzel is able to stab an ice pick through the fabric. But when stabbing a treated section of fabric with all the force he can muster, the ice pick dents the fabric but can't penetrate it.

Research is being done into whether STF can be of use to the Army, Wetzel said. If it is, soldiers may start getting gear treated with it in about two years.

Warriors in 2025?

Army Staff Sgt. Raul Lopez, an infantryman stationed at the Natick Soldier Center in Massachusetts, spent four days during the conference in what could be the Army uniform of the future.

Dressed in black and wearing a helmet that allowed barely a glimpse of his face, Lopez looked like something from a science-fiction movie.

He explained that the fabric of the form-fitting suit would be made through the wonder of nanotechnology, which involves manipulating atoms and molecules to create things at a scale about 50,000 times smaller than the diameter of a strand of hair. Soldiers wearing the suit would have the ability to blend into any environment, like chameleons.

The helmet he wore is envisioned as the main hub of the uniform, where "all of the action happens," Lopez said. A tiny video camera on the helmet provides 360-degree situational awareness. A series of sensors gives the soldier three-dimensional hearing and the ability to amplify specific sounds, while lowering the volume of others.

Complete voice translation is also provided for what soldiers hear and say. Night-vision sensors, minimized to the size of pencil erasers, are also in the helmet. Maps and other situational-awareness information are projected on the inside of the visor, while everything the soldier sees and hears is sent in real time up to higher headquarters.

"It's all voice activated," Lopez said. "I can tell it to show me where my buddies are, and it projects the information on the visor."

Excellence in Research

Representatives from 31 countries—including Canada, the United Kingdom, Argentina, South Korea, Australia, and Singapore—attended the conference for the first time.

Brig. Gen. Peter Holt of Canada's Defence Research and Development agency believes the working relationship among scientists, engineers, and researchers has been beneficial to all concerned, and that the benefits of collaboration are already on the battlefield.

ARMY NEWS SERVICE (APRIL 7, 2005)
INDUSTRY LEADERS PLAN TO HELP ARMY BUILD MORE, FASTER

Lt. Col. Stan Heath, USA

WASHINGTON—With $1.7 billion slated for the construction of barracks and other stateside Army facilities next year, the Corps of Engineers completed the first of five forums April 6 with architects and construction firm representatives.

About 145 industry officials, including small business reps, attended the event to provide market research and insight into streamlining the military construction processes.

"We are going to change the way we do business," said Don Basham, chief, Engineering and Construction for the Corps. "We have to turn dirt the same year as our appropriations to meet the Army's upcoming construction demand."

The Corps is charged with developing a construction strategy to decrease the time it takes to plan, program, design, and build military facilities.

Coined the "perfect storm," a large construction demand is imminent as the Army moves units from Germany, Korea, Iraq, and Afghanistan, while it restructures its forces into modular units, and simultaneously executes Base Realignment and Closure decisions, Corps officials said.

"We're going to provide quality facilities faster, at a reduced cost," Basham explained. "We know that this is going to be a minimum of a $2 billion project for several years."

In 2004, the command leveraged private industry to provide rapidly deployed relocatable barracks to housing units of the 3rd Infantry Division at Fort Stewart, Ga. The Corps used this same approach to solve soldier housing issues at Fort Hood, Texas.

The primary purpose of the April forums, officials said, is to gather information as to how to construct permanent facilities for brigade-size units, not temporary facilities.

The overall military construction program will involve installations in the contiguous U.S states, officials said, as well as Alaska and Hawaii over the next few years.

Military construction is about $3.4 billion of the estimated $12.1 billion fiscal 2006 military programs budget. This consists of $1.7 billion for Army Military Construction (Army, Army Family Housing, Army Reserve);

Barracks for trainees are shown here under construction at Fort Jackson, S.C., last summer. As many installations prepare to build facilities for brigade-sized units of action, Corps of Engineers officials are working with industry representatives in an effort to cut the time it takes for military construction. U.S. Army photograph.

$1.3 billion for Air Force Military Construction (Air Force, Air Force Family Housing, Air Force Reserve); and $370 million for Department of Defense programs (medical, Defense Logistics Agency, Special Operations Forces, chemical demilitarization).

Heath is the deputy public affairs officer for the Army Corps of Engineers.

U.S. JOINT FORCES COMMAND PUBLIC AFFAIRS (MAY 10, 2005)

NEW TECHNOLOGY TRANSFER AUTHORITY HELPS PUT TRANSFORMATION ON THE FAST TRACK

Journalist 1st Class (SW/AW) Chris Hoffpauir, USN

NORFOLK, Va.—Secretary of Defense Donald Rumsfeld recently delegated technology transfer authority to U.S. Joint Forces Command (USJFCOM), allowing it to share technology with academia and industry for the purpose of research and development.

USJFCOM can use this authority to speed the research and development process. The result is new ideas from academic, industrial, national, and international research laboratories can be developed into integrated capabilities for the joint warfighter quicker.

"We are not a national laboratory, but the Department of Defense recognizes that so much of what we do has national laboratory-like implications, processes, and the rest, which is why we were given this technology transfer authority," USJFCOM commander Navy Adm. Edmund Giambastiani said at a net-centric warfare conference in Norfolk, Va., March 22.

While USJFCOM is not a national laboratory, the new authority gives the command many of the same authorities national laboratories use to structure partnerships with industry to exchange personnel and technical data, make technology assessments, and collaborate on research and development efforts.

The command can now enter into core technology transfer agreements with private industrial and academic partners. For USJFCOM, technology transfer provides a new avenue for developing collaborative and cooperative relationships with both.

Technology transfer allows partners to share costs by entering into Cooperative Research and Development Agreements (CRADA) with private companies and other entities. They provide the government use of the intellectual property while protecting the rights of the company to guard its patents.

According to command officials, the objective of a CRADA is cooperative research that will enhance the mission of the command and benefit the other party. CRADAs define the individual responsibilities of each party toward achieving that objective, as well as rights to intellectual property developed under the CRADA.

USJFCOM may provide personnel, facilities, and equipment to perform the cooperative research, but may not provide funds to support the CRADA. The other party may provide personnel, facilities, equipment, and funding.

Under federal law, CRADAs can be established with industrial organizations, industrial development organizations, non-profit organizations, universities, state and local governments, licensees of inventions owned by federal agencies, and other federal agencies.

As a result, USJFCOM may not always pay for the services or products it needs to develop technologies. In fact, some projects may produce income for USJFCOM. Newly developed technologies and concepts will immediately be applied to support the operational warfighter.

Command officials see the process as a win-win situation, for the both command and its partners. USJFCOM Director of Experimentation Army Maj. Gen Bob Wood spoke about the potential of technology transfer authority on April 5 during the command's 2005 Industry Symposium in Portsmouth, Va. "With the expanded authority," Wood said, "we can start to transfer better technologies out or in, depending upon the technologies, and break new ground with traditional defense contractors along that path. In the areas of research and development, it will give us new flexibility to structure partnerships with industry."

USJFCOM's focal point for technology transfer is the command's newly formed Office of Research and Technology Applications (ORTA). It will oversee partnership agreements between USJFCOM and industry. It will also identify new technologies that will help fulfill warfighter requirements

By law, any government organization using technology transfer authority must have an ORTA for offering ad-

vice and assisting the command with CRADAs, intellectual property agreements, patent licensing agreements, personnel exchange, and research grants.

Dr. Russell Richards of USJFCOM's Joint Experimentation directorate heads the new office. "Our job is to use these mechanisms in a way that makes it easier to work with industry," he said. "These agreements give us more timely access to new technologies while protecting the property rights of the inventors, whether they are government or industry." During the Industry symposium, he outlined three principal ways for technology transfer to take place at USJFCOM.

The first involves the classic model of spinning off technology developed in federal labs and transferred to industry partners for commercial development. "That's the way traditional technology transfer works for most federal laboratories," Richards said. The second consists of what Richards calls "spin-on."

"Our industry partners may have good capabilities and technologies that we need to embrace to enhance the warfighter's effectiveness," he said. "That will probably be prevalent here."

The third form of transfer would be what he termed "spin-over," where technology and capabilities are shared among USJFCOM's various subordinate organizations like the Joint Systems Integration Command, the Joint Futures Laboratory, and the Joint Advanced Training Technology Laboratory, all in Suffolk, Va.

While research and development has always been an important part of the command's mission, all those activities are there to support the joint warfighter. USJFCOM will remain first and foremost a combatant command focused on transforming the U.S. military.

"These new technology transfer authorities are but a means to an end—not the end itself," Giambastiani said. "The whole point of these authorities is to speed the process of turning the best ideas from industry and academia and other national and international research laboratories into integrated capabilities."

INTERNATIONAL CONFERENCE ON ENTERPRISE TRANSFORMATION (ICET)

The Association for Enterprise Integration (AFEI) will host its 2005 International Conference on Enterprise Transformation (ICET) Sept. 13–14 in Washington, D.C. The theme of the conference is "Going Live with Service Oriented Architecture (SOA)." The conference will address two key aspects of federal agency transformation: SOA for Federal Agencies, and Protecting Shared Information Assets. Details and registration are available at: <http://www.afei.org/brochure/5AF3/index.cfm >.

2005 ANNUAL ITEA SYMPOSIUM (SEPT.26–29, 2005)

The International Test and Evaluation (ITEA) Symposium 2005 will be held Sept. 26–29, 2005, at the Albuquerque Convention Center in Albuquerque, N.M. This year's event will provide a forum for addressing the issue of transformational test and evaluation, examining the topic from three perspectives:

- **Programs** that are or will be testing in the Joint Force and Coalition Battlespace
- **Methodologies**, processes, resources, tools, and limitations that enable or hinder our testing in the Joint Force and Coalition Battlespace
- **Lessons Learned**, including recommendations for the way ahead.

For more information on this event, check the ITEA Web site: <http://www.itea.org > or call (703) 631-6220.

DEFENSE LOGISTICS INFORMATION SERVICE (MARCH 21, 2005) ONLINE REGISTRATION AVAILABLE FOR NATO SYMPOSIUM

BATTLE CREEK, Mich.—Organizers have established an online registration system to help interested parties sign up for the 10th International Symposium on Codification, Oct. 10–13 in Edinburgh, Scotland.

Members of the Defense Logistics Information Service will join international logisticians, business leaders, trade associations, and other interested individuals gathering from around the world for the symposium. The meetings are conducted every few years to review the current state of the NATO Codification System and discuss future development.

"Logistics continues to change and is becoming more complex. Accordingly, the logisticians' need for standard, accurate information at their fingertips is growing," said Richard Maison, the DLIS executive director, who also serves as the chairman of the NATO Group of National Directors of Codification (Allied Committee 135).

The committee sponsors the meetings to continue the advancement of the NCS, based on the U.S. cataloging system, as the world's standard language of government supply chain logistics. Originally adopted for NATO, the system is now used by more than 50 nations. It is also becoming a standard for e-commerce.

According to Maison, supporters of the NCS are reaching out to industry to build a common language between government and business. Countries are improving their information products and focusing on accuracy and relevancy, and National Codification Bureaus in participating countries seek to build synergy in the logistics chain from the factory to foxhole.

The symposium agenda includes speakers from around the world discussing a range of supply chain and codification issues as well as a number of social events planned for both before and during the main conference. Anyone interested in supply chain management, codification (cataloging), logistics and engineering support, international standards for data management, and related topics—whether within a military, government, industrial, or commercial enterprise or organization—should attend. All spoken and written material will be presented in English and French.

Those who would like to register online for the symposium can log on to <https://registration.meetingmakers.co.uk/dev-cgi/nato_2005/register?short_conference_name=nato_2005> or use the online tool at <www.codification2005.org> to learn about exhibition or sponsorship opportunities for the symposium.

2005 PEO/SYSCOM COMMANDERS' CONFERENCE (OCT. 18–19, 2005)

The 2005 Program Executive Officer/Systems Command (PEO/SYSCOM) Commanders' Conference will be held at the Defense Acquisition University, Fort Belvoir, Va., Oct. 18–19, 2005. 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, information on the 2005 conference will be posted to the conference Web site at <http://www.peosyscom.com>.

U.S. ARMY ACQUISITION CORPS ANNUAL AWARDS CEREMONY ARLINGTON, VA. (OCT. 2, 2005)

Watch for details of this upcoming event on the Army Acquisition Support Center Web site at <http://asc.army.mil/public/news/events/default.cfm>.

8TH ANNUAL SYSTEMS ENGINEERING CONFERENCE (OCT. 24–27, 2005)

The 8th Annual Systems Engineering Conference will be held Oct. 24–27, 2005, at the Hyatt Regency Islandia, San Diego, Calif. The call for papers and the conference announcement will be mailed and will be available at <http://register.ndia.org/interview/register.ndia?PID=Brochure&SID=_1D00RC2RA&MID=6870>. If you would like to add your information to the mailing list, please contact Phyllis Edmonson at (703) 247-2588 or pedmonson@ndia.org.

2005 FALL NATIONAL SBIR/STTR CONFERENCE

The 2005 Fall National Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Conference will be held Nov. 14–17, 2005, in Albany, N.Y. This conference will give participants the tools they need to obtain part of the $2 billion plus available to small business innovators. This conference will also provide participants with multiple opportunities to meet and network with SBIR and STTR program managers and fellow attendees including SBIR/STTR award winners, speakers, and experts from business and the government. For additional information, please visit the conference Web site at: <http://www.pmi-cpm.org/public/pages/news_events/news_events.html>.

17TH ANNUAL INTERNATIONAL INTEGRATED PROGRAM MANAGEMENT CONFERENCE

The 17th annual International Integrated Program Management Conference will be held Nov. 6–9, 2005, in Tysons Corner, Va. The conference will feature seminars, workshops, and symposia providing the latest information on Earned Value Management tools, best practices, and current trends. For more information, please visit the conference Web site at <http://www.pmi-cpm.org/public/pages/news_events/news_events.html>.

Acquisition & Logistics Excellence

ARMY NEWS SERVICE (APRIL 28, 2005)
ARMY'S SMALL-BUSINESS ADVOCATE RECEIVES GOLD STAR AWARD

Eric Cramer

WASHINGTON—The Army's Office of Small and Disadvantaged Business Utilization received two awards this week for supporting firms with less than 1,000 employees, or those that meet government revenue limits, and those owned by minorities or disabled veterans.

Tracey Pinson, director of the Army office, received the federal Small Business Administration's Gold Star Award for Excellence for her achievements in helping the Army make greater use of small businesses in its acquisitions.

In addition to Pinson's award, the SBA gave her agency its Goaling Award of Excellence. The awards came during the annual Small Business Week.

"We have a cadre of small business advisors in the field who are the real catalysts for this effort," Pinson said. "I accepted the award for them."

This is not the first time Pinson has been recognized by the SBA. In 2004, she received the organization's SBA Administrator's Leadership Award.

Pinson said her office helped small businesses receive $15.4 billion in Army contracts last year, 28 percent of the $55 billion in Army contract funding.

OSDBU has multiple roles in its mission to establish the Army as the premier organization for promoting and assisting small businesses.

"We provide counseling to businesses, and disseminate goals to the major commands—and we have executed goals both from the Office of the Secretary of Defense and our statutory goals from the Small Business Act," Pinson said.

As an example of the goals her office tries to meet, she said the $15.4 billion in contracting it arranged last year was distributed among the following categories: small and disadvantaged businesses received $4.5 billion, or about 9 percent of the Army's total $55 billion in contracting; women-owned businesses received $2 billion, or about 5 percent of the total; companies in historically under-utilized business zones (HUBzones), received $1.5 billion, or roughly 3 percent of the total; and service-disabled-veteran-owned companies received $228 million or .04 percent.

Pinson said the statutory goals for each category are: small-disadvantaged businesses, 5 percent; women-owned businesses, 5 percent; historically under-utilized business zones, 3 percent; and service-disabled-veteran businesses, 3 percent.

"So we're exceeding our goals for disadvantaged businesses, and we're there with the HUBzones," she said. "Service-disabled veteran-owned small business is a new program."

Pinson said her office is there to help both the businesses and the Army achieve their goals.

"I try to create a positive environment for the MACOMs [major commands] to use small businesses," she said. "Those MACOMs also have goals. All contracting activities have goals."

Reaching those goals is made easier by the broad support for the OSDBU programs throughout the Army, Pinson said.

"We have a very strong infrastructure within the Army in support of achieving these goals," she said "We have strong support in the entire acquisition community, from the top down."

MISSILE DEFENSE AGENCY (APRIL 14, 2005)
KADISH RECEIVES MISSILE DEFENSE AWARD

Air Force Lt. Gen. Henry "Trey" Obering, Missile Defense Agency director, announced that Lt. Gen. Ronald T. Kadish, U.S. Air Force (Retired), is the third recipient of the Ronald Reagan Missile Defense Award, an annual honor awarded to individuals or organizations to recognize outstanding support, innovation and engineering, and scientific achievement associated with technologies designed to defend against ballistic missile attack. Kadish served as director of the Ballistic Missile Defense Organization and the Missile Defense Agency from 1999 to 2004.

Previous recipients of the Ronald Reagan Missile Defense Award were former Secretary of Defense Caspar Weinberger in 2003 and retired Air Force Lt. Gen. James A. Abrahamson, the first director of the Strategic Defense Initiative Organization.

DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 29, 2005)
SECRETARY OF DEFENSE 2004 ENVIRONMENTAL AWARD WINNERS NAMED

Ten military installations and individuals received the 2004 Secretary of Defense Annual Environmental Awards in an awards ceremony May 4, 2005, in the Pentagon. A panel of expert judges from the government, non-profit, and private sectors recognized the winners for excellence in five categories: cultural resources management, environmental quality, environmental restoration, natural resources conservation, and pollution prevention.

The award winners by category are:

- **Lt. Colonel Michael Tarpley**—Camp Beauregard, La.
  Individual—Cultural Resources Management
- **Marine Corps Recruit Depot Parris Island, S.C.**
  Installation—Cultural Resources Management (tie)
- **15th Airlift Wing, Hickam Air Force Base, Hawaii**
  Installation—Cultural Resources Management (tie)
- **Naval Air Depot Cherry Point, N.C.**
  Industrial Installation—Environmental Quality
- **Misawa Air Base, Japan**
  Overseas Installation—Environmental Quality
- **Naval Facilities Engineering Command Pacific, Hawaii**
  Installation—Environmental Restoration (tie)
- **Keesler Air Force Base, Miss.**
  Installation—Environmental Restoration (tie)
- **Fort Drum, N.Y.**
  Large Installation—Natural Resources Conservation
- **Tinker Air Force Base Pollution Prevention Team, Tinker Air Force Base, Okla.**
  Individual/Team—Pollution Prevention
- **Commander Navy Region Mid-Atlantic, Va.**
  Installation—Pollution Prevention

Recognizing excellence in environmental management is a crucial element in Department of Defense efforts to support the twin imperatives of producing the best-trained military force in the world while providing the best environmental stewardship possible. Each year, the secretary of defense honors installations, teams, and individuals for outstanding environmental management by military and civilian personnel at both domestic and overseas bases, to sustain military readiness, and training and operational capabilities.

Detailed information on the secretary's Environmental Awards can be found at <https://www.osd.mil/denix/Public/Library/Awards/awards.html>.

ARMY NEWS SERVICE (MAY 19, 2005)
ARMY RECOGNIZES LOGISTICS EXCELLENCE

Maj. William Thurmond, USA

WASHINGTON, D.C.—In today's Global War on Terror, Army logisticians are on the front lines throughout the world. Their work, always difficult and often dangerous, ensures that warfighters have the supplies and mobility required to engage and defeat the enemy.

In that spirit, dozens of Army soldiers, civilians, and their families gathered here this week to recognize excellence in all aspects of Army logistics.

Lt. Gen. Claude V. Christianson, the Army deputy chief of staff, G-4 (logistics), in coordination with the Association of the United States Army, hosted "Army Logistics Week" here. The event's theme was "Joint and Expeditionary Warfighter Support."

The highlight of the week was an awards ceremony where the Army's best logistics support providers in the fields of maintenance, supply, and deployment were recognized.

The first annual Army Chief of Staff's Combined Logistics Excellence Awards, or CLEA, were presented to units and organizations that epitomized outstanding service and set the standard for others to emulate, according to Christianson.

"The soldiers that are here represent the very best of Army logistics. In addition to these winners and runners-up, I know that there are thousands of dedicated unsung professionals out there every day doing magnificent work to support our Army," said Christianson.

"Logistics can be a dirty business, because you're always dealing with things that are broken and problems that have to be solved. So the awards themselves are important because they tell our logisticians in the field that their work is vital," said Christianson.

Lt. Gen. Claude V. Christianson (second row, center), the Army Deputy Chief of Staff, G-4 (Logistics), poses with the 2005 Combined Logistics Excellence Award (CLEA) winners and runners-up. The group and their families attended a twilight tattoo on the White House ellipse. Photograph by Maj. William Thurmond, USA.

Christianson noted that the Army logistics team is a diverse one.

"We wouldn't have Army logistics if we didn't have Army civilians supporting us, as well as contractors dedicated to augmenting our capabilities. They all share with us the same sense of pride, priorities, and commitment to service."

As he reviewed the list of award winners, Christianson said that he identified common threads.

"All of these units, down to each individual, are dedicated to supporting soldiers. They're fully committed to their mission and take success personally."

Secondly, they possess extraordinary attention to detail. Ours is a very complex business, and this attention to detail allows them to be successful."

Finally, these people are from units that always finish the job they start."

View a list of all 2005 CLEA winners, runners-up, and honorable mentions at <http://www4.army.mil/ocpa/read.php?story_id_key = 7351 >.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 15, 2005)
DEPARTMENT OF DEFENSE VALUE ENGINEERING ACHIEVEMENT AWARDS

Under Secretary of Defense for Acquisition, Technology, and Logistics Kenneth Krieg presented the annual Department of Defense Value Engineering Achievement Awards during a ceremony today at the Pentagon.

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 year 2004, 1,723 in-house value engineering proposals and contractor-initiated value engineering change proposals were accepted with projected savings/cost avoidance in excess of $1 billion.

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: program/project, individual, team, organization, and 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 by categories:

Office of the Secretary of Defense

Special—Mary Hart, DoD Value Engineering Program

Army

Program/Project—Army Small Computer Program
Individual—Conrad Gonzales Ortega, U.S. Army Program Executive Office Simulation, Training, and Instrumentation
Team—Aviation Parts Reclamation Team
Organization—U.S. Army Corps of Engineers, Los Angeles District (Los Angeles, Calif.)
Contractor—Northrop Grumman Systems Corp.
Subcontractor—Bose Corp.
Special—U.S. Army Defense Ammunition Center (McAlester, Okla.)
Special—Hamilton City Ecosystem Restoration Project Value Engineering Team (Hamilton City, Calif.)

Navy

Program/Project—AN/SSQ-110A Active Acoustic Source Refurbishment and Reuse Sonobuoy Program, Naval Surface Warfare Center, Indian Head Division (Yorktown, Va.)
Individual—Regina Shuster, Naval Sea Systems Command, Naval Surface Warfare Center Carderock (Carderock, Pa.)
Team—Crane Division, Naval Surface Warfare Center, Ordnance Engineering Department, PM-10 (Crane, Ind.)
Special—Shirley A. Bowe, Naval Facilities Engineering Command, Atlantic (Norfolk, Va.)

Air Force

Team—Battle Management/Command, Control and Communications Capability, Hardware Procurement Team (Hanscom AFB, Mass.)
Contractor—Northrop Grumman Mission Systems Minuteman III Guidance Replacement Program (Clearfield, Utah)

Defense Logistics Agencies

Program/Project—F-16 Leading Edge Flap Rotary Actuator Project Team, Defense Supply Center Richmond (Richmond,Va.)
Individual—Dale A. Roberts, Defense Supply Center Richmond (Richmond,Va.)
Team—Price Challenge/Should Cost Team, Defense Supply Center Columbus (Columbus, Ohio)
Organization—Defense Supply Center Columbus
Special—Brian P. McNicholl, Defense Supply Center Columbus (Columbus, Ohio)

Missile Defense Agency

Program/Project—Terminal High Altitude Area Defense Project Management Office
Team—Terminal High Altitude Area Defense Project Office Value Engineering Team (Huntsville, Ala.)

Defense Finance and Accounting Service

Program/Project—Electronic File Room Project (Columbus, Ohio)
Team—Audit Command Language Program Team (Columbus, Ohio)

Defense Contract Management Agency

Team—Joint Standoff Weapon (JSOW) Missile Block II Program, DCMA/Navy/Raytheon-Tucson (Tucson, Ariz.)

DEFENSE LOGISTICS AGENCY (JUNE 16, 2005)

DSCR RECEIVES WHITE HOUSE ENVIRONMENTAL AWARD

Fort Belvoir, Va.—Defense Supply Center Richmond's Environmental Management System received the 2005 White House Closing the Circle Award for the Department of Defense military category in a White House ceremony June 14.

The White House Office of the Federal Environmental Executive presents the awards annually. DSCR was among 11 winners selected from nearly 200 nominations in the areas of environment management systems,

pollution prevention, recycling, green product purchasing, alternative fuels, and sustainable building.

DSCR received special recognition for partnering with local governments and stakeholders in the development of their EMS. Increased levels of public confidence on environmental issues were attributed to DSCR's partnerships with Chesterfield County, the city of Richmond, and Virginia's Department of Environmental Quality.

DSCR has been a consistent and dependable supplier of quality goods and services to those defending freedom around the world since it was activated in 1942. Designated as the aviation supply chain manager for the Defense Logistics Agency, DSCR serves within the DoD supply chain as the primary source for the almost 1.2 million repair parts and operating supply items. While these items and parts have an extremely wide range of applications, the center's core mission is to supply products with a direct application to aviation. These include a mix of military-unique items supporting more than 1,300 major weapons systems, and other items readily available in the commercial market.

ARMY MATERIEL COMMAND (JUNE 8, 2005)

U.S. ARMY RECOGNIZES TOP TEN GREATEST INVENTIONS OF 2004

The commanding general of U.S. Army Materiel Command as well as the Army's Vice Chief of Staff, and other senior Army science and technology leaders recognized the U.S. Army's "Top Ten Greatest Inventions of 2004" in an awards ceremony June 8, at the Hilton McLean Tyson's Corner, Va. Military units in Southwest Asia are currently using all 10 inventions.

The Army-wide awards program is dedicated to recognizing the best technology solutions for soldiers.

"Nominations for the program were submitted from across the Army laboratory community," said Gen. Benjamin. S. Griffin, commander, AMC.

The Army—from active-duty divisions to the Training and Doctrine Command—chose the 10 winning programs for their impact on Army capabilities (breadth of use and magnitude of improvement over existing systems), inventiveness, and potential benefit outside the Army.

Displays with mock-ups and examples of the inventions were also featured at the ceremony. The Army recognized the following inventions:

Armor Survivability Kit for the HMMWV
U.S. Army Research Laboratory

In late 2003, ARL began producing prototype kits for HMMWVs using rolled homogenous armor steel and ballistic glass to provide the HMMWV with maximum balanced protection against small arms projectiles and fragments from improvised explosive devices (IEDs). The effort was transitioned to the Tank Automotive Research, Development and Engineering Center, who further developed the solution for production by the Army industrial base.

Improvised Explosive Device Countermeasure Equipment
U.S. Army Research Laboratory

The IED Countermeasure Equipment (ICE) is a radio-controlled IED countermeasure, completely composed of commercial-off-the-shelf technology. The Department of the Army IED Task Force identified ICE as a preventative solution to IED casualties and vetted the system through its confirmation process.

UTAMS (Unattended Transient Acoustic MASINT Sensor) Mortar, Rocket, Explosion Locator
U.S. Army Research Laboratory

UTAMS is an acoustic localization system based on classic sound ranging principles with advanced and unique signal processing techniques that can detect and isolate transient events such as mortar or rocket firings, munitions impacts, and other explosive events.

M107 .50 Cal Long Range Sniper Rifle
U.S. Army Armament Research, Development and Engineering Center

The M107 is a .50 caliber long range sniper rifle effective against various materiel and personnel targets such as parked aircraft; command, control, communications, computers, and intelligence sites; and lightly armored vehicles. The M107 has a longer stand off range and increased terminal effect when opposing snipers armed with smaller caliber weapons.

Lightweight Handheld Mortar Ballistic Computer
U.S. Army Armament Research, Development and Engineering Center

The Lightweight Handheld Mortar Ballistic Computer System provides, for the first time, a handheld fire control system with GPS and digital communication capability

for all fielded mortar weapon systems. The system calculates ballistic solutions and provides fire support coordination measures with functionality. The software component allows the weapon platform to receive, decode, encode, and send digital messages via the combat net radio to other weapon systems or command and control systems on the digital network.

Upgraded Aviation Force Battle Command Brigade and Below/Blue Force Tracking (Upgraded Aviation FBCB2/BFT)
U.S. Army Aviation and Missile Research, Development and Engineering Center

AMRDEC's Upgraded Aviation FBCB2/BFT is a paradigm-shattering communication and tracking system that provides global, real-time, situational awareness and command and control to/from air and ground platforms in a compact militarized package. Consisting of a Miltope laptop computer, satellite antenna, and Global Positioning System receiver, BFT displays the air or ground platform's location on the computer's terrain-map display along with the respective location of other air and ground platforms.

Lightweight Counter Mortar RADAR
U.S. Army Communications Electronic Research Development and Engineering Center

LCMR was designed to automatically locate mortar weapons over 360 degrees and to be sufficiently lightweight to support insertion by Airborne troops. LCMR is specified to detect and track mortar rounds that are out of range for most mortar weapons and locate the firing weapon with a target location error sufficient to neutralize the shooter with either combat air support or counterfire.

Chitosan Hemostatic Dressing
U.S. Army Institute of Surgical Research

Chitosan is a biodegradable, nontoxic, complex carbohydrate derived from chitin, a naturally occurring substance. In an initial test of prototype laboratory-constructed dressings, this dressing significantly increased survival rates and reduced both blood loss and resuscitation fluid requirements following Grade V liver injuries in swine. The dressing is a freeze-dried chitosan-based dressing designed to optimize the mucoadhesive surface density and structural integrity of chitosan at the site of injury.

Electronic Information Carrier
U.S. Army Telemedicine and Advanced Technology Research Center

The Electronic Information Carrier is a wireless data storage device the size of a dog-tag that is capable of storing up to 4 gigabytes of data. The real power of the Wireless Electronic Information Center (WEIC) is its ability to securely and wirelessly read and write data within a range of 10 meters of medical devices such as the Battlefield Medical Information System-Telemedicine and the Composite HealthCare System II-T. It also has a universal physical interface that ensures its compatibility with commercial and government off-the-shelf products.

Army Combat Uniform
U.S. Army Natick Soldier Center

Developed in collaboration with PEO Soldier, this new combat uniform increases performance capabilities through the application of new camouflage technologies, incorporation of functional fabric finishes, and design engineering for increased operational effectiveness, while reducing sustainment costs. Scientists fused terrain environments into a single visual camouflage design by analyzing terrain types and then incorporating the results into an acceptable digitized pattern. The Army Combat Uniform (ACU) includes coat, trousers, moisture wicking t-shirt, rigger-style belt, improved moisture wicking anti-blister socks, and no shine tan combat boots. The cChief of staff of the Army approved the ACU to replace the battle dress uniform and the desert camouflage uniform.

New Army Combat Uniform
U.S. Army photograph courtesy PEO Soldier.

THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

ACQUISITION, TECHNOLOGY AND LOGISTICS

JUN 16 2005

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: The Secretary of Defense Performance Based Logistics Awards Program

Performance Based Logistics (PBL) is the Department of Defense strategy to improve weapon system readiness by purchasing weapon system sustainment as an integrated package, based on output measures, such as weapon system availability, rather than input measures, such as parts and technical services. The Quadrennial Defense Review (QDR) and the Defense Planning Guidance directed the application of PBL to new and legacy weapon systems.

Utilizing the best mix of public/private capabilities is a fundamental enabler of successful PBL strategies. A long-term relationship based upon a foundation of trust and mutual accountability for achieving the outcome performance goals in managing reliability, supportability, and total ownership cost over the life cycle of a weapon system is critical for implementation of a successful PBL program.

To enhance PBL awareness and encourage PBL excellence, DoD is instituting an awards program to recognize government/industry teams responsible for outstanding achievements in PBL development, implementation and execution. The Secretary of Defense PBL Awards program shall be implemented to annually recognize outstanding PBL performance in three categories: the System Level, the Sub-system Level and the Component Level. The PBL Awards will recognize successful PBL programs that demonstrate exceptional operational readiness.

The DoD will display the PBL Award in a prominent location so that it is afforded suitable public viewing access. This award will be maintained in perpetuity and updated annually. The public and private winners in each category will receive a plaque acknowledging their achievement. The awards will be presented annually in the Fall timeframe commencing in calendar year 2005. Application for the awards and criteria is contained in the enclosure.

Overall management of the PBL Awards program will be carried out by the Deputy Under Secretary of Defense (Logistics and Materiel Readiness) in affiliation with the Defense Acquisition University and Aerospace Industries Association. PBL Award instructions and format are attached.

The principal point of contact for administration of the PBL Awards program is Mr. Lou Kratz, Assistant Deputy Under Secretary of Defense (Logistics Plans and Programs), 703-614-6327, Louis.Kratz@osd.mil.

Kenneth J. Krieg

Attachment:
As stated

Editor's note: View the distribution and attachment to this memorandum at <https://acc.dau.mil/simplify/ev.php?ID = 78345_201&ID2 = DO_TOPIC >.

AT&L Workforce— Key Leadership Changes

NEW ACQUISITION, TECHNOLOGY AND LOGISTICS UNDER SECRETARY ANNOUNCED

The Department of Defense announced June 7 that Kenneth J. Krieg has taken over the duties as the under secretary of defense for acquisition, technology and logistics. Krieg, who served as special assistant to the secretary and director of the office of Program Analysis and Evaluation, was nominated to be the Pentagon's acquisition chief by President Bush on April 4, 2005, and confirmed by the Senate on May 26, 2005. He joined the Department of Defense in July 2001 to serve as the executive secretary of the Senior Executive Council. The SEC, composed of the secretary, deputy secretary, Service secretaries, and under secretary of defense for acquisition, technology and logistics, is responsible for leading initiatives to improve the management and organization of the Department of Defense.

Before joining the Department of Defense, he was the vice president and general manager of the Office and Consumer Papers Division for International Paper. Prior to that, he was the business manager for the office and consumer paper business. Before joining International Paper, he worked in a number of defense and foreign policy assignments in Washington, D.C., including positions at the White House, on the National Security Council staff, and in the Office of the Secretary of Defense. Krieg received his bachelor's degree in history from Davidson College and his master's in public policy from the Kennedy School of Government at Harvard University.

APPOINTMENT OF THE SPECIAL ASSISTANT FOR BUSINESS TRANSFORMATION

Effective April 17, 2005, Paul A. Brinkley has been appointed as the special assistant to the under secretary of defense (acquisition, technology, and logistics (AT&L)) for business transformation. Brinkley will lead AT&L's oversight of the business transformation efforts for the department, including the Business Management Modernization Program, the assimilation of transferred personnel and resources from the Business Management Systems Integration office into AT&L, and the realigned AT&L offices supporting business transformation.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 9, 2005)

GENERAL OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Air Force Brig. Gen. Ted F. Bowlds has been nominated to the rank of major general while serving as the deputy for acquisition, Aeronautical Systems Center, Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio.

Air Force Brig. Gen. David M. Edgington has been nominated to the rank of major general while serving as the vice commander, Air Armament Center, Air Force Materiel Command, Eglin Air Force Base, Fla.

Air Force Brig. Gen. Wendell L. Griffin has been nominated to the rank of major general while serving as the mission area director, Global Reach, Office of the Secretary of the Air Force (Acquisition), Pentagon, Washington, D.C.

Air Force Brig. Gen. Arthur B. Morrill III has been nominated to the rank of major general while serving as the director of resources, Deputy Chief of Staff, Installations and Logistics, Headquarters United States Air Force, Pentagon, Washington, D.C.

Air Force Brig. Gen. Jeffrey R. Riemer has been nominated to the rank of major general while serving as the director, Operations, Headquarters Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio.

Air Force Brig. Gen. Mark D. Shackelford has been nominated to the rank of major general while serving as the deputy for Test and Assessment, Missile Defense Agency, Arlington, Va.

Air Force Brig. Gen. John T. Sheridan has been nominated to the rank of major general while serving as the director, Requirements, Headquarters Air Force Space Command, Peterson Air Force Base, Colo.

AT&L Workforce—Key Leadership Changes

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 16, 2005)
GENERAL OFFICER ASSIGNMENT

The chief of staff, Army announces the following general officer assignment:

Brig. Gen. Marvin K. McNamara, deputy director for Force Structure, Integration, and Deployment, Missile Defense Agency, Washington, D.C., to deputy director, Missile Defense Agency, Washington, D.C.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 17, 2005)
GENERAL OFFICER ANNOUNCEMENT

Secretary of Defense Donald H. Rumsfeld announced today that the president has nominated Marine Corps Maj. Gen. Richard S. Kramlich, for appointment as the deputy commandant, installations and logistics, and for appointment to the grade of lieutenant general. Kramlich is currently serving as the commanding general, 1st Force Service Support Group, Camp Pendleton, Calif.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 18, 2005)
GENERAL OFFICER ANNOUNCEMENT

Secretary of Defense Donald H. Rumsfeld announced today that the president has nominated Air Force Maj. Gen. Terry L. Gabreski for appointment to the rank of lieutenant general with assignment as vice commander, Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio. Gabreski is currently serving as commander, Oklahoma City Air Logistics Center, Tinker Air Force Base, Okla.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 23, 2005)
FLAG OFFICER ASSIGNMENTS

Chief of Naval Operations Adm. Vern Clark announced today the following flag officer assignments:

Rear Adm. David Architzel is being assigned as commander, Program Executive Officer for Aircraft Carriers, Washington, D.C. Architzel is currently commander, Operational Test and Evaluation Force, Norfolk, Va.

Rear Adm. (lower half) William J. McCarthy is being assigned as commander, Operational Test and Evaluation Force, Norfolk, Va. McCarthy is currently commander, Carrier Strike Group Eight, Norfolk, Va.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 1, 2005)
GENERAL OFFICER ASSIGNMENTS

The chief of staff, Army announces the following officer assignments:

Maj. Gen. Bennie E. Williams, commanding general, 21st Theater Support Command, United States Army Europe and Seventh Army, Germany, to director, logistics operations, J-3, Defense Logistics Agency, Fort Belvoir, Va.

Brig. Gen. Philip J. Thorpe, United States Army Reserve, chief of staff (Troop Program Unit), 21st Theater Support Command, Indianapolis, Ind., to deputy commanding general, 21st Theater Support Command, Germany.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 3, 2005)
GENERAL OFFICER ASSIGNMENTS

The chief of staff, Air Force announces the assignments of the following senior leaders:

Maj. Gen. Daniel J. Darnell, commander, Space Warfare Center, Air Force Space Command, Schriever AFB, Colo. to director, legislative liaison, Office of Secretary of the Air Force, Pentagon, Washington, D.C.

Brig. Gen. (s) Susan K. Mashiko, deputy system program director, National Polor-orbiting Environmental Satellite System, Silver Springs, Md. to vice commander, Air Armament Center, Air Force Materiel Command, Eglin AFB, Fla.

DEFENSE ACQUISITION UNIVERSITY WELCOMES NEW INDUSTRY CHAIR

The Defense Acquisition University is pleased to welcome back retired Navy Rear Adm. Leonard "Lenn" Vincent as a member of the Defense Acquisition University (DAU) Executive Institute effective June 6. Vincent joins DAU as industry chair, a position previously held by Frank W. Swofford from 1998 to 2004.

Vincent retired from active duty and relinquished his position as commandant of the Defense Systems Management College on Aug. 1, 1999, after a 32-year career in the Navy. Following his retirement, he joined American Management Systems and later CACI International, Inc. As a vice president at both companies, he was re-

sponsible for working with senior DoD and industry leaders to help solve acquisition, logistics, and financial management challenges. Since 2004, he has also served on the DAU Board of Visitors.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 6, 2005)
DIRECTOR OF PROGRAM ANALYSIS AND EVALUATION ANNOUNCED

The Department of Defense today announced that Bradley M. Berkson has assumed the position of director for Program Analysis and Evaluation.

Berkson, who is simultaneously serving as the acting deputy under secretary of defense (logistics and materiel readiness), replaces Ken Krieg, who was sworn in as the under secretary of defense for acquisition, technology and logistics.

The former president of NEW Customer Service Companies Inc., and founder and former CEO of IP-Mill Inc., Berkson joined the office of the secretary of defense in January 2003, serving as director, studies and analysis, for the senior executive council.

Prior to his entrepreneurial efforts at IP-Mill Inc, Berkson was a partner at McKinsey & Company Inc., a leading international management consultancy. At McKinsey, he co-led the firm's corporate strategy and finance, innovation and technology management, and energy practices.

Berkson holds a B.S. in engineering, cum laude from the University of Tulsa, and graduated with a M.B.A. with scholastic honors from Harvard University. He is a pilot and flies as a volunteer for several mercy medical airlift organizations, transporting cancer and other patients, and their relatives for treatment.

As director of program analysis and evaluation, Berkson will provide independent analytic advice to the secretary of defense regarding alternative weapon systems and force structures, the development and evaluation of defense program alternatives, and the cost effectiveness of defense systems. His office conducts analysis and offers advice in a number of related areas, and is responsible for the management of the department's programming systems.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 7, 2005)
FLAG OFFICER ASSIGNMENT

Chief of Naval Operations Adm. Vern Clark announced the following flag officer assignment:

Rear Adm. (lower half) Alan B. Hicks is being assigned as program director, AEGIS BMD, Missile Defense Agency, Washington, D.C. Hicks is currently deputy, Surface Warfare for Combat Systems/Weapons, N76F, Office of the Chief of Naval Operations, Washington, D.C.

USTRANSCOM NEWS SERVICE (JUNE 14, 2005)
SCHWARTZ NOMINATED TO COMMAND USTRANSCOM

SCOTT AIR FORCE BASE, Ill.—President Bush has nominated Air Force Lt. Gen. Norton A. Schwartz to the rank of general with his next assignment as commander, U.S. Transportation Command. Schwartz is currently serving as director, the Joint Staff in Washington, D.C. Prior to that assignment he was director for operations, the Joint Staff.

A 1973 graduate of the U.S. Air Force Academy, Schwartz is also an alumnus of the National War College, a member of the Council on Foreign Relations, and a 1994 fellow of Massachusetts Institute of Technology's Seminar XXI. He is a command pilot with more than 4,200 flying hours in a variety of aircraft. Schwartz is a former commander of the Special Operations Command–Pacific, as well as Alaskan Command, Alaskan North American Aerospace Defense Command region, and the 11th Air Force.

If confirmed by the Senate, Schwartz will succeed Air Force Gen. John W. Handy, who has commanded both USTRANSCOM and Air Mobility Command since November 2001. The change of command date and the new commander for AMC have not been announced.

DEFENSE INFORMATION SYSTEMS AGENCY (JUNE 15, 2005)
NEW PROGRAM MANAGER JOINS NCES PROGRAM

ARLINGTON, Va.—Lt. Gen. Harry D. Raduege, Jr., director of the Defense Information Systems Agency (DISA) and commander, Joint Task Force-Global Network Operations (JTF-GNO), announced today that Rita Espiritu, has been appointed as the new program manager for Net-Centric Enterprise Services (NCES).

Espiritu's assignment is a major step in the continuing evolution of the NCES program's management team and reflects the importance with which DISA views the program. Her experience and technical expertise will assist DISA in ensuring NCES meets the Department of Defense's expectations.

Espiritu, a retired Naval officer, comes to DISA with over 25 years of in-depth experience in management with a focus on IT programs and acquisition. Her education includes an M.A. in personnel management; an M.S. in information systems management; and a Level III certification in program management. Prior to joining DISA, Espiritu was division manager for Science Applications International Corporation, Mclean, Va. In that position, she managed multi-million dollar contracts serving the U.S. Navy, Army Corps of Engineers, Department of Interior, and the Department of Agriculture.

Raduege also announced that Alfred Schenck, a retired Army officer with more than 30 years in management and operations, and who served as the acting program manager for the past several months, will continue as the deputy program manager. Espiritu and Schenck will work directly for Debra Filippi, the program director for NCES.

The Defense Information Systems Agency is a Department of Defense combat support agency. DISA provides real-time information technology and communications support to the president, vice president, secretary of defense, the military services, and the combatant commands.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 17, 2005)
GENERAL OFFICER ASSIGNMENTS

The chief of staff, Air Force announces the assignment of the following senior leader:

Brig Gen (s) Stephen D. Schmidt, director of logistics, Headquarters Air Education and Training Command, Randolph Air Force Base, Texas, to commander, E-3A Component, North American Treaty Organization, Airborne Early Warning Force, Geilenkirchen, Germany.

ARCHITECT OF AIR FORCE SPACE AND MISSILE PROGRAMS DIES

Retired Gen. Bernard Adolph Schriever, widely regarded as the father and architect of the Air Force space and ballistic missile programs, died of natural causes at home in Washington on June 20.

Under Schriever's leadership, the Air Force developed programs such as the Thor, Atlas, Titan, and Minuteman missiles, and all aerospace systems that have been launched into orbit, including those supporting NASA in its Mercury man-in-space program.

In 1959, General Schriever assumed command of Air Research and Development Command, which became Air Force Systems Command on April 1, 1961, under a reorganization initiated by him. He was promoted to full general in 1961 and retired in 1966.

ARMY ACQUISITION SUPPORT CENTER PRESS RELEASE (JUNE 16, 2005)
ASC CHANGE OF LEADERSHIP CEREMONY HONORS OUTGOING AND INCOMING DIRECTORS

FORT BELVOIR, Va.—The U.S. Army Acquisition Support Center (ASC) held a change of leadership Ceremony June 16, 2005, in Scott Hall on the Defense Acquisition University (DAU) campus at Fort Belvoir.

During the ceremony, Col. Genaro J. Dellarocco relinquished his directorship to Craig A. Spisak. Spisak, who has served as ASC's deputy director since 2002, took the helm as the organization's first civilian director. Dellarocco departed ASC to assume responsibilities in the office of

Lt. Gen. Joseph L. Yakovac Jr., military deputy to the assistant secretary of the Army for acquisition, logistics and technology presents new U.S. Army Acquisition Support Center (ASC) director Craig A. Spisak with the ASC Charter. Spisak is the organization's first civilian director.
ASC photograph by Debbie Fischer-Belous.

the director, Force Structure, Resources and Assessment (J8), as the chief of the Requirements and Acquisition Division.

Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology (AL&T) Lt. Gen. Joseph L. Yakovac Jr., the presiding official, bid farewell to Dellarocco and thanked him for his outstanding tour of duty as ASC director. Yakovac then officially handed over responsibility for directing the organization to Spisak during the exchange of organizational colors. "You are hereby delegated the full-line authority of the Army Acquisition Executive for the management of the Acquisition Support Center," Yakovac instructed.

The military change of leadership ceremony and exchange of organizational colors dates back to the beginning of our nation's history and provides for the orderly transfer of organizational responsibility from one Army leader to another. The passing of the colors is a symbolic act through which the outgoing leader relinquishes authority to his superior, who in turn passes that authority to the incoming leader.

During the ceremony, Yakovac presented Dellarocco with a symbolic Army Acquisition Corps (AAC) flag to recognize his outstanding accomplishments and service as the ASC director and the Army's deputy director of Acquisition Career Management.

In passing the mantle of leadership to Spisak, Yakovac explained the significance of the event to the audience. "As the director of this field operating agency, Mr. Spisak will perform as the major command for the Army Acquisition Corps and the acquisition workforce reporting to the Army acquisition executive [AAE] through the military deputy [MILDEP]. As such, he will serve as the Army's 'one face' for acquisition, logistics and technology proponency on behalf of the AAE, the MILDEP, the AL&T community, its operating agencies, and strategic partners."

In addition to the duties outlined by the MILDEP, Spisak also assumes responsibility for ensuring synchronization of all AAC proponency initiatives with supporting career management organizations in concert with MILDEP direction. Additionally, he will formalize AL&T process links to Army and Joint proponency systems, ensuring the viability and relevancy of the workforce and its alignment with the AL&T workforce, Army/AAC transformation, the Army Campaign Plan, and overarching DoD strategic objectives.

Media Contact: Mike Roddin, director, strategic communications, (703) 805-1035 or e-mail michael.roddin @asc.belvoir.army.mil.

ACTING DIRECTOR, FORCE TRANSFORMATION

Terry J. Pudas has been named acting director of force transformation, Office of the Secretary of Defense. As acting director, Pudas follows Arthur Cebrowski, the retired three-star admiral who stepped down as the Pentagon's transformation director early in 2005. Pudas previously served as the deputy director, force transformation, a position created in the aftermath of 9/11 and which he accepted in October 2001.

As the acting director, Pudas serves as advocate, focal point, and catalyst for Department of Defense transformation. The Office of Force Transformation provides recommendations for linking the Department's transformation efforts to strategic functions, evaluates the transformation efforts of the military departments, and promotes synergy by recommending steps to integrate ongoing transformation activities. Other responsibilities of the office include making policy recommendations to the secretary and deputy secretary of defense.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 29, 2005) GENERAL/FLAG OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Air Force Lt. Gen. John D. W. Corley has been nominated for appointment to the grade of general with assignment as vice chief of staff, United States Air Force, Pentagon, Washington, D.C. Corley is currently serving as principal deputy assistant secretary of the Air Force for acquisition, Department of the Air Force, Pentagon, Washington, D.C.

Navy Rear Adm. Paul E. Sullivan has been nominated for appointment to the grade of vice admiral and assignment as commander, Naval Sea Systems Command, Washington, D.C. Sullivan is currently serving as deputy commander for ship, design, integration and engineering, SEA-05, Naval Sea Systems Command, Washington, D.C.

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- Forum on defense acquisition through newsletters/symposium papers.
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To learn more about DAUAA, call (703) 960-6802 or **e-mail dauaa@erols.com**. To join DAUAA, visit the DAUAA Web site at http://www.dauaa.org.

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Surfing the Net

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.

Acquisition Reform Network (AcqNet)
www.arnet.gov/
Virtual library; federal acquisition and procurement opportunities; best practices; electronic forums; business opportunities; acquisition training; excluded parties list.

Advanced Concept Technology Demonstrations (ACTDs)
www.acq.osd.mil/actd/
ACTD's accomplishments, articles, speeches, guidelines, and points of contact.

Aging Systems Sustainment and Enabling Technologies (ASSET)
http://asset.okstate.edu/asset/index.html
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/
Policy; career development and training opportunities; reducing TOC; library; links.

Air Force Materiel Command (AFMC) Contracting Laboratory's FAR Site
http://farsite.hill.af.mil/
FAR search tool; Commerce Business Daily announcements (CBDNet); Federal Register; electronic forms library.

Army Acquisition Support Center
http://asc.army.mil
News; policy; *Army AL&T* Magazine; programs; career information; events; training opportunities.

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 of Old Crows (AOC)
www.crows.org
Association news; conventions, courses; conferences, *Journal of Electronic Defense*.

Commerce Business Daily
http://cbdnet.gpo.gov
Access to current and back issues with search capabilities; business opportunities; interactive yellow pages.

Committee for Purchase from People Who are Blind or Severely Disabled
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
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
Acquisition tools and resources; government and related links; career opportunities; member forums.

DAU Distance Learning Courses
www.dau.mil/registrar/apply.asp
DAU online courses.

Defense Advanced Research Projects Agency (DARPA)
www.darpa.mil
News releases; current solicitations; "Doing Business with DARPA."

Defense Electronic Business Program Office (DEBPO)
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
Structure and mission of DISA; Defense Information System Network; Defense Message System; Global Command and Control System.

Defense Modeling and Simulation Office (DMSO)
www.dmso.mil
DoD Modeling and Simulation Master Plan; document library; events; services.

Defense Systems Management College (DSMC)
www.dau.mil
DSMC educational products and services; course schedules; job opportunities.

Defense Technical Information Center (DTIC)
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
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
DoD standardization; points of contact; FAQs; military specifications and standards reform; newsletters; training; nongovernment standards; links.

DoD Enterprise Software Initiative (ESI)
www.donimit.navy.mil/esi
Joint project to implement true software enterprise management process within DoD.

DoD Inspector General Publications
www.dodig.osd.mil/pubs/
Audit and evaluation reports; IG testimony; planned and ongoing audit projects of interest to the AT&L community.

DoD Office of Technology Transition
www.dtic.mil/ott/
Information about and links to OTT's programs.

Earned Value Management
www.acq.osd.mil/pm
Implementation of earned value management; latest policy changes; standards; international developments; active noteboard.

Electronic Industries Alliance (EIA)
www.eia.org
Government relations department; links to issues councils; market research assistance.

Federal Acquisition Institute (FAI)
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
Online policy and guidance for all aspects of the acquisition process.

Federal Government Technology Transfer Links
www.dtic.mil/matris/t2/orgt2.htm
Manpower and Training Research Information System (MATRIS) project offers links to federal government tech transfer programs.

Federal R&D Project Summaries
www.osti.gov/fedrnd/about
Portal to information on federal research projects; search databases at different agencies.

Federal Research in Progress (FEDRIP)
http://grc.ntis.gov/fedrip.htm
Information on federally funded projects in the physical sciences, engineering, life sciences.

Fedworld Information
www.fedworld.gov
Comprehensive central access point for searching, locating, ordering, and acquiring government and business information.

Government Accountability Office (GAO)
www.gao.gov
GAO reports;policy and guidance; FAQs.

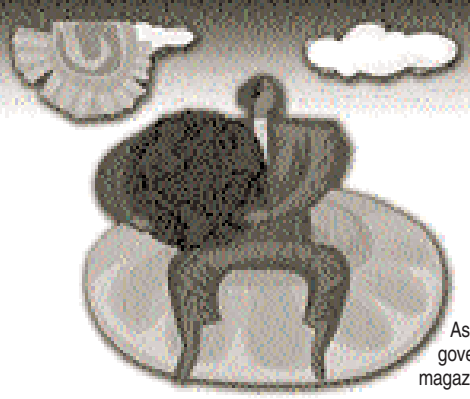
General Services Administration (GSA)
www.gsa.gov
Online shopping for commercial items to support government interests.

Government-Industry Data Exchange Program (GIDEP)
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
Information for technology-rich commercial companies on doing business with the federal government.

International Society of Logistics
www.sole.org
Online desk references that link to logistics problem-solving advice; Certified Professional Logistician certification.



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Surfing the Net

International Test & Evaluation Association (ITEA)
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
A "transformation laboratory" that develops and tests future concepts for warfighting.

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
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
Research services; Congress at Work; Copyright Office; FAQs.

MANPRINT (Manpower and Personnel Integration)
www.manprint.army.mil
Points of contact for program managers; relevant regulations; policy letters from the Army Acquisition Executive; briefings on the MANPRINT program.

National Aeronautics and Space Administration (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
"What's New in Contracting?"; educational products catalog; career center.

National Defense Industrial Association (NDIA)
www.ndia.org
Association news; events; government policy; National Defense magazine.

National Geospatial-Intelligence Agency
www.nima.mil
Imagery; maps and geodata; Freedom of Information Act resources; publications.

National Institute of Standards and Technology (NIST)
www.nist.gov
Information about NIST technology, measurements, and standards programs, products, and services.

National Technical Information Service (NTIS)
www.ntis.gov/
Online service for purchasing technical reports, computer products, videotapes, audiocassettes.

Naval Sea Systems Command
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
Policy documents; training opportunities; guides on risk management, acquisition environmental issues, past performance; news and assistance for the Standardized Procurement System (SPS) community; notices of upcoming events.

Navy Acquisition, Research and Development Information Center
www.onr.navy.mil/sci_tech
News and announcements; acronyms; publications and regulations; technical reports; doing business with the Navy.

Navy Best Manufacturing Practices Center of Excellence
www.bmpcoe.org
National resource to identify and share best manufacturing and business practices in use throughout industry, government, academia.

Naval Air Systems Command (NAVAIR)
www.navair.navy.mil
Provides advanced warfare technology through the efforts of a seamless, integrated, worldwide network of aviation technology experts.

Office of Force Transformation
www.oft.osd.mil
News on transformation policies, programs, and projects throughout the DoD and the Services.

Open Systems Joint Task Force
www.acq.osd.mil/osjtf
Open Systems education and training opportunities; studies and assessments; projects, initiatives and plans; reference library.

Parts Standardization and Management Committee (PSMC)
www.dscc.dla.mil/psmc
Collaborative effort between government and industry for parts management and standardization through commonality of parts and processes.

Project Management Institute
www.pmi.org
Program management publications; information resources; professional practices; career certification.

Small Business Administration (SBA)
www.sbaonline.sba.gov
Communications network for small businesses.

DoD Office of Small and Disadvantaged Business Utilization
www.acq.osd.mil/sadbu
Program and process information; current solicitations; Help Desk information.

Software Program Managers Network
www.spmn.com
Supports project managers, software practitioners, and government contractors. Contains publications on highly effective software development best practices.

Space and Naval Warfare Systems Command (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
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/
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.uscg.mil
News and current events; services; points of contact; FAQs.

U.S. Department of Transportation MARITIME Administration
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. DAU encourages the reciprocal linking of its Home Page to other interested agencies. Contact: 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).

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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
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