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Cost-effective Joint Support for the Warfighter

Defense AT&L Interviews Jack Bell, Deputy Under Secretary of Defense for Logistics and Material Readiness

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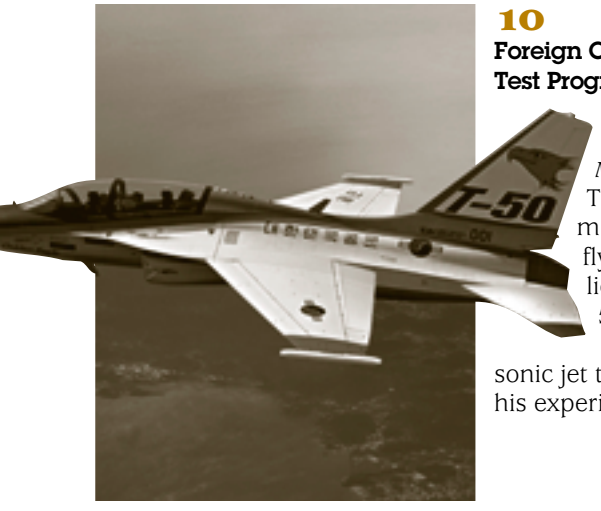

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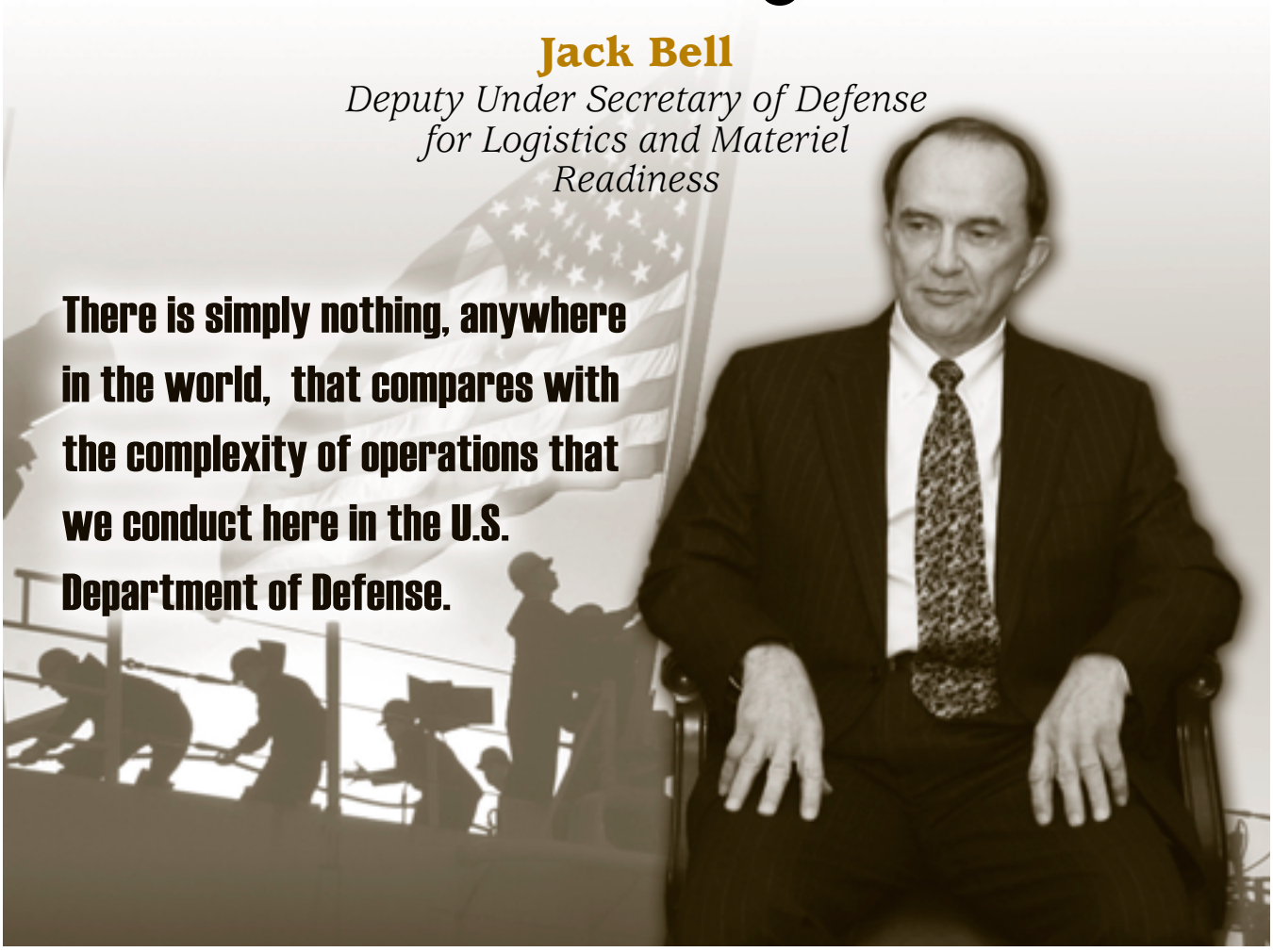
Cost-effective Joint Support for the Warfighter

Jack Bell
Deputy Under Secretary of Defense for Logistics and Materiel Readiness



There is simply nothing, anywhere in the world, that compares with the complexity of operations that we conduct here in the U.S. Department of Defense.

Jack Bell had been working in the position of deputy under secretary of defense for logistics and materiel readiness (DUSD(L&MR)) for 18 months when Randy Fowler, DAU professor of logistics, interviewed him in December 2006. Bell talked about the many challenges and opportunities facing defense logistics, from supporting soldiers in some of the most difficult terrain on the planet to continuing to work transformational issues and drive materiel readiness into all aspects of the procurement process.

Q
Mr. Bell, please tell us a little bit about your roles and responsibilities.

A
The deputy under secretary for logistics and materiel readiness has specific Title 10 responsibilities of two types. The first is to advise the under secretary for acquisition, technology and logistics on logistics and materiel readiness issues and policy questions; and the second is to provide program oversight of all the logistics and materiel readiness and sustainment operations that go on in the military services, in the defense agencies, and in the COCOMs [*combatant commands*].

Q
As a former executive in private industry, how do you compare the complexity and the breadth of challenge of this job with what you experienced as a leader in the private sector?

A
In the private sector, I worked in both the airline and railroad industries. I had considerable knowledge and experience in the logistics arena. There is simply nothing,

Photographs by Sgt. Andre Reynolds, USA

anywhere in the world, that compares with the complexity of operations that we conduct here in the U.S. Department of Defense. People talk about Wal-Mart or Dell, but Wal-Mart would never in their remotest imagination think about supporting stores in the mountains of Afghanistan or in the deserts of Iraq.

One of the things that we've learned from the global war on terror is that we have the ability to deploy and support soldiers anywhere in the world. Our people involved in logistics are doing an outstanding job.

Q

You have been heavily engaged with stability operations in Afghanistan and Iraq. What are the top logistics priorities arising from these operations?

A

Unlike most AT&L offices, L&MR also has a major mission supporting the current warfighting effort, working with the COCOMs and the military services. In this area, L&MR is responsible for updating policy guidance and providing program support in a dynamically changing warfighting environment. DLA—the Defense Logistics Agency—the major defense agency reporting to L&MR, is a key player in COCOM and military service support.

This aspect is really important in terms of defining who we are. For example, DLA is substantially focused on supporting warfighting needs at the same time it is working with L&MR, TRANSCOM [*the U.S. Transportation Command*], and the Services to integrate supply chain operations to improve its effectiveness and efficiency.

Our Transportation Policy Office is also focused in the same way, working with the Office of the Secretary of Defense offices, the Services, and the COCOMs on policy guidance and program support, addressing such issues as sealift policy, transportation of fallen comrades, emergency airlift needs, and finalization of the DoD instruction for TRANSCOM's distribution process owner role. In addition, they played a key role in negotiating a landmark memorandum of understanding between DoD and the Department of Transportation to allow TRANSCOM to participate in DoT's fitness reviews of actual and applicant civil reserve air fleet carriers.

We have established a new program support office in L&MR that focuses on providing direct support for the COCOMs and the military services in addressing urgent logistics and related issues in support of the global war on terror. Three major efforts are already under way in this area.

First, L&MR has deployed a team of consultants under L&MR leadership to assist the Multi-national Security and Transitional Command Iraq in accelerating the development of logistics and sustainment capabilities of the Iraqi security forces, a key to their becoming self-supporting.

Second, L&MR is supporting a U.S. European Command request for assistance in integrating reconstruction and development efforts with more traditional military roles in support of the NATO transition into Afghanistan. In this effort we assembled a multinational reconstruction database and created a template for a provincial reconstruction team handbook to support transitions from outgoing military teams to their incoming successors. We also facilitated the assignment of a staff person to Brussels to monitor provincial reconstruction team activities in Afghanistan.

And we have recently organized an OSD materiel readiness committee to expedite decisions on urgent materiel readiness issues in the forward areas.

Q

I think these operational questions regarding Iraq and Afghanistan are of real interest to our readership. What are some of the logistics lessons learned from Operation Enduring Freedom and Operation Iraqi Freedom?

A

As I indicated earlier, we have demonstrated that we have the ability to effectively support warfighting efforts anywhere in the world. Our program support and oversight mission mandates that we also look at the efficiency and effectiveness of ongoing operations. We approach the task as a program-support mission. We are very oriented to field operations. I visited the theater about three times in 2006, meeting with the senior leadership to find out what we can do to more effectively support them.

The Iraq support issue addresses a fundamental challenge we have in the global war on terror: intervening in a host country to deal with transnational terrorist operations. We are in a country that is not developed or whose capabilities to provide their own security have been vastly undermined by the terrorist organizations. We have substantial capabilities within DoD to train, equip, and sustain these forces; but it requires a significant amount of effort and coordination. We have not only to train the people, but to furnish them with equipment that strategically aligns with us, and to enable them to provide their own logistics support organically.

In both Afghanistan and Iraq, the previous regimes did not pay any attention to considerations of sustainment and maintenance. So a significant effort for us at L&MR is to support the COCOMs in this effort.

Q

At DAU we train delegations—so far only Afghan delegations—mainly on the contracting process and sustain-

P. Jackson "Jack" Bell

Deputy Under Secretary of Defense for Logistics and Materiel Readiness

Jack Bell was sworn in as deputy under secretary of defense for logistics and materiel readiness on Aug. 8, 2005. In this role, he is the principal advisor on logistics and materiel readiness to the secretary of defense, the deputy secretary of defense, and the under secretary of defense for acquisition, technology and logistics. He is the principal logistics official within the senior management of the Department of Defense.

Prior to this appointment, Bell served as the deputy under secretary of the Army and earlier served as the first chief of staff of the State Department's Afghanistan Reconstruction Group in Kabul, advising the president's special envoy and ambassador to Afghanistan and ministers of the government of Afghanistan on efforts to accelerate political stability, reconstruction, and economic development, including private sector development.

Before that, Bell had a successful career in the private sector, specializing in transformation management in large complex organizations facing major challenges in their operational, market, and/or competitive environments. His work included service as chief financial officer and other senior management positions at US Airways, American Airlines, Burlington Northern Railroad, Adobe Systems, and Conner Peripherals. He also served as a venture advisor to, and board member of, startup information technology companies in Silicon Valley. Earlier, he was a consultant with McKinsey & Company, working on transformation challenges with such clients as the World Bank, Office of Management and Budget, and the Peace Corps.

Bell began his career as an officer in the United States Marine Corps. He served tours in Vietnam, Okinawa, and the Caribbean, rising to the rank of captain. He was awarded the Navy Commendation Medal with Combat "V," the Presidential Unit Citation, the National Defense Service Medal, the Armed Forces Expeditionary Medal, the Vietnam Service Medal, and the Republic of Vietnam Campaign Medal.

Bell earned a bachelor's degree in business administration from Northwestern University, and a master's degree in international relations from the University of South Carolina.

ment. Their questions are very fundamental. It is rewarding to work with those folks.

A

When you get involved in sustainment issues in host countries that have no culture or experience in their own operations, the questions become incredibly basic—so basic that we often don't even teach them here in our logistics courses.

For example, a guy says, "I need to build a building. So I need some adobe bricks and some bags of cement." Here, because we are so used to having national stock numbers or local stock numbers on defined products, we could just order adobe bricks and bags of cement. But in different parts of the world, such standards are not enforced. Reconstruction agencies would order cement and get bags of cement marked "for export to Afghanistan ONLY" (for example) that could be as much as 50 percent dirt.

Many agencies were buying adobe bricks that were not kiln-fired, so within two or three seasons of snow and rainstorms, the building was gone. Even for procedures as simple as buying rebar, we need to provide basic training: What is the product being bought, and how do you specify it? Then we need to establish the principle of inspecting what is ordered, both at the factory and the warehouse. They can order a Kalashnikov AK-47 from anywhere, but without inspection, they might receive a new one that doesn't even work. These basics—defining your product, inspecting the product at the site, factory-inspecting the product when it is delivered—concepts that are so fundamental to procurement and logistics management in the developing world, have to be taught.

Q

What are some of the other key logistics opportunities or challenges that you have noticed in terms of stability operations in both Afghanistan and Iraq?

A

Both Afghanistan and Iraq represent severe tests of our logistics capabilities because of limited port access to forward areas, as well as the big three maintenance headaches: dust, heat, and in Afghanistan, high altitudes.

However, our major challenge has been operating over non-secure lines of communication in the face of explosive growth in the use of improvised explosive devices. We have had to rethink the use of ground transportation and the integration of strategic and tactical airlift. We have also made significant advances in our capabilities for precision air-drops.

Q

How much do we spend annually on logistics? Are there any plans or strategies to get logistics costs down?

A

The baseline information we have was in connection with the Quadrennial Defense Review and related to fiscal year 2005. It confirmed that out of the $450 billion DoD budget, the logistics enterprise represents $112 billion, or about 24 percent of that. It also involves slightly over one million personnel, both civilian and military, working for DoD.

Q

That's a shocking figure to a lot of people; they just don't think about the people component of logistics costs.

A

About 60 to 75 percent of the total cost of a weapons system or a major end item of equipment is in the sustainment logistics phase. Of that percentage, probably 40 percent is labor cost.

Q

Let's move into the strategic framework. For the last 10 years or better, logistics transformation has been an integral component of the Department's efforts to transform the entire enterprise. As we review the policy-making literature and Under Secretary Ken Krieg's objectives, we see an emphasis on things like knowledge-enabled logistics, achieving cost-effective joint logistics, and so forth. We'd like your comments on how those initiatives, among others, are really integral to our future logistics strategy.

A

Our overarching goal, as defined in the AT&L objectives, is to provide cost-effective, joint logistics support for the warfighting effort. Under that, we have three specific objectives that are transformational in nature.

One is to integrate what we call life-cycle management principles into both the "Big A" acquisition process and into all the follow-on sustainment activities, including legacy systems that are already deployed.

The second is to make sure we achieve what we call a seamless integrated operation within supply chain operations, which have many organizational boundaries to cross. It should be seamless from the time of procurement, when it enters into the system here at DoD, until it is delivered to the user.

The third goal is to strengthen the logistics management skills of the DoD staff, whether they are involved in acquisition, or logistics and sustainment, and whether they are in the Services or at the OSD level.

Those are all transformational in nature, and necessary. We now fight jointly, where formerly we fought in individual Services, each of which had its own supply lines. The cost of sustainment is a significant portion of the DoD budget. And under the global war on terror, we have to have the capability to deploy and support our troops all over the world. That part of our global logistics process is very complicated and very expensive.

Q

You mentioned the importance of joint logistics. One of the key things in making joint logistics happen is getting cooperation and collaboration among the Services and agencies to move towards those joint staffs and joint logistics goals. Are you noticing a willingness to collaborate and get serious about being joint?

A

I don't have a whole lot of historical perspective, having arrived here only about two years ago; but what I hear and certainly observe at this time is that we have a team of senior leaders within DoD who really want to work more effectively on a joint basis. Part of that is personalities involved: many of our senior leaders think jointly and have served jointly under the global war on terror. Part of it is the fact that we all realize we have to wage war effectively and cost effectively, and that knowledge tends to overcome some of the resistance to change and some of the territorial issues that at one time apparently existed within the Services. As a result, there is much more of a collaborative approach with the Services at the joint level and with the COCOMs.

The cost of major weapons systems is driving us to joint solutions. We don't have the luxury of having a separate fighter or attack aircraft for the Navy or the Air Force. To a large extent, we are increasingly moving to joint concepts for rotary wing aircraft and we are already moving in that direction for armored and tactical vehicles.

Q

At the The DoD Maintenance Conference and Symposium in October, you led a panel that addressed a lot of these strategic challenges. You also put a nice emphasis on the efforts occurring with reset. We'd appreciate some of your senior leader insights about how you think that it is going.

A

In both Iraq and Afghanistan, we've shifted from the expeditionary mode to a sustainment basis of operations. That involves some significant changes in our focus. Warfighter requirements become more predictable, and we can plan ahead more effectively. We also begin to gather up unused, excess materiel and redeploy it where it is needed in theater and elsewhere in the world to support our requirements. And we are moving equipment and weapons systems back to our depots to be reset.

We generate an enormous amount of scrap. We have more than 20 million pounds of clean metal scrap over in Iraq today. We are in the process of disposing of and

The Iraq support issue addresses a fundamental challenge we have in the global war on terror: intervening in a host country to deal with transnational terrorist operations. We are in a country that is not developed or whose capabilities to provide their own security have been vastly undermined by the terrorist organizations.

selling it off into the scrap markets so that as we draw down operations, we are not overwhelmed with a huge amount of materiel that has to be retrograded. Wars produce lots of junk, and excess materiel flows into forward areas as planned requirements do not materialize. We must address early what we are going to do with hazardous materials, scrap metal, and items that can't be returned to the United States, such as canvas tentage.

The Army got $17.1 billion in its appropriation from Congress and I believe that the Marine Corps got $5.5 billion for the reset of their materiel. The funding triggers the beginning of major retrograde movement of equipment that is in need of reset and that has been left in theater until funding was available to move it and induct it into the maintenance depots. Right now, we have major muscle movements in our distribution processes within Iraq and Afghanistan, getting items to major points for retrograde. In most cases, these are surface retrograde points and they come out of ports. That involves a huge amount of sealift capability that we have to coordinate as well as some airlift on high priority items that have to be inducted.

That effort will go on; it is funded for the current fiscal year at the levels I just described, but that effort of resetting our equipment to meet future needs will probably continue for about two years after the end of our active combat operations over there.

Q

We read a lot about network-centric operations and network-centric logistics, and it seems that in the area of logistics that has manifested itself in a kind of a bumper-sticker program called "Sense and Respond." Do you see sense and respond logistics changing the way our processes work within the big logistics enterprise?

A

The term "sense and respond" covers a lot of aspects of what we are doing. Part of sense and respond is knowing where our inventory is within the distribution process so that when it's needed, it can be most efficiently expedited and put in the distribution process to get there. A lot of what we are doing now is reclaiming excess materials that got shipped into theater that are now in the wrong locations and need to be brought back into the system. We call that real-time asset visibility.

What we are working for in the future perspective is to make RFID [*radio frequency identification*] tagging uni-

versal, so we have real-time asset visibility, which is a key part of the sense and respond. What we now have is thousands of containers of materiel that we need to inspect and then reposition elsewhere to support those efforts.

Sense and respond is more often referred to in connection with predictive onboard diagnostics for major weapons systems and equipment. We are in a steep learning curve in installing those onboard diagnostics and in building the database of experience that will give it predictive value. I would say this will be one of the more significant efforts that will, in the future, contribute greatly to a decrease in logistics and maintenance costs.

The final area is to get all the various systems tied together in a net-centric way that allows us to see the materiel and be able to quickly move it wherever it's needed across the organizations involved in supply chain operations. TRANSCOM and the Defense Logistics Agency have undertaken a significant effort to integrate their systems to talk to each other. We now have to interface that combined system with the efforts that are under way with the Air Force, Army, Navy, and Marines Corps systems as they track their own assets so we can get a total global visibility. Network-centric operations are key to effective operations and reducing costs, mainly in reducing the required inventory.

Q

Let's turn to the acquisition domain. How do you perceive the effectiveness over time of logistics and particularly the emphasis on designing for supportability?

A

Some time ago, there was much more emphasis in major weapons development in dealing with the unholy triad of acquisition cost, delivery schedule, and operating performance in the acquisition system; and if one or more of those ends up getting out of whack, sacrifices were often made, sometimes in the long-term sustainability of the weapons system.

We've been effective in raising awareness on the importance of life cycle sustainment within the acquisition community. Just the simple knowledge that the total system life cycle costs are 60 to 75 percent in the sustainment phase begins to put more emphasis on looking at sustainment implication of design and cost proposals. As you know, we are on the cusp of getting some really serious traction and integrating life cycle management into procurement in a couple of ways.

One is that the Joint Requirements Oversight Council has approved a new KPP—key performance parameter—"materiel availability." It has a cost component, and it has materiel readiness and materiel availability as a reliability component. Putting those in the concept during the periods prior to Milestone A and Milestone B and having to demonstrate before the commitment to production in Milestone C, create the groundwork for integration of life cycle maintenance into acquisition processes.

The real test will come as we make the decisions about allowing weapons systems to advance through those milestones if they have not adequately addressed those requirements. There are some basics that have to be included in that concept of maintainability and reliability. For example, getting government-use intellectual property rights to sophisticated weapons systems and components is critical for us. In almost every case, DoD has to sustain a major weapons system far beyond the time that the vendor and its subcontractors are manufacturing the components or even have interest in manufacturing components to support the weapons systems.

We have not paid adequate attention to getting complete documentation of all components from the vendor. We also have to get life cycle management principles embedded into our acquisition programs, embedded into the contracts at the very beginning of the developmental phase.

The new KPP is going to be helpful. I think we've also learned enough through performance-based logistics to understand the importance of getting these costs under control during the design phase.

Q

That is a far-reaching, well-connected answer to a big issue: acquisition and logistics integration.

A

This is actually the number one priority in L&MR for the next two years: to achieve integration so that the life cycle management principles are embedded in our major acquisition programs and in our major sustainment programs going forward.

Q

I'd like to think that DAU would have a big part in helping you do that. It's not just a matter of reshaping logisticians' attitudes, but of reshaping PMs' and contractors' attitudes as well.

A

There are three components to staff development, if we're going to achieve this transformation state we're talking about. One is that we need state-of-the-art training for the acquisition professionals who have to begin integrating this thinking in their own experience and in their own analysis. Second, we have to provide professional development for our logisticians so they are sensitive to life cycle sustainment issues in their own logistics areas. Third,

we must develop continuing career development learning for our logistics and acquisition professionals. We need to keep them abreast of emerging concepts and technologies in logistics management.

We have established a requirement that all staff in the LM&R organization have a professional development plan that addresses their needs and that their supervisor agrees is the appropriate next step in their professional development.

Q

I'd like to follow up on the new KPP you mentioned. The Joint Requirements Oversight Council endorsed the implementation of a new materiel availability KPP with supporting KSAs—key system attributes—of materiel reliability and ownership cost for all major defense acquisition programs and select ACAT II and III programs. Is that policy already effective?

A

It is effective for all future weapons systems that have to come up through Milestones A, B, and C.

Q

Is there any way to back-fit that same kind of policy pressure with respects to an availability KPP on legacy programs as they come through the acquisition process with major milestone decisions?

A

Certainly to the extent that major components are being replaced—for example, engines for airframes—you could build that in. But at the same time, we have regular reviews of in each of the Services to see how their materiel readiness is affected by the cost and the reliability aspects of their own maintenance programs; so a significant part of our emphasis for the legacy systems is on looking at the ongoing sustainment operations and helping the Services to identify the issues they need to address.

Q

There has been a huge emphasis on bringing about acquisition/logistics integration through total life cycle systems management. It is a policy still today and as far as I know a lasting policy that will probably evolve. Have you been satisfied with what you perceive to be DoD's implementation of the total life cycle policy?

A

Let me back up and talk about the relationship of life cycle management principles to a lot of other things we are doing. As you think about the different terms, whether it is CPI [*continuous performance improvement*], CBM+ [*condition-based maintenance plus*], or PBL—they are really all parts of this much broader topic we call life cycle management principles.

What we have been doing in separate efforts like CPI or PBL is to attack different aspects of the logistics and sustainment requirements. What life cycle management is about is saying, let's look at all of those components. We can shoot for realignment for more effective CPI, which reduces cycle time, reduces inventory requirements, and usually results in improved quality—that's one dimension. And we can turn to CBM+, which shows we don't have to automatically replace the fan blades on this engine; the system will indicate when it is beginning to malfunction, so we don't throw away the flying hours prematurely. It's all part of life cycle management. It's all going to significantly improve reliability and ultimately reduce cost.

Q

A little perspective before asking this question: The PMs I encounter in the classroom are largely saddled with the responsibility or accountability for implementing total life cycle systems management across the life cycle. They often say it's a bit of a flawed policy because the money doesn't follow their responsibility. They say that if we had control or at least more visibility of the money inputs and outputs, we could do a better job with total life cycle systems management. Do you think it is a reasonable policy evolution to perhaps invest more of that financial authority in the program manager, who is in some degree accountable for the life cycle systems management platform?

A

It's not a flaw in the policy—it's a flaw in program funding and accountability. Traditionally, acquisition executives rotate to other jobs or other programs before the sustainment implications of their acquisition decisions are fully understood. Establishing a KPP on materiel readiness and sustainment costs requires that the trade-offs at least be identified for assessment before the design is locked up and production begins.

Q

The cousin to total life cycle management is performance-based logistics. We're about seven or eight years into PBL implementation across the Services, with our industrial partners helping us with many of these strategies. How would you assess the progress and the success that we've had with PBL types of initiatives and strategies?

A

The PBLs have been surprisingly successful, particularly when the vendor is a PBL provider. It is the first time in weapons systems acquisition history that we have aligned the interest of the vendor and the customer to improve reliability in the system.

That has been a significant benefit. A second benefit, which is not as commonly recognized but is significant, is that the PBL contract often eases the problem of a

weapons system upgrade. The military services, as PBL customers, pay for equipment availability—an O&M cost. The PBL contractor has the flexibility to upgrade components to achieve better performance and/or reliability.

We are beginning to focus on the importance of conducting CPI processes on operations before we establish the baseline for contractor performance. If you have an inefficient operation that hasn't been leaned out or that hasn't applied CPI, then the vendor can often get target-cost performance improvements out of doing a lean event, not out of improving the real cost performance of a weapons system or its long-term cost. We need to think about how we position the processes we use as the vendor's benchmark for improvement.

One of the things we also recognize is that our private sector partners are often more effective at project and program management for sustainment programs than we are. They have the flexibility to adapt to changing requirements, changing behaviors, or changing performance of these weapons systems; and they have great experience in managing the systems they design and build.

Another area we need to consider is the structure of the initial PBL contracts. If the contractor has squeezed most of the operational efficiencies and reliability improvements out of the initial contract, they may have very limited appetite for being a contractor on the second or third generation, particularly as systems become obsolete. We need to think very carefully about how to structure the initial and subsequent terms to create the right balance of incentives for us and for our partners.

Q

*When we invented the PBL policy in 1998-99, we realized that there was an issue in what we call the competitive base, in trying to understand how that base would remain competitive in the evolution of these strategies. Even at that time we were exploring options of 3PLs [*third-party logistics*] and 4PLs [*fourth-party logistics*] and organic depots to compete because—as you said—the Lockheed Martins and the Boeings will lose the appetite once they've got the margin out of tech-refresh. That issue—the competitive base, the financial enablers, and the length of time to contract on PBL—were the issues in 1999, and they are still largely the issues today.*

A

Yes, it's a particularly difficult challenge when we look at the growing importance of electronics and chips and circuit boards in our weapons systems. At a certain point in time, no manufacturer of chips or sophisticated circuit boards or flash systems is going to be interested in supporting the relatively small volume necessary to meet our requirement because it doesn't remotely meet the minimum scale of economic operations.

That is and will continue to be a significant challenge to us, requiring us to think very differently about component design. It will involve much more of an input-output mode in performance, not a structural design mode in which "it looks just like this." Otherwise, we waste the opportunity to take advantage of more advanced technology to create the same performance outcomes.

Q

I want to get your perspective on performance-driven outcomes and how you see PBL fitting within that architecture.

A

The performance-driven outcome is really talking about a shift in the way we think about providing weapons systems to the warfighter. Where we once measured the inputs by the number of aircraft on the line and/or fully mission-capable, the real question now is availability for tasking at a given moment in time.

We have thought more about how to integrate the COCOM requirements with changing technology. For example, a COCOM commander wants the ability to deliver bombs with a 100 percent success rate on four targets simultaneously. Technology has turned that requirement for aircraft on its head. Instead of needing four aircraft to ensure a hit on target with dumb bombs, today one aircraft can deliver four smart bombs effectively on four different targets.

Q

The PBL has always been driven by readiness platforms, but we knew that the next evolution was CBL—capability-based logistics—and that it doesn't matter whether you're talking tankers or missiles or whatever—the combatant commander has a certain capability he or she wants. That is what the PEO and the PDO architecture is going to do: embrace a whole lot more than just that platform-centric view that was really PBL in order to get that operational capability out there. I think that's the shift I hear you describing.

A

The difference is the PBL partner cannot make the geographic decision about the deployment of capability, so the Services, who have to make that decision, have to be very closely integrated with the PBL partner to know with a high degree of predictability what the aggregate stream of requirements is by location and how to support that with weapons availability for tasking.

Q

Mr. Bell, thank you for taking time to talk to Defense AT&L.

Foreign Comparative Test Program Samples Korea's Best

Col. Bob Mattes, USAF

The Republic of Korea's introduction of the T-50 Golden Eagle supersonic advanced jet trainer has raised the ante in the international military aviation market. I know this first-hand because I am the first U.S. military pilot to fly the T-50.

The author and Republic of Korea Air Force test pilot Maj. Cheol Kang before test flying the T-50 Golden Eagle. Photograph by Hui Man Kwon

The Foreign Comparative Test (FCT) Program under the Office of the Deputy Under Secretary of Defense for Advanced Systems and Concepts (AS&C) scours the world for the best equipment possible to meet our warfighters' requirements. AS&C partners with the Services and Special Operations Command, who test promising new technologies and equipment and procure those that meet their immediate warfighter requirements. Prominent examples of FCT successes include the Buffalo mine-clearing vehicle from South Africa and the M240 7.62 mm medium machine gun from Belgium, both used daily to save coalition lives in Iraq and Afghanistan. FCT remains a critical tool to support our troops in the war on terror. A close ally in the war on terror, the Republic of Korea has participated in the FCT program with nine projects over the years. I recently traveled to the Republic of Korea with an AS&C/multi-Service/Special Operations Command team to assess their current technology, engineering, and manufacturing level, with an eye toward garnering an expanded Republic of Korea involvement in the FCT program.

From literal devastation in 1953, the Korean people, industry base, and government have labored diligently, rising to a leading world economic power. In recent decades, the Korean government has emphasized and invested heavily in a handful of high-technology industries, including their aerospace industry. As a result, the overall economy of the Republic of Korea has grown to 18 times that of its neighbor to the north. Consumers can see the payoff in products from companies like Samsung, Hyundai, Daewoo, and many more.

Pinnacle of Achievement

Republic of Korea President Roh Moo-hyun highlighted the T-50 Golden Eagle supersonic advanced jet trainer as the pinnacle of Korean technical achievement at the recent Korean Aerospace and Defense Exposition 2005 opening ceremony. The president pointed out that the Republic of Korea stands as only the 12th country in the world to natively produce a supersonic aircraft. Korea Aerospace Industries (KAI), Ltd., designed, tested, and produces the T-50 in partnership with Lockheed Martin. The KAI and Republic of Korea Air Force leadership graciously extended me an invitation to fly the Golden Eagle during our FCT visit. Although the United States has no

Mattes *is a command pilot with over 3,700 flight hours. He now directs the Comparative Testing Office for the DUSD(AS&C), fielding critical capabilities to U.S. warfighters.*

requirement for a new trainer, what better way to assess a nation's technical and manufacturing capabilities than to taste the best they have to offer?

The indigenous defense aviation industry in the Republic of Korea started expanding by making parts and subassemblies for the F-5 Tiger II program. Their engineering and manufacturing expertise grew over time, and with the co-manufacturing arrangements in the Republic of Korea F-16 Fighting Falcon buy, they became more technologically sophisticated. Through targeted investment, partnering, and technology sharing with Lockheed Martin—and a phenomenal work ethic—Korea transitioned to assembling entire F-16s in country. The Republic of Korea T-50 program graphically exhibits the fruits of these efforts and alliances, as well as the power of carefully considered technology sharing.

Photograph courtesy of Lockheed Martin

Putting the T-50 Through its Paces

Maj. Cheol Kang, a Republic of Korea Air Force test pilot with over 400 hours in the T-50, conducted a thorough and professional briefing prior to the flight. He wisely took the front seat of the initial test aircraft, tail number 001, while I settled into the rear cockpit. The T-50 resembles an 80 percent scale, 2-seat F-16 on the outside; and the cockpit layout and advanced avionics are about the same as the F-16. It shares the F-16's relaxed longitudinal stability that enhances its agility. The overall design is thoroughly optimized for the training environment, to include reliability and maintainability. Examples of this mission-centered design include a control stick that duplicates its movement in both cockpits, larger control surfaces for enhanced low-speed handling, ability to start from its own battery and auxiliary power unit, and a raised rear seat for greatly improved instructor visibility.

KAI positioned the T-50 as an advanced trainer for fighter lead-in and transition training. It possesses all the advanced systems one encounters in front-line fighter/attack aircraft. This includes a hands-on throttle and sidestick control setup, electronic flight instruments, head-up display, up-front controls, two 5 by 5-inch color multifunction displays, integrated advanced avionics and sensors, GPS/INS navigation, embedded training features with in-flight recording and post-mission debriefing capability, and a Martin-Baker zero-zero ejection seat. The seatback angle is 17 degrees—similar to the F-35 Joint Strike Fighter and the F/A-22 seat angles. KAI estimates that transitioning Republic of Korea Air Force pilots from the T-50 to an F-16 would take just a few flights, saving over 40 of the training sorties now required to transition from the F-5E.

Once in the military operating area, Kang flawlessly demonstrated the T-50's roll rate, the 25-degree angle of attack limiter, and its enhanced pitch stability. The T-50's triple-redundant, fly-by-wire control system feeds back a term of one minus the cosine of the pitch angle, essentially eliminating the natural long-period, longitudinal oscillation (known to engineers as the phugoid) that is shared by all stable aircraft. The impressive result revealed itself in a 70-degree pitch angle climb held until the aircraft decelerated to about 70 knots (we crisply rolled it inverted at about 110 knots), while the aircraft tracked the pitch angle like a laser. A brisk pull on the stick brought the nose down crisply without a hint of buffet (airframe vibration from separated airflow). The T-50 demonstrated solid directional stability and ample control authority about all axes throughout the demonstrations.

Taking the Controls

I then flew some aerobatics and performed a tracking task to assess the ability to accurately position the aircraft under a variety of conditions and airspeeds. The Golden Eagle went where I pointed it without hesitation or complaint. The General Electric F404-GE-102 engine's dual-channel, full-authority digital electronic control provided instant thrust whenever asked, regardless of speed or

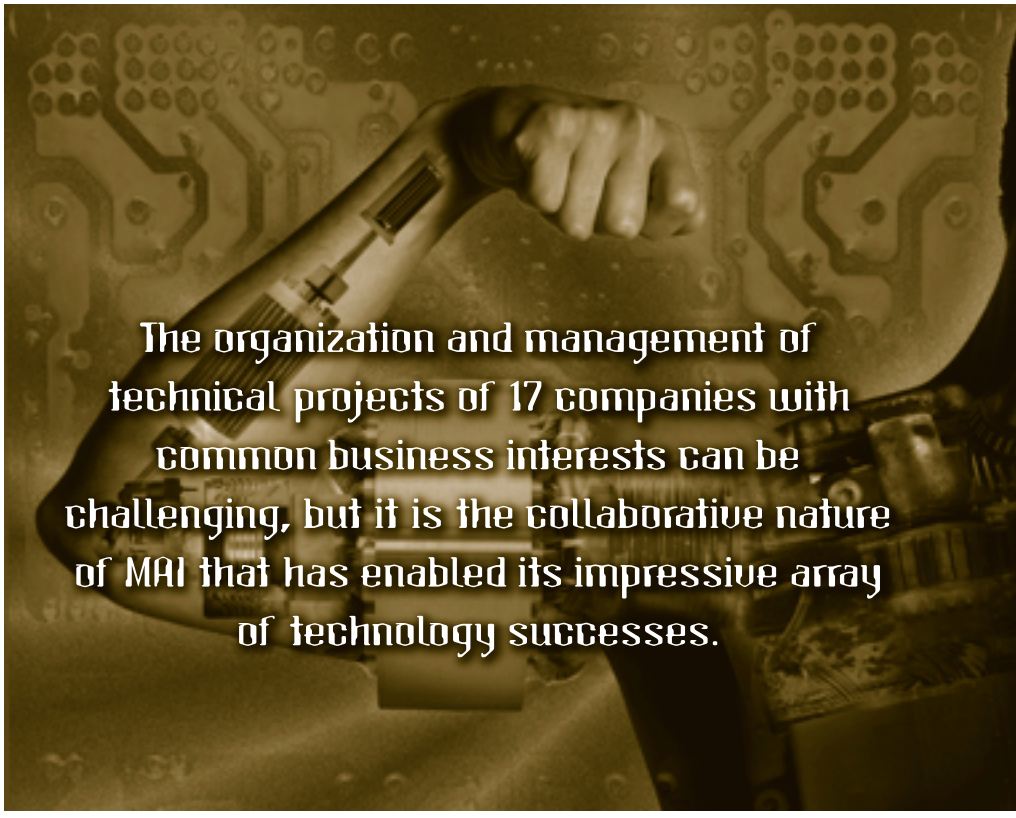
"Korea's Best" continued on page 15

Technology Transition through Collaborative R&D

Metals Affordability Initiative: A Government-Industry Technical Program

Mary E. Kinsella ■ Daniel Evans

Department of Defense leadership has challenged the acquisition community to deliver quality technology rapidly and efficiently. In September 2001, then Secretary of Defense Donald Rumsfeld said, "We must recognize … the revolution in management, technology, and business practices … reward innovation and … share information. [Business enterprises] have to be nimble in the face of rapid change or they die. … but governments can't die, so we need to find other incentives for bureaucracy to adapt and improve."



The key thoughts in the above challenge center upon embracing innovation, sharing information, and adapting in order to enable constant improvement. Those same thoughts have been the main tenets of the Metals Affordability Initiative (MAI), a collaborative research and development initiative between the Materials and Manufacturing Directorate of the Air Force Research Laboratory (AFRL/ML) and the metallic materials and product sector of the United States aerospace supply chain. Since its inception in 1999, the MAI consortium has worked dozens of technical projects in a collaborative research environment, enabling an impressive number of technology transitions to impact a wide variety of aerospace systems.

What is the Metals Affordability Initiative?

Metals are a mature but still vital and robust technology area for defense aerospace systems. For example, metals comprise almost three-fourths of turbine engine components and two-thirds of the weight of a typical airframe. Thus, improving the performance of metals and their alloys and addressing cost issues of both in-service and in-acquisition metallic components will have a major impact for a wide array of defense systems. With both cost and performance objectives in mind, AFRL/ML has teamed with a large cross-section of the complete aerospace metals supply chain, including primary metals producers (mills), component manufacturers (forge and casting shops), and original equipment manufacturers (airframe and system integrators and aero-engine manufacturers). The following 17 companies formally joined as the MAI

Kinsella *is a senior materials research engineer in the Metals Branch of the Air Force Research Lab's Materials and Manufacturing Directorate at Wright-Patterson AFB, Ohio; and the Air Force program manager for the Metals Affordability Initiative. She holds a doctorate in industrial engineering.*
Evans *is a science and technology advisor for the Metals, Ceramics and Non Destructive Evaluation Division of the Materials and Manufacturing Directorate. He has worked with the Metals Affordability Initiative since its inception. He holds a doctorate in materials science and engineering.*

Consortium: Boeing, GE, Honeywell, Lockheed Martin, Northrop Grumman, Pratt and Whitney, Rolls-Royce Corporation (OEMs); Brush Wellman, Alcoa Howmet Castings, Ladish Company, PCC Structurals (metallic component manufacturers); and Allegheny Technologies, Carpenter Technologies, Crucible, RMI, Special Metals, Timet (mills/metals suppliers). They work with AFRL/ML to spur technology development that is aimed at improving the performance of metallic components, lowering materials costs, maturing and transitioning innovative computational and manufacturing methods, and refreshing in-service components through the introduction of a wide array of new technologies. Each project tackled by the MAI team requires focused technical plans, defined implementation targets and milestones, and realistic and supportable business cases. The enumeration of these three project features is required at the proposal stage and at every periodic project review.

To date, the consortium has been awarded approximately $40 million of funding and has matched it with about $14 million of cost share, as required under the technology investment agreements that the consortium signed with AFRL. This shared risk stimulates projects that are timely, feasible, and supported by the entire metals value stream.

The sidebar highlights some of the technologies in which MAI has invested and the DoD and NASA systems impacted by those "MAI technologies." The list includes NASA, Navy, and Army systems, since it is in the interest of the Air Force to insert promising technologies whenever opportunities allow. Crossing Service and agency lines is embraced in MAI because this practice reduces insertion risk to Air Force systems whenever acquisition schedules, retrofit plans, etc., permit.

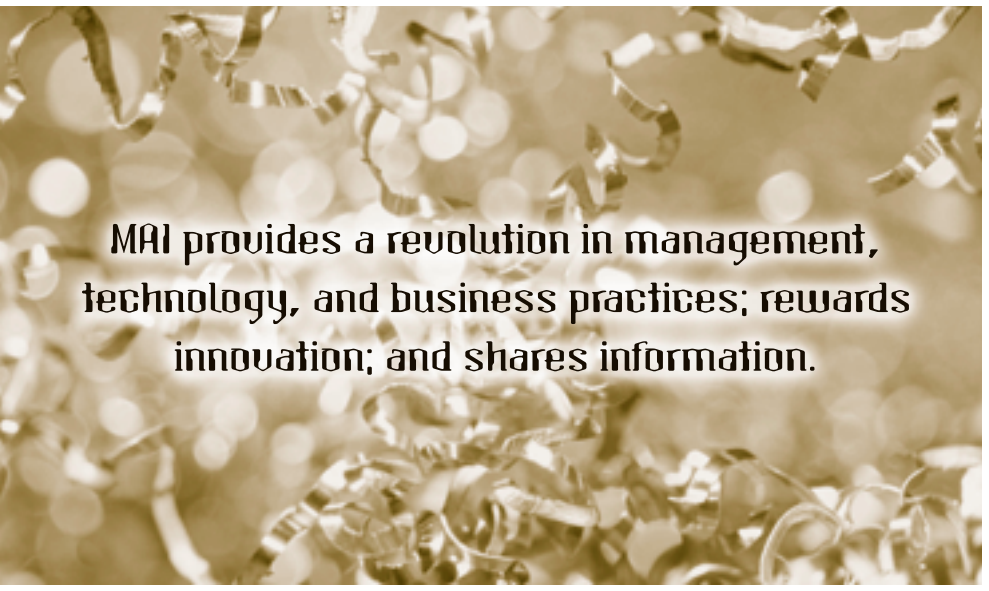
MAI Technologies and the DoD and NASA Systems Impacted

- High-Yield Investment Cast Superalloy Airfoils
  - F135, F136, F108 Turbine Blades
  - F414, AE1107, AE2100, AE3007H, T700, T800 and F100
- Affordable Machining
  - F-15 Wing Tip and Vertical Tail Leading Edge
  - F/A-18 E/F Drag Beam
  - F-22 Keelson and F-35 Weapons Bay Door Hinge
  - C-17 Pylon Panel and Structural Support
  - AE1107, AE2100 and AE3007H Compressor Discs
- Forged Titanium Alloy Modeling
  - F119 Fan Blades and Discs
  - F135, F136 Fan Discs and F-22 Plate Airframe Structure
- Direct Electron-Beam-Melted Titanium Slabs
  - F-15 Vertical Tail and F-15, C-17 Titanium Plate
  - C-40 and P-8 (Navy)
  - F/A-22, F/A-18 E/F, B-2, Global Hawk, JSF, Army Vehicle Armor Plate
- High-Stiffness Aluminum-Beryllium Structures
  - Lockheed Martin XSS-11 Gas Generator Brackets and Solar Array Hinges
  - Mars Reconnaissance Orbiter Brackets and ST5 Sensor Bracket
  - F/A-22 Missile Launch Detector Heat Sinks
  - Boeing Communication Satellite Wave Guides and Tube End Fittings
  - Apache Longbow, F-15 and F-35 Optical Housings
- New Low-Cost High-Temperature Structural Alloy (718Plus)
  - F136 Structural Rings

MAI as a Model of Government-Industry Collaboration

The organization and management of technical projects of 17 companies with common business interests can be challenging, but it is the collaborative nature of MAI that has enabled its impressive array of technology successes. In fact, the management of MAI programs is unique among government research programs. Since the industrial partners have a financial stake in the technology development programs, each company actively engages as part of the unified consortium technical oversight committee that works with the Air Force program manager to assess all projects and help guide the government funding towards efforts with the most tangible and yet greatest potential payoffs. By engaging each consortium member in the management of the technical program, the Air Force reaps the technical benefits of experienced industrial specialists and experts and also exposes technology investments to a wide private-sector audience. In addition to the collaborative and innovative nature of the management of technical efforts, the development and selection of the technical program is also unique and integral to the success of the consortium. There are two types of projects in MAI, and while the development and selection methodology differs for these types, the technical management of the efforts is consistent.

The first type of MAI project is one developed by industrial teams. Subsets of the consortium work together to develop specific technical efforts geared toward near- and mid-term insertion opportunities on any number of DoD systems. These clusters of companies form activity-integrated product teams (AIPTs) and compete against other AIPTs for funds made available to the consortium. The entire consortium then reviews all proposed efforts by all AIPTs and, under Air Force leadership, jointly chooses a technology portfolio with the greatest performance, cost, and schedule payoff potential to the DoD.



For example, a nickel casting technology worked between PCC Structurals, Allegheny Technologies, and GE under MAI might compete with a cost-saving titanium forging technology concept proposed by Ladish, Timet, Pratt and Whitney, Rolls-Royce, and Northrop Grumman. All proposals will be reviewed thoroughly by the Air Force and the entire consortium (including such competitors as Alcoa Howmet, Lockheed Martin, Boeing, RMI, and Honeywell).

Let's extend this hypothetical example and assume the consortium chose to fund the nickel casting technology rather than the titanium forging technology. Those technological advances made by the PCC-Allegheny Technologies-GE team are the intellectual property of that team, but their competitors are exposed to the technology. Since the competitors actively review and critique the technical project, it is clear that they will understand technical and business risks in a far more detailed manner than comes from reading a normal technical report resulting from a typical government research contract awarded under the limits of Federal Acquisition Regulation. Thus, the Air Force benefits from the depth of industrial expertise, while ensuring technology advances are distributed across the domestic metals supply chain.

The second type of MAI project is one developed in response to longer-term challenges that will enable future Air Force mission capabilities. In this case, the Air Force MAI program manager will present specific metals technology challenges to the consortium in a workshop environment. With the government priorities in hand, the consortium—as in the first type of MAI project—forms AIPTs in response to the Air Force long-term challenges. The Air Force program manager then picks those proposed efforts that best match long-term roadmaps and needs, and funds specific project teams. While the generation and selection of these projects is slightly different, the MAI technical community again participates in reviews of those longer-term efforts to increase the likelihood of pervasive technology transition. Further, while the business-case development and implementation paths are more speculative for these longer-term efforts, there is obvious benefit in anchoring needed future technologies across larger cross sections of the domestic metals value stream.

Collaboration as Enabler for Technology Transition

MAI has structured itself to enable a unique collaborative environment with an impressive array of technology transitions that speaks for itself. Some reflection on the relationship between collaboration and transition is warranted with the following question in mind: How has the collaboration in MAI made technology transition possible? We've outlined the merits of the collaborative environment for the Air Force—sustained access to industrial technical experts and a regular forum (MAI convenes meetings every quarter) for communicating government investments to a broad cross section of the value stream. While these are undeniably beneficial, the collaboration between the industrial members of MAI is the ultimate key to the consortium's success. The benefits of company-to-company interaction are manifest in several ways.

MAI provides an environment for metals vendors and suppliers to meet with and understand the needs of their customers. Unlike the often difficult superior-subordinate relationship that the typical business situation might produce, the interaction in MAI allows the lower tiers of the value stream to interact with their customers as technologists, on more neutral and collegial turf. This type of interaction is invaluable in creating high-performing teams focused on high-payoff solutions to problems. As technologists, AIPTs can work chiefly on technical aspects of problems, while allowing the Air Force to adjudicate on the business and implementation aspects of projects that the technical teams develop.

Likewise, MAI also provides a forum for industry to have some insight into the technology plans of their competitors. This benefit has many aspects to it. For example, the MAI consortium has three major aerospace casting companies as part of its membership: PCC, Alcoa-Howmet, and PCT (a subsidiary of Ladish). Casting technologies or advances made with MAI funding by one of these companies are brought to the attention of the others, allowing the technological bar to be continually raised at all three. Similarly, advances made in new-process technologies, like laser-additive manufacturing, are brought

into competition with more traditional processes, like forging and casting. The advent of emerging technologies either challenges those established businesses to improve their core technologies or to incorporate the new technology with their traditional processes to build new hybrid concepts that have unique system benefits.

Finally, MAI gives the technical community a place to discuss and develop technologies that best pay off when applied across the broad community. The best example of this type of pre-competitive technology is modeling and computational methods. The consortium has the ability to work collectively on models and tools and configure the tools such that they are applicable to a wide variety of issues and viable across a number of corporate technical architectures. The list of MAI technologies in the sidebar on the previous page includes modeling efforts that have been worked by and impact the majority of the consortium membership.

It might be argued that the benefits highlighted above resulting from MAI collaboration would occur naturally in the competitive free market anyway. Even if this supposition proved to be true, there is little doubt that the MAI consortium accelerates the advantages and allows them to take place in a forum that pays off directly for DoD.

Collaboration: Next Steps

The technology transitions of MAI have impacted a wide variety of fielded and in-acquisition systems. These transitions are noteworthy but have focused largely on Air Force systems. While this is the expected result of an AFRL-led initiative, it is clear that return on investment and transition opportunities will expand with the incorporation and the presence of program management from other Services and agencies. A logical next step for MAI will be for AFRL to invite government partnership in MAI. For example, if Army and Navy technical priorities are included in the long-term challenge workshop and then ultimately funded and managed by those Services with the added technical oversight of the consortium, then the domestic metals value stream is certain to be even further strengthened.

Clearly MAI provides a revolution in management, technology, and business practices; rewards innovation; and shares information. Continuing to utilize the consortium with the goal of expanding its impact fits within the strategic thrust of former Secretary Rumsfeld's vision. The DoD and the domestic metals infrastructure will both be beneficiaries of such action.

The authors welcome comments and questions. Contact them at mary.kinsella@wpafb.af.mil and daniel.evans@wpafb.af.mil.

"Korea's Best" continued from page 11.

The Foreign Comparative Test Program scours the world for the best equipment possible to meet our warfighters' requirements.

angle of attack—again without a hint of hesitation or complaint.

I returned to base, flying a precision radar instrument approach. Although I hadn't flown anything in five years (other than one T-50 simulator sortie the day before), I found the approach a breeze to accomplish. The T-50's directional and speed stability on approach proved impeccable, making even a rusty old aviator look like a hero.

After the flight, I engaged in a discussion of my T-50 experience with Hui Man "He-Man" Kwon—a U.S.Air Force Test Pilot School graduate and KAI's chief test pilot—and Kang. I asked Kwon about the lack of buffet at low speed/high angle of attack/high pitch rate conditions. He indicated that KAI had worked hard to eliminate any hint of buffet during the flight test program. He agreed with my assessment of the T-50's unassailable directional stability and enhanced control authority throughout its envelope, especially at low speed, stating that the larger control surfaces and vertical tail area keep the aircraft stable and yet responsive under all flight conditions.

The T-50 truly earns its title as a Golden Eagle. President Roh, KAI, and the Korean people may be rightly proud of this achievement. The Republic of Korea Air Force's gracious offer to me to be the first U.S. military pilot to fly the T-50 honors me beyond words. I found the design, manufacturing quality, assembly, performance, and handling qualities of the Golden Eagle to be world-class.

Given the demonstrated advanced state of the Republic of Korea's engineering and production capabilities, we in the Comparative Testing Office look forward to the Republic of Korea's industry proposals targeted at meeting our pressing warfighter requirements. And Korea's participation in the Dubai Air Show and active pursuit of contracts for the supersonic T-50 in Greece and the United Arab Emirates clearly demonstrate their intent to up the ante in the international defense aviation market.

The author welcomes comments and questions. Contact him at bob.mattes@osd.mil. For more information on the Foreign Comparative Test Program, visit <www.acq.osd.mil/cto/>.

You've Optimized Your Process ...

Now Optimize Your Organization

Maj. Joel J. Hagan, USAF ■ Capt. William G. Slack, USMC
Col. John Dillard, USA (Ret.) ■ Roxanne Zolin

So you've tried everything you can think of to improve your organization's production processes. You've identified bottlenecks through Theory of Constraints; you've eliminated wasteful process through Lean techniques such as process mapping; and you've decreased variation by plotting control charts as part of your Six-Sigma program. Your results have been impressive, but you want to do better. What's the next step? What else can you do to improve?

Those were the questions asked by leadership of the Naval Air Station (NAS) Lemoore Aircraft Intermediate Maintenance Division (AIMD) in January 2006. Was there more that could be done? The answer was yes!

The NAS Lemoore AIMD is responsible for maintenance of F/A-18C/D/E/F aircraft. Over the past several years, the AIMD had implemented a full-court-press on improving their maintenance processes under the AIRSpeed program—a Navy program focused on implementing process improvement techniques such as Theory of Constraints, Lean, and Six-Sigma in order to improve weapon system operational availability. The successes NAS Lemoore AIMD had achieved through AIRSpeed placed it at the leading edge in this Navy process improvement effort. Not satisfied with past successes, the AIMD teamed with the Graduate School of Business and Public Policy at the Naval Postgraduate School to investigate the utility of less traditional, yet potentially beneficial tools for improving F/A-18 maintenance.

The tool we chose to investigate was computational organizational modeling. Specifically, we chose to investigate applying the Virtual Design Team computational organizational modeling techniques developed by Dr. Raymond Levitt at Stanford University based on J. R. Galbraith's theories on information processing, and implemented using the POWer software version 1.1.6, a software program developed and maintained by Stanford University. The tool of organizational modeling differs from the AIRSpeed tools in that it focuses not on the item moving through the organization (such as an aircraft or engine), but instead on the flow of information through the organization.

Computational Organizational Modeling

Computational organizational modeling is a tool that helps managers design an organization. The concept of organizational design is relatively new and differs from the more traditional approach of simply allowing an organization to incrementally evolve in response to external and internal forces. Traditionally, when managers have been asked to take on new tasks or improve the output of tasks

Hagan, *a flight test engineer, and* **Slack**, *an aviation maintenance officer were assigned as students to the Naval Postgraduate School, Graduate School of Business and Public Policy, Monterey, Calif., at the time of writing.* **Dillard** *is a senior lecturer with the Naval Postgraduate School, Graduate School of Business and Public Policy.* **Zolin**, *an assistant professor at the Naval Postgraduate School, holds a doctorate in construction engineering management from Stanford University.*

Computational organizational modeling is a far better approach than the more common trial-and-error method—make a change, see how it works, and then make another change.

already assigned, they often considered modifying their organization to meet the new challenges. Unfortunately, their methods for assessing the impact of proposed organizational changes were at best heuristic rules of thumb employing minimal scientific rigor. In other words, they were taking their best guess at how a reorganization would impact overall performance. Although the result of this less-than-structured methodology was—for the very best of managers—considered acceptable, the reality is that not all of us are the best of managers and there's no crystal ball allowing us to predict the impact of our actions. In public organizations, prediction is even more difficult because of the lack of market feedback through pricing mechanisms.

Most organizations would benefit from a clear path to evaluating the impact of organizational change. Computational organizational modeling provides that clear path by allowing managers to build detailed organizational models on their desktop computers, then modify the models to assess the effects of proposed organizational changes. Once they identify an organizational structure that results in the desired performance, they can implement the relevant changes. This is a far better approach than the more common trial-and-error method—make a change, see how it works, and then make another change.

Modeling NAS Lemoore AIMD

In the fall of 2006, the NAS Lemoore AIMD 400 Division became the sole continental U.S. organization responsible for F414 engine intermediate maintenance. As the power plant for the Navy's newest fighter aircraft F/A-18E/F, AIMD production throughput of this engine was identified by leadership as a prime candidate for our improvement effort. Decreasing throughput time for the engine would enhance the operational availability of the F/A-18E/F.

Methodology

To improve F414 throughput, we first developed an organizational model of the 400 Division. We then validated that model, comparing predicted organizational performance to actual performance. Finally, we modified the model to represent various organizational changes in order to determine which changes reduced maintenance time.

Model Development

The modeling techniques employed in this study required us to clearly identify three components of the 400 Division: tasks associated with F414 maintenance; personnel assigned to accomplish those tasks; and key communications paths within the organization.

Figure 1 illustrates the F414 maintenance process. In the Acceptance phase, the engine is inspected to identify maintenance accomplished at the squadron level. This information is then compared against information contained in the engine logbook as well as the Aircraft Engine Management System database employed by the Similar to Automated Maintenance Environment (SAME) software application. If there are discrepancies, 400 Division administration personnel resolve the issue with the

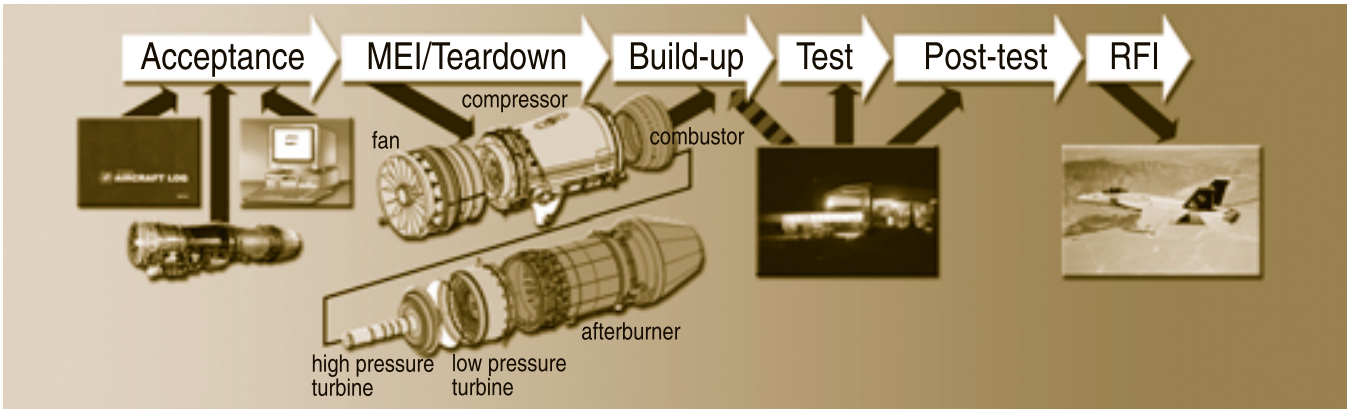


FIGURE 1. **F414 Engine Intermediate Maintenance Process**

squadron. Historically, this process takes, on average, 14 days. Following Acceptance, engine maintenance personnel conduct a major engine inspection and tear down the engine. Inoperative engine modules are identified and sent to the Navy Depot at Jacksonville, Fla. In the build-up phase, inoperative modules are replaced and the engine is reassembled. The engine is then run in the test cell through a set of pre-programmed cycles during the test phase. If the engine fails, it may be fixed at the test cell, returned to the maintenance hanger to the build-up phase or—in rare instances—sent back to the teardown phase. Following testing, a post-test inspection determines if damage to the engine occurred in the test cell. Finally, in RFI (ready for issue) stage, paperwork is completed and the engine is deemed RFI back to the squadron. Within each phase described above, there are numerous tasks that we have not detailed because of space constraints; all these tasks were modeled in terms of the time and skills required of an individual to accomplish them.

Once we had identified the tasks required to accomplish F414 maintenance, we identified the people responsible for accomplishing the tasks. The positions these personnel fill are presented in Figure 2.

Personnel were characterized in terms of their skills, experience, and available time to accomplish tasks. Accurately characterizing personnel was important, since many times, excessively long maintenance stems from mismatches between an individual's skills, experience, and available time compared with what is required by a task.

It is important to note that Figure 2 does not present a chain of command, but instead a chain of information flow within the 400 Division. Differentiating between them is critical, since within the Division—as in many organizations—an individual doesn't necessarily go to the next person in the chain of command to get resolution on a problem. Information regarding problems may flow to another individual. Our modeling required us to characterize how information would flow in an organization

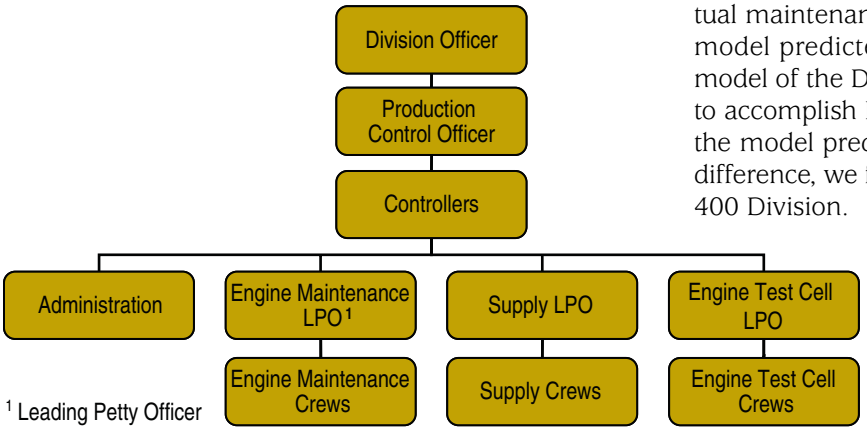


FIGURE 2. **400 Division Personnel**

Computational organizational modeling can help managers identify opportunities for improving their organizations.

to solve a problem, since it is though improving this flow that problems associated with task execution can more quickly be resolved; tasks can hence be accomplished more quickly.

Our final modeling step was to identify paths of information flow. Daily meetings held to coordinate maintenance actions were key paths for information flow. Along with the primary coordination meeting held daily at 7 a.m., personnel associated with specific positions, (i.e., controllers, engine maintenance, and supply), held morning and afternoon meetings to coordinate the efforts for their specialty. Meetings are, of course, a two-edged sword. They are great for transferring information, but they also take time away from accomplishing tasks. As part of our organizational modeling effort, we wanted to characterize this information flow and determine the utility of meetings currently being held by Division.

Model Validation

In our study, we did not attempt to prove the validity of the virtual design team modeling techniques employed. Instead we accepted the validation results of previous studies. We did, however, validate our particular model of the 400 Division by comparing the actual and modeled F414 maintenance throughput durations. As the primary metric of interest in this study, we felt that if the actual maintenance throughput time closely matched the model predicted time, we had developed an accurate model of the Division. The average actual time required to accomplish F414 maintenance was 21.77 days while the model predicted 21.09 days. With only a 3 percent difference, we felt our model accurately represented the 400 Division.

Model Interventions

Once validated, we modified the model, evaluating potential changes or interventions to the 400 Division that may reduce F414 throughput time. Among others, we considered the following five interventions.

Paralleling engine acceptance process: As shown in Figure 1, the current acceptance process must be completed prior to conducting other maintenance actions. This intervention evaluates the impact of conducting this effort in parallel with all other maintenance actions.

Combining the administration and controller positions: As shown in Figure 2, these are currently separate positions. This intervention was the result of interviews with 400 Division personnel, where it was suggested that administration personnel could, with some additional training, do the same work as controller personnel. This intervention evaluates this assertion.

Decreasing centralization: One of the effects of implementing the AIRSpeed tools is decentralizing organizational control. Although this is normally considered beneficial, there are drawbacks to decentralization in terms of rework when poor decisions are made at lower levels. This intervention evaluates this tradeoff.

Combining meetings: Since the F414 maintenance tasks are well defined and accomplished by highly skilled personnel, we hypothesized that 400 Division personnel may not need as many coordination meetings. With this intervention, we wanted to evaluate the tradeoff between having more meetings resulting in better information flow and fewer meetings resulting in more time to conduct engine maintenance. Specifically, we combined all of the morning meetings into one meeting attended by all personnel, and separately combined all of the afternoon meetings also attended by all personnel.

Decreasing meeting duration and frequency: Here we evaluated the tradeoff between longer, more frequent meetings, which reduce the risk of re-work resulting from inaccurate information transfer; and shorter, less frequent meetings, which afford greater time to conduct engine maintenance. We focused on the key 400 Division coordination meeting, which currently occurs every day at 7 a.m., evaluating 30 combinations of meeting duration and frequency.

Figure 3 presents the impact of the interventions presented above as predicted by our model. The critical metric was project duration. Did these interventions increase or decrease the time required to conduct the F414 maintenance? At the same time, we were also concerned with how these interventions impacted the risk of accomplishing each task associated with F414 maintenance. Risk is quantified in terms of the amount of maintenance rework required as a result of such issues as skills mismatches, inadequate time available to accomplish tasks, and insufficient information to accomplish tasks. As a result of the complex nature of the algorithms employed to quantify risk, an in-depth discussion of this assessment is not within the scope of this article.

The first intervention, paralleling the acceptance process, decreased engine throughput time by 58.6 hours. Although the risk of administration personnel failing to complete tasks associated with the acceptance process increased slightly, we assess the significant benefit of decreased project duration outweighs this risk.

In contrast to the first intervention, the second intervention, combining the administration and controller positions, had an adverse impact on both project duration (increasing it by 56.7 hours) and on risk. We believe the benefits of specialization drove this result.

Decreasing centralization, the third intervention, reduced maintenance throughput duration by 4.4 hours but had no significant impact on risk. We believe this benefit comes about because F414 maintenance consists of well-defined tasks accomplished by highly skilled personnel. The benefits of decreasing the time required to make decisions by pushing decision authority to lower levels outweigh the potential risk of poor decisions resulting in rework.

The fourth intervention, separately combining the 400 Division morning and afternoon meetings, also decreased project duration, specifically by 7.3 hours, while having no significant impact on the risk of accomplishing maintenance tasks. This result is somewhat intuitive when you consider that if everyone in the organization is going to attend at least one morning meeting and one afternoon meeting, it makes sense to have everyone in the same meeting. Each individual consumes the same amount of

Intervention	Impact on Project Duration	Impact on Task Risk
Paralleling engine *Acceptance process*	58.6 hour decrease ↓	Slight risk increase associated with tasks conducted by *Administration* personnel
Combining the *Administration* and *Controller* positions	56.7 hour increase ↑	Risk increase associated with tasks conducted by *Administration* personnel
Decreasing Centralization	4.4 hour decrease ↓	No impact
Combining Meetings	7.3 hour decrease ↓	No impact
Decreasing Meeting Duration and Frequency	6.6 hour decrease ↓	No impact

FIGURE 3. **Impact of Interventions**

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time, and the risk of misinterpreting information presented in the meeting and then passing it down to subordinates is decreased.

Finally, the fifth intervention identified a benefit from decreasing meeting frequency to every other day. While there was no benefit to increasing meeting duration, decreasing meeting frequency decreased maintenance time by 6.6 hours. We believe that this benefit is the result of F414 maintenance consisting of well-defined tasks accomplished by highly skilled personnel. There were greater benefits to spending more time working on engines than coordinating maintenance efforts and transferring information in meetings every day.

Impact of Computational Organizational Modeling

Before having an organizational model, the 400 Division leadership's only method for evaluating the impact of these five interventions on F414 engine throughput was to sit around a conference table talking over their best estimates based on previous experience. Although such discussions are helpful, they're more productive when based on quantifiable information. A computational organizational model provided 400 Division leadership with the opportunity to evaluate these changes, quantify the impact, and determine if the potential benefits were worth the risks of making the organizational change. Without this capability, leadership might forego certain organizational changes because they are unable to quantify the benefit when the risk of change is high. At the same time, they may also choose to make an organizational change that on the surface appears beneficial, but later realize there were significant second-order effects that erase any perceived benefit. In short, an organizational model provides leadership with a tool for making informed decisions about organizational change.

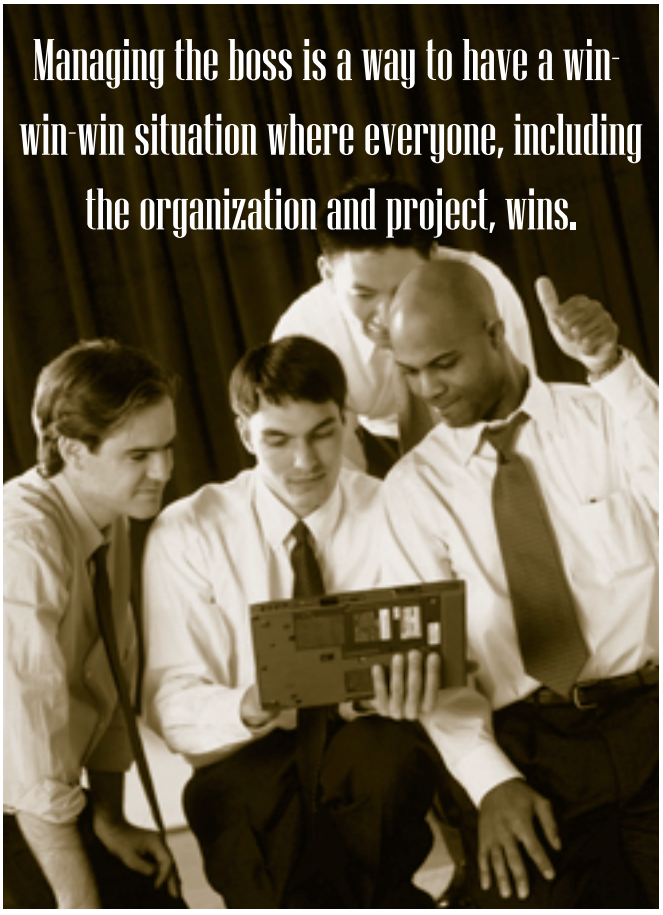
Our research shows that computational organizational modeling—like the tools associated with Theory of Constraints, Lean, and Six-Sigma—can help managers identify opportunities for improving their organizations. Computational organizational modeling differs from those logistics tools, however, in that it focuses on how to improve organizational performance by optimizing the flow of information through the organization. Computational organizational modeling can allow managers to quantify the complicated interactions associated with tasks and personnel in an organization, and determine how best to align personnel with tasks in order to accomplish their mission.

The authors welcome comments and questions. Contact Hagan at tpsfte@aol.com; Slack at aorbslack@hotmail.com; Dillard at jdillard@nps.edu; and Zolin at rvzolin@nps.edu.

The Art of Managing Up

Wayne Turk

About 45 years ago, a satirical play (later a movie) called *How to Succeed in Business Without Really Trying* opened on Broadway. It offered a method of moving up in the executive suite that included a little murder and a lot of mishap. There are better ways (even if you do have a boss you've fantasized about murdering). One of those methods is *managing up*. According to Thomas Zuber and Erika James, "managing up is the process of consciously working with your boss to obtain the best possible results for you, your boss, and your organization. This is not political maneuvering or kissing up. Rather, it is a deliberate effort to bring understanding and cooperation to a relationship between individuals who often have different perspectives."



Management or Manipulation?

Managing up or managing the boss sounds good in theory, but isn't it just another term for manipulating the boss or being the boss's toady? No! Managing the boss is a way to have a win-win-win situation where everyone, including the organization and project, wins. Failure to manage the boss can result in misunderstandings about expectations and cause wasted time and effort on tasks not in line with organizational goals or the project's needs. And looking at it from a purely self-serving perspective, career progress rarely happens if you don't manage your boss successfully.

Team member, project manager, or program manager—you have a boss, or in most cases, multiple bosses. You have to worry about those bosses and their needs. Having more than one boss makes work more difficult because you have to consider the needs or preferences of each of them. But it's still doable.

If you are a manager at any level, you have to think about managing both up and down. Some managers pay attention to managing *either* their own bosses *or* those people who report to them. It is the managers who only manage up who give managing the boss a less-than-stellar reputation. They appear to be the suck-ups or toadies; subordinates assume they don't care about them and may withhold their respect or slack off in their work. On the other hand, the ones who only manage down can't advocate for their team or gain buy-ins for the project's endeavors from those up the chain. Successful managers pay attention to managing both directions and communicating with their peers.

In this article, I will deal with managing up. If you are curious about successfully managing down, see "10 Rules for Success as a Manager" (*Defense AT&L*, August-September 2004).

Guidelines for Managing Up

Communicate. And make sure the communication is two-way. Most of the guidelines in this article are related to communication. Good communications skills are the basis for being able to succeed in almost every situation. Communication with the boss can be verbal or written. Some bosses are readers, meaning they prefer to receive information in written form. Others are listeners, meaning they prefer to get their information verbally. In DoD, get-

Turk *is an independent management consultant. He is a retired Air Force lieutenant colonel and defense contractor. He has supported information technology projects, policy development and strategic planning projects for DoD, other federal agencies, and non-profit organizations. He is a frequent contributor to* Defense AT&L.

ting information to your boss may be a briefing from you to him (and others). Listeners need to hear the information first, then they can consume a written version. Readers want the story on paper first so that they have some time to digest and understand the issue before meeting to discuss it. If you want your ideas to be heard, understood, and acted upon, make it easy for your boss by communicating in the manner with which he is most comfortable. You'll be meeting your boss's needs as well as your own. But make sure that the communication is two-way. You have to understand the boss's wants and decisions. Listen and ask questions if you aren't sure. Then it is a good idea to feed it back to confirm that you got it right.

No surprises—don't surprise the boss. Even good surprises can backfire on you. Most readers can cite examples of bringing the boss what they thought was good news, only to find out later that it that it wasn't so good after all. Let her know what is happening with the project on a regular basis so that she can brief her boss. It may be a quick meeting in her office; a daily, weekly, or monthly e-mail; or some other exchange. Full-blown interim progress reports (formal meetings to discuss the project status) on a regular schedule can help make sure that neither of you is surprised.

Provide solutions, not problems. There are going to be problems with your project. Every project has them. But when you let your boss know about those problems, give him your proposed solution(s). That shows him that you have thought the situations through. There are supervisors who seem to want to hear only good news; they don't want to hear about problems. Those bosses represent a particular challenge. It is up to you to help your boss face problems head on with courage and innovation. For the good of the project and the organization, you must communicate problems and failures with the successes, but do so delicately and appropriately. That's when providing him proposed solutions to the problems can really pay off.

Be honest and trustworthy. Dishonesty, covering up problems or failures, and trying to sweep things under the rug will only hurt you and the project in the long run. The truth will come out eventually. Bad news doesn't get any better with age. A key element in managing your boss is building trust by being trustworthy. Most people are dependable, hardworking, and have a desire to do a good job, but because of misunderstandings or mismatched priorities, some end up inappropriately labeled as problem children. To avoid that label, maintain your honesty and dependability. One way of doing this is honoring commitments, project schedules, constraints, and suspenses. The best way is just honest and forthright communication.

Be loyal and committed. She's your boss and you owe her your loyalty and commitment, and she owes you her support. If you don't do your part, chances are that she won't do hers. And that's bad for you and the project.

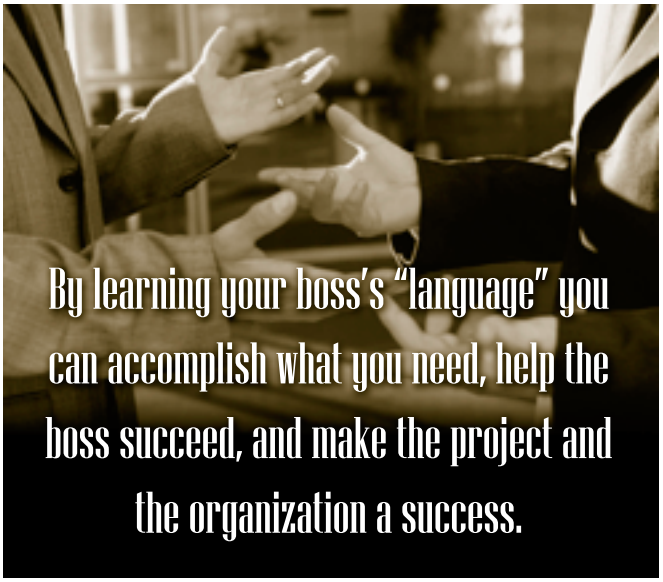
Understand your boss's perspective and agenda. That way, you can align your priorities with your boss's priorities. Put yourself in his shoes. While many people think that they have an understanding of their boss's goals and pressures, they don't always understand the strengths, weaknesses, aspirations, and work styles of their supervisors, or the pressures and constraints on them. Exploring these will help you identify commonalities you never knew existed and gain a little insight on how to better interact effectively with your boss.

Understand your boss's preferences and try to conform to them. If she wants a daily report on what has been accomplished, give it to her. If she wants the big picture and not the details, give it to her that way. If she wants something in a specific format, give it to her. That doesn't mean that you can't try to show her a better way, but remember to use tact and diplomacy. If you get crosswise with your boss, even over something minor, you may never be able to undo the damage.

One of the worst mistakes you can make is to assume you know what your boss expects. Many bosses don't spell out their expectations, and the burden of discovery falls to you. If he doesn't give you the information that you need, initiate one or a series of informal discussions on "our" objectives. This can help your boss clarify and communicate his ideas, plans, and needs to you; and it gives you the chance to communicate your own ideas as well. Together, set realistic expectations that you both agree on. They include expectations on schedule, costs, and the final product. The emphasis is on "realistic." Don't set expectations too high or you will ruin your credibility when they are not met. Don't intentionally set them low. That won't help you either.

Understand your own management style and take responsibility for its effect on others. Developing an effective working relationship with your boss requires that you understand yourself and your management style. Recognize your own strengths, weaknesses, goals, and personal needs; how you respond to being managed; and how others respond to you. Be aware of the effect that you have on others and their reaction to you, especially those under you. If you don't, you could be in for a surprise when you meet with the boss, especially at appraisal time. She probably talks with some of your people and has an idea of their reactions to you.

Depend on your boss's strengths and use them. You need to determine his strengths. Whether those strengths are communication, seeing the big picture, resource man-



agement, new ideas, or something else, go to your boss for his expertise. Get him to use his particular skills for the project. Remember, though, that time is a precious commodity for most managers. Effectively managing your boss requires that you respect his time. Every request made of the boss uses up his time and resources, so make sure your requests are necessary. Use his strengths, but if you can do it yourself, don't waste his time.

Recognize your boss's weaknesses and compensate for them. She is not going to be good at everything. It is up to you to figure out where she's weak and provide your support in those areas. You might just want to intentionally try doing something to make life easier for your boss. Maybe you can build the slides for her briefings, track the finances, monitor the schedule, or provide the support that she needs in some area. Perhaps your boss will spend that extra time or effort that you saved her to advocate for your project's needs.

Be aware of your manager's hot buttons and pet peeves. Is it being late to meetings or not contributing, sloppy memos or e-mails, swearing, a loud radio? Sounds obvious, but whatever they are, consider them land mines to be avoided. Ignoring them (or not understanding them) can sour your relationship with the boss. And that can mean an unsuccessful project because you didn't get the support that you needed—or worst case, it can be career suicide for you.

Request feedback—and learn to accept it. Request periodic feedback if you aren't getting it. Don't wait for the annual appraisal to find out the boss's opinion of you and your work. If you get bad feedback, discuss your concerns, but do it on a mature level, not emotionally or confrontationally. As in a marriage, the best approach is nonadversarial. Listen to what he says and try to act on it.

Don't go over the boss's head or behind her back. That is not the way to manage up and can permanently ruin the relationship with the boss. Go to her first. If it is something very serious and she does nothing, you might have to go over her head. In some cases she may be the serious problem and you can't confront her. But going over her head should be a last resort only if:

- Your project is on the line, and there is an urgent problem that your manager continues to ignore
- Your boss is doing something illegal
- Your boss has a serious physical illness, mental illness, or substance abuse problem that you are aware of
- Your boss is doing something (e.g., sexual harassment or contracting irregularities) that could lead to a lawsuit and/or bad publicity.

In such cases, be very careful to keep the information highly confidential, discussing it with only anyone who needs to know. Document your conversation with that person in an e-mail or memo for the record, and save a copy for yourself. And always remember to tread carefully. You could be mistaken.

Managing Up: An Essential Tool

"[Managing up] sounds simple, but managers, and everyone else, need to learn this basic concept," says Richard L. Knowdell, author of *Building a Career Development Program: Nine Steps for Effective Implementation*. "If we want someone to understand what we have to say, we must learn to speak their language, rather than expect them to learn ours." By learning your boss's "language" you can accomplish what you need, help the boss succeed, and make the project and the organization a success.

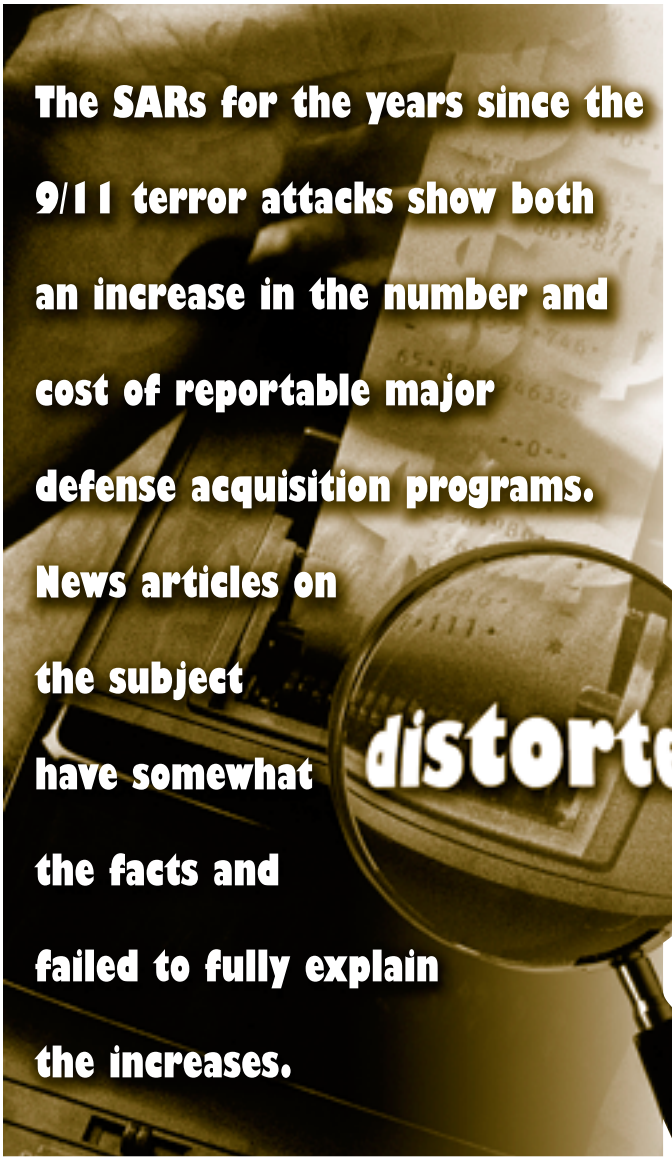
Adam Khan says in *Self Help Stuff That Works*, that the way to manage up is to treat your boss like your liege lord. He says that by making that your attitude, it changes the whole environment. "Your attitude toward a person creates that person. Interact with someone with a chip on your shoulder and the person will usually respond defensively. Approach someone with friendliness and cooperation and the person is likely to respond in kind. We play a part in creating the way someone treats us." Excellent advice.

Too many people perceive that managing up is brownnosing or trying to curry favor with the boss. They consider it manipulative. But it's not. Being rebellious or adversarial, or stonewalling the boss won't get you or your project anywhere. Managing up is one of the tools to engender success.

The author welcomes comments and questions. Contact him at rwturk@aol.com or wayne.turk@sussconsulting.com.

Sources of Program Cost Growth

William Fast



Congress uses the Department of Defense Selected Acquisition Report (SAR) to oversee defense acquisition programs. In addition to other information, the SAR provides the program's original or current cost estimate baseline and cost growth from that baseline. Acquisition programs requiring expenditures of more than $365 million in research, development, test, and evaluation (RDT&E) or $2.190 billion in procurement (both in fiscal year 2000 constant dollars) must submit an annual SAR to the Congress. Summaries of SARs are posted on the Web site of the under secretary of defense for acquisition, technology and logistics at <www.acq.osd.mil/ara/am/sar>.

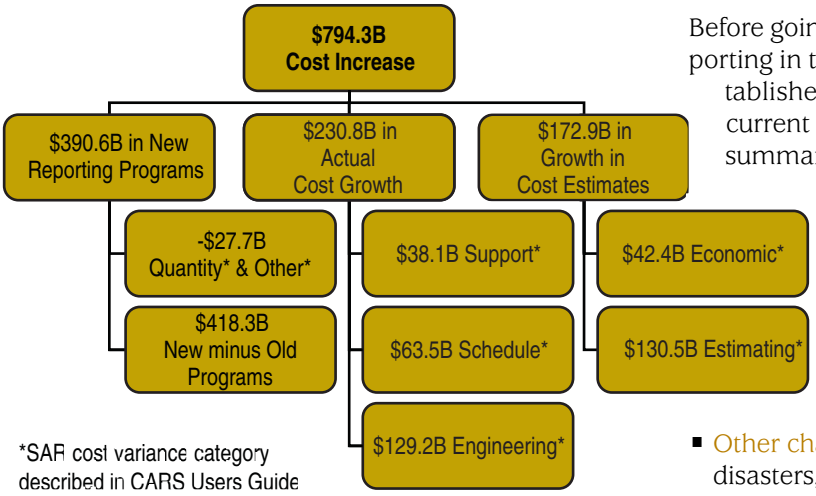
The SARs for the years since the 9/11 terror attacks show both an increase in the number and cost of reportable major defense acquisition programs. News articles on the subject have somewhat distorted the facts and failed to fully explain the increases. I will discuss three reasons for this apparent cost growth and the root causes of the actual and estimated cost increases. The bottom line is that the actual cost growth isn't as bad as reported in the media. In fact, the actual cost growth experienced in completed programs since 9/11 is comparable to historical program cost growth. Finally, I want to propose a few changes to the SAR that would make it a more effective tool for communicating program costs to the Congress.

In its budget bulletin of July 28, 2006, the Republican staff of the Senate Budget Committee wrote, "An examination of the most recently posted SAR, dated December 31, 2005, provides data for 85 programs totaling $1.585 trillion in combined R&D [research and development] and procurement costs. The SAR of September 2001—the last SAR to reflect pre-9/11 acquisition decisions—reported 71 programs totaling $790 billion. *In only four years, the Department's total cost of major programs doubled*" (emphasis added). What were the causes for this apparent doubling? An analysis of SARs from December 2001 through December 2005 reveals three major reasons for the cost growth of $794.3 billion: new reporting programs; actual cost growth; and growth in cost estimates.

New Reporting Programs

New reporting programs added $390.6 billion (49 percent of the increase). The SAR summary tables posted on the Web identify 48 new or reinstated programs from December 2001 to December 2005. During the same timeframe, 34 programs were either completed or terminated. Thus, the net result was 14 additional SAR programs. In nearly every report, new or existing programs meeting the RDT&E and procurement

Fast *facilitates financial and program management training at DAU. From 2001-2004, he managed programming and budgeting for the assistant secretary of the Army (acquisition, logistics and technology).*



Breakdown of Cost Growth

dollar reporting thresholds were added to the SAR, while other programs were deleted, based upon completion or termination.

Among the programs and dollar amounts that became reportable since 9/11 were the Army's Future Combat System development ($164.6 billion); the Navy's Future Aircraft Carrier procurement ($31.7 billion); the Navy's Destroyer DDG-1000 initial procurement ($27.8 billion); and the Joint Strike Fighter initial procurement ($198 billion). In the case of the Army, the development cost of the Future Combat System was funded by stopping developments or terminating procurements of some 30 lower-priority systems. In addition, the Chemical Demilitarization Program was split into three separate reporting programs. Clearly, not all of this new program increase should be considered as new budget authority. Rather, more of the existing acquisition budget met reporting thresholds and was therefore visible to the Congress in the SAR. All told, the net increase in dollars reported in the SAR, calculated by subtracting completed and terminated program costs from new program cost estimates, was about $418.3 billion. The breakdown of cost growth is shown graphically above.

The Congress should be happy that the DoD is reporting on a greater percentage of its acquisition (RDT&E and procurement) dollars. From fiscal 2002 to fiscal 2005, DoD's annual acquisition budget authority increased 37 percent, from $104.7 billion to $143.8 billion. However, during the same period, acquisition dollars reported in the SAR increased by 57 percent, from $39.9 billion to $62.6 billion. In other words, for every acquisition dollar appropriated, the Congress was getting SAR reports on about 38 cents in fiscal 2002 and 44 cents by fiscal 2005. Any way we slice it, the Congress got more information on a greater percentage of the DoD acquisition budget as a result, in great measure, of new reporting programs that met SAR thresholds.

Before going further, we need to understand variance reporting in the SAR. Once a program's cost baseline is established, variances between that baseline and the current estimate of program costs are quantified and summarized. Cost variances are categorized and reported according to seven categories of cost change, as described in the Consolidated Acquisition Reporting System (CARS) Users Guide, and recapped below.

- Quantity change: cost variance resulting from a change in the number of end items being procured
- Other change: changes in program cost due to natural disasters, work stoppage, and similarly unforeseeable events not covered in other variance categories
- Support change: changes in program cost associated with training and training equipment, peculiar support equipment, data, operational site activation, and initial spares and repair parts
- Schedule change: cost variance resulting from a change in procurement or delivery schedule, completion date, or intermediate milestone for development or production
- Engineering change: cost variance resulting from an alteration in the physical or functional characteristics of a system or item delivered, to be delivered, or under development after establishment of such characteristics
- Economic change: cost variance resulting from price-level changes in the economy, including changes resulting from actual escalation that differs from that previously assumed and from revisions to prior assumptions of future escalation
- Estimating change: cost variance due to correction of an error in preparing the baseline cost estimate, refinement of a prior current estimate, or a change in program or cost estimating assumptions and techniques.

We have accounted for these categories of cost variances by placing them under the appropriate reasons for cost growth in the graphical representation. Since quantity and other changes are baseline cost changes, usually beyond the control of the program manager, we place them together under new reporting programs. Because support, schedule, and engineering cost changes represent events that have or will result in actual cost variances, we place them under actual cost growth. And, since economic and estimating changes represent future costs that may or may not be realized, we place them under growth in the cost estimate.

Finally, to conclude our discussion of growth resulting from new reporting programs, we can offset the growth in new programs with modest decreases based upon quantity (-$27.1 billion) and other factors (-$0.6 billion) reported as SAR variances from December 2001 to December 2005. This is reflected in the figure as "-$27.7 billion Quantity & Other."

Actual Cost Growth

The SAR reports from December 2001 through December 2005 indicate that actual cost increases of $230.8 billion (29 percent increase) break out as follows: support cost ($38.1 billion); schedule ($63.5 billion); and engineering ($129.2 billion). The SAR summary tables also provide some interesting reasons for actual cost growth in these areas.

Support Costs

In one program, a "refined definition of support requirements" added nearly $4 billion to the program's cost estimate. In another program, a change in the "mix" of aircraft in a squadron added $243 million. As program quantities increased, additional simulators and training devices were needed. As programs were stretched out, costs were added to deal with the problems of part obsolescence. In several programs, software support estimates were revised upward. Service-life extension of the system was also cited as a reason for support cost growth.

Schedule

Any stretch-out of the schedule, whether the result of development and testing issues or lower production rates, brought on increased cost. Many programs cited extended development and testing to deal with integration challenges or performance and reliability problems. In addition, several programs lost procurement budget to higher priorities. The resultant lower production rates simply cost more.

Engineering

As expected, additional requirements drove cost increases in this area. However, shifts in policy were also at work to increase cost. For example, within helicopter programs, full component recapitalization and the decision to procure new aircraft instead of remanufacturing old aircraft added billions to the estimates.

Completed or terminated programs are an important subset of the actual cost growth piece of the total cost growth pie. These programs can account for most, if not all of their actual costs and we can now determine their "Cost Growth Factor" or CGF. The CGF is the ratio of actual costs to estimated costs. When we examine only the 19 programs completed or terminated with cost overruns between September 2001 and December 2005, we get a CGF of 1.27. In other words, programs completed or terminated during that period overran their baseline estimates by about 27 percent. Since these programs totaled $146 billion when completed or terminated, the total overrun was about $31 billion.

Had we added together cost growth for all programs, including those programs not yet completed, we would have been adding apples to oranges—and in effect, this is what the news articles mentioned earlier did. On the surface, it would appear that cost growth from the September 2001 to the December 2005 SAR report was over 100 percent. However, that high percentage is based upon a mixture of actual costs, estimated costs, and new reporting programs. Actual or real cost growth, based purely upon programs completed in that timeframe, was significantly less.

In 2006, The RAND Corporation released a study on the historical cost growth of completed weapon systems. Based upon a review of 68 programs completed during the period 1968 to 2003, the study concluded that cost growth was about 46 percent from Milestone B to completion and 16 percent from Milestone C to completion. So our actual cost growth for completed or terminated SAR programs between September 2001 and December 2005 appears to be within the range of RAND's study.

Growth in Cost Estimates

Growth in cost estimates was about $172.9 billion (22 percent of increase). Thus, the balance of the reported cost growth lies in the cost estimates of the programs not yet completed. In the December 2001 through December 2005 SAR reports, cost estimate increases are broken into two categories: economic ($42.4 billion) and cost estimating ($130.5 billion). Again, the SAR summary tables provide some interesting reasons for estimated cost growth in these areas.

Economic

In numerous programs, revised escalation rates were cited as a reason for cost growth. This is an unfortunate consequence of looking at "then-year or current dollar" rather than "base-year or constant dollar" program costs. "Current dollar" estimates mask true cost growth because they are escalated to account for future inflation and outlay rates. In addition, direct labor and overhead rate increases resulting from changes in the contractor base were common causes of cost growth.

Cost Estimating

The refinement of cost estimates and the use of different cost estimating methods were often cited as reasons for cost estimating growth. For example, one program changed from parametric estimating to extrapolation from the actual costs experienced during prototype development. This resulted in a higher cost estimate. Another program reported more definition to the work breakdown structure and that the estimate had been increased based upon actual labor and materials costs. Reports also indicate that there was greater realism in the learning curve as a program moved into production. Assumptions about great learning made early in the program failed to materialize, and the expected rate of learning was less than the rate assumed when the cost estimate was developed. As a result, costs were higher.

An analysis of SARs from December 2001 through December 2005 reveals three major reasons for the cost growth of $794.3 billion: new reporting programs; actual cost growth; and growth in cost estimates.

Observations and Recommendations

Recapping, we found that 49 percent of the apparent cost growth in SAR programs between September 2001 and December 2005 was in new programs meeting reporting thresholds. Twenty-nine percent of the cost growth was actual cost growth characterized by support, schedule, and engineering changes. And 22 percent of the apparent cost increase was to account for changes in economic and cost estimating assumptions.

Clearly, there is a need for DoD to communicate more clearly with the Congress in the SAR. In its current form, costs can easily be misinterpreted. Digging out the statistics for this analysis alone required review of 13 SAR reports spanning five years. For programs filing their last SAR, the costs are actual costs and the associated overrun or underrun is real. For new programs in early development, the costs are weighted heavily toward estimates that may or may not materialize. Moreover, as programs move into the production phase, estimates to completion contain more actual costs and less estimated costs. Therefore, even within a single program, we need to identify actual versus estimated cost growth.

There is also the issue of SAR thresholds. Some programs never meet the reporting thresholds and are never counted in the total numbers. Still other programs suddenly appear in the SAR when they exceed the threshold, even though they may have been ongoing for many years. While necessary to limit the number of programs reported, thresholds have the negative effect of muddying the waters when it comes to comparing total costs from one report to the next or when comparing reports over several years.

The fiscal 2007 National Defense Authorization Act requires that the DoD conduct a study on revisions to requirements related to SARs. The study will focus on incorporating into the SAR elements DoD regards as most relevant to major defense acquisition program performance, especially with respect to program costs and schedule before the program receives Milestone B approval. Based upon the misunderstanding of cost growth over the past four years, it would be prudent for the DoD to recommend several changes to the SAR.

First, by having to report cost variances in base-year and then-year dollars, the DoD is thrust into the political game of predicting the economic future. Take away the issue of inflation and outlays by reporting only in base-year dollars. The added benefit is that programs reported in base dollars of the same year can be compared from year to year to determine real increases or decreases in actual costs and cost estimates.

Second, program costs should be depicted in the SAR as actual costs incurred to date and estimated costs to completion of the program. Don't mix actual and estimated costs. Program managers and contractors already know actual versus estimated costs if they are managing their program using the techniques of Earned Value Management. Furthermore, by breaking out actual costs from estimates, we can calculate the cost growth factor to date and use that factor in testing the cost estimate to completion.

Third, the SAR should tie growth in actual and estimated costs to specific root causes. The current report summarizes cost growth in seven broad categories. Although reasons for growth are identified in the SAR narrative summary, there is no clear audit trail back to the root cause(s) of these increases.

Finally, programs should not be reported based solely upon achieving a threshold dollar amount. Rather, programs should be reported in the SAR based upon the capability they will achieve for the warfighter. For example, if an unmanned air reconnaissance capability is needed, all programs enabling that capability, regardless of program cost, should be reportable in the SAR. This approach would enable the Congress to oversee the linkage of capabilities and funding.

The author welcomes comments and questions. Contact him at william.fast@dau.mil.

The Pursuit of Courage, Judgment, and Luck

A Rogue Risk Management Rant

Maj. Dan Ward, USAF ▪ *Maj. Chris Quaid, USAF*

He who will not risk cannot win.
John Paul Jones, 1791

Program management is risky stuff, in part because it relies so much on programmatic forecasts (a notoriously dodgy business, this fortunetelling). Accordingly, smart program managers institute risk management plans to deal with the potential of cost increases, budget cuts, schedule slips, performance failures, and the like.

However, the traditional approach to risk management is seriously flawed. It overlooks several key elements of successful program management. When PMs think about risk at all, they typically pay prodigious attention to the mechanisms and methods of risk management, while the human side is frequently ignored. This often leads PMs to do the wrong things for the wrong reasons, producing the wrong results—and ultimately short-changing the warfighter.

In spite of, or perhaps because of, the volumes of officially sanctioned risk management guidance and training, all too many PMs think a good risk management process simply identifies and mitigates the bad things that can happen. Conventional risk management wisdom states that a closed risk is a good risk. Many PMs are apparently driven by the fear that their project could go down the tubes and take them with it.

Those beliefs are wrong in so many ways.

For starters, risk management is not supposed to be about preventing bad things from happening. Some readers may want to take a moment to let that statement sink in. Risk management is also not supposed to be about counting, tracking, and closing risk items. It's *definitely* not supposed to be about protecting the PM's backside. And yet, in case after case, that's what PMs make of it.

Real risk management involves accepting the fact that bad things happen, being as aware of those bad things as possible, and doing our best to make sure the bad things don't impact our customers' ability to accomplish their mission. Everything else is ... well ... something else.

Risk management—*real* risk management—is ultimately all about customer success. The point is to make sure we deliver a needed capability to the customer or die trying. Risk management should be as focused on taking the right risks as we are on avoiding the stupid ones. Further, it should involve PMs' accepting risks, rather than forcing our customers to accept them. It's simply a question of whose interests come first. Which brings us to ...

Ward *holds degrees in electrical engineering and engineering management. He is Level III certified in SPRDE, Level I in PM, T&E, and IT. He is currently assigned to the Air Force Research Laboratory in Rome, N.Y.* **Quaid** *is currently deployed to Afghanistan, where he is doing field research on risk management with the Army.*

Illustration by Jim Elmore.

Customers First

What have our risk management activities done for us? Ah, but that's the wrong question. We should be asking what our risk management program has done for our customers. When the customer's success is our focus, risk management becomes a romantic, even spiritual activity, full of opportunities for love and self-sacrifice. It becomes something worth doing.

On the other hand, if we "successfully" deliver something (on time, on budget), but it doesn't actually help our customers accomplish their missions, then we have failed to accurately deal with the program's most important risk—the risk of irrelevance. No doubt such a PM will get rewarded for an on-time, on-budget delivery, despite this failure. And that's just plain wrong.

Oversights and Flawed Assumptions

The official guidance about risk management, in both the Department of Defense and industry, usually describes a paradigm in which PMs seek to establish and execute disciplined risk planning, identification, assessment, and risk response project phasing. Got all that? The primary objective is apparently to ensure the PM and his or her organization don't get in trouble. Very seldom is the customer even mentioned. The end result is PMs who take the safe-for-me route, embracing the risk of mediocrity while studiously avoiding any possibility of game-changing excellence.

Another fundamental (and flawed) assumption in this equation is that risk is bad. The brutally messy and scary news is this: If you care about your customer's success, risk is good, folks. A program with minimal risk is a program that isn't going to make much difference in the world. PMs need to get over the fear, abandon the reflexive CYAing, and get down to the real work of meeting the customer's needs.

Don't misunderstand. Rigorous thinking about risk is a vitally important aspect of program management. Discipline, integrity, skill, experience, attention to detail—all of these are good things and have a role to play in our risk management activities. Many of the analytical activities and thoughtful planning exercises have a great deal of merit. The well-established risk management methodologies are, generally speaking, useful tools. But ... once we've executed the proscribed plan-identify-assess-respond-etc., process, we are left with the need to decide and the need to act. That's where the real risk handling happens. When the analysis is done, the hard decisions have to be made, and sometimes you just have to grab the scissors and run with them.

Courage and Judgment

PMs can't allow risk management simply to be about checklists and procedures. We can't allow risk management to be a bloodless, rationalistic exercise in careful planning. It is rightly a human, subjective activity. When you get right down to it, risk management is basically an exercise in personal courage and professional judgment.

Lest we be accused of making stuff up, in the name of due diligence, we searched the *Risk Management Guide For DoD Acquisition*, Sixth Edition (Version 1.0 Aug 2006) for the words "courage" and "judgment." Neither word turned up. That's a shame, because if you aren't talking about courage and judgment, you're not really talking about risk. The DoD shouldn't feel too bad—we searched the online archives of a commercial journal, *Risk Management Magazine*, and got the same results.

Trust and Luck

It bears repeating that risk management is a human endeavor. We contend the best risk management strategy can be summed up in a single, terrifying word: *trust*. Trust your team. Trust your contractors. Trust your customers. Trust your boss. It takes courage and judgment to trust, but failure to trust is an unacceptably risky strategy. [*The authors explained the importance of trust in "The PM's Dilemma,"* Defense AT&L*, May-June 2004.*]

Of course, risk management is more than just implementing approved methodologies with courage, judgment, and trust. Luck is a pretty important piece of the puzzle as well. What does luck have to do with risk management, you might ask? Just about everything. Fortunately, über-guru Tom Peters' book *Liberation Management* lays out a list of 50 actions designed to help in "the pursuit of luck." While following his advice doesn't guarantee success, doing the opposite of what he recommends pretty much guarantees failure. A quick Google search of the words "tom peters luck" will provide the actual list, for curious readers.

Those of a more scientific mindset may prefer to refer to University of Hertfordshire professor Richard Wiseman's research. The aptly named Wiseman executed a 10-year study of luck. He published his findings in a book titled *The Luck Factor: The Scientific Study of the Lucky Mind* (2003) in which he observes that luck perception and luck production are both related to personality factors such as optimism, extroversion, openness, and low levels of anxiety.

Wiseman's research showed that while people who describe themselves as lucky are not more likely to win the lottery, they *are* more likely to experience positive outcomes in other, less random activities. For example, a person's extroversion creates a large social network, which can lead to "fortuitous" connections with people and resources. Openness to new experiences leads to action, as John Nash said in *A Beautiful Mind*, "The probability of my success increases with every attempt." Turns out, he was really on to something. The bottom line: Luck is

real, and you probably want an optimistic, open, extroverted, lucky person leading your risk management team.

Of course, there are those who scoff at luck and optimism. They might even sniff, "Hope is not a strategy." However, a significant body of research seems to indicate that optimism might indeed be, if not a strategy, at least an important and reliable strategic element. In fact, in addition to contributing to luck, optimism is itself a powerful and direct component of achievement, as Dr. Martin Seligman demonstrated in his book *Learned Optimism*. Pessimistic risk managers will tend to have more negative outcomes than optimistic people (call it bad luck). Fortunately, as alert readers may have guessed, Seligman's book claims optimism can be learned, which is why we brought it up in the first place. Pessimists might want to peruse Seligman's book. There are worse ways to spend a little time.

It Comes Down to This

PMs have to do risk management because the world is uncertain. Everything is not under control (and if it is, it shouldn't be). No matter how smart, educated, optimistic, or lucky you are, things will sometimes go wrong. No amount of risk management will ever change that. But as we said, risk management is not really about preventing bad things from happening anyway.

Yes, there are always ways to avoid or mitigate the risks involved with program management and technology development. However, when we mitigate away all the risks, we virtually guarantee mediocrity. Six Sigma, for example, has been described as "a way to measure the probability that a product being developed will have almost no risk." If that's true, it sounds like a pretty good way to identify products and procedures the research and development community should run, not walk, away from.

PMs must engage in risk management activities, but those activities require courage and judgment, not simply checklists and database entries. Trust, hope, optimism, and luck are all, to a certain degree, in your grasp; and they will go a long way towards ensuring meaningful risk management, leading to customer success. And that's what it's all about.

Only those who dare to fail greatly
can ever achieve greatly.
Robert F. Kennedy

The authors welcome comments and questions. Contact them at daniel.ward@rl.af.mil and christopher.quaid@pentagon.af.mil.

The Swing of the Pendulum

L.S. Kove

Early in my Department of Defense career, an experienced mentor compared the way we do business in acquisition to a pendulum. It swings all the way to one side but always comes back to the other. He told me that was how the Department was and always would be. All you could do was try to forecast what direction the pendulum was going and manage accordingly.

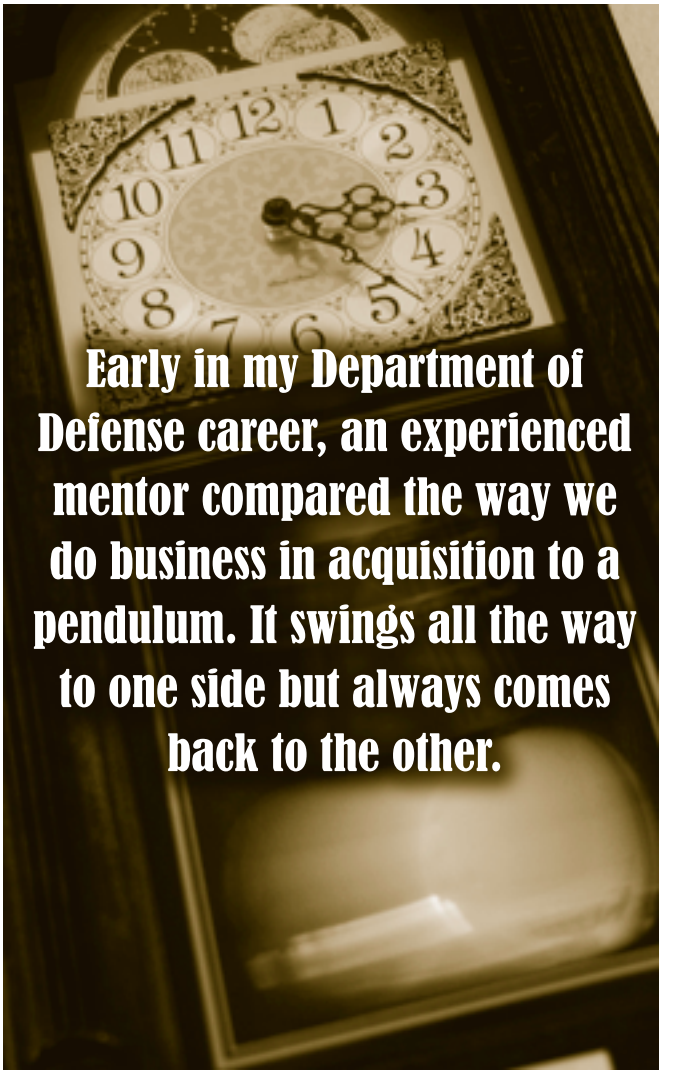
I have come to realize we need to aim for that pendulum to come to rest somewhere in between. This middle ground consists of a balance of the buyers' common sense born from expertise, experience, and an awareness of all their options.

That was Then

In the early days everything was policy-driven. Each policy led to many more policies, leaving you lost in the policy labyrinth. We called this "The Teardrop Effect" because a teardrop just keeps falling down. These policies seemed to create an endless stream.

Boilerplates are structured examples, designed as tools to be plagiarized. Every acquisition paperwork type (funding justifications/formulas, planning, and contracts) and specific acquisition area had tailorable boilerplates that were updated to match the latest policies. Although nobody captured the processes in those pre-personal computer days, we had plenty of them, and we had them down to a bureaucratic science. Even source-selection methodologies were concise. A senior person always accompanied the junior person in his or her first few source selections. In this way, the junior person was taught the process. The investment in on-the-job training was resource-intensive, but it paid off very well. Mentoring was an important ingredient to teaching the "hows."

There was a sharp division between industry and government then. We were all reasonably friendly, but there was no doubt that we, the government, were in the position of buyers and they, the contractor, were in the position of sellers. Certain lines could not, and should not, be crossed. Those acting as buyers served as the government's agent to get the best price and quality deal possible; while those acting as sellers served their company's bottom line, aiming for a profit while providing good products and/or services. And all was based upon the requirements as outlined in contracts that relied heavily on very specific policies and their related regulations.



We had experts, usually with at least 20 years of acquisition experience, who really knew their stuff—and when they didn't know the answer, they knew who did. They knew their policies and acquisition requirements as well as what things should cost for any procurement within their purview. And this was before the ability to model costs through computer programs.

This is Now

Complicated as those days were, I never realized how much I would miss them until now, when the pendulum

Kove *is a special projects officer at a Naval Airfield activity. Her range and depth of experience of almost 30 years includes military, commercial, and various positions in civil service.*

has swung to such an extreme the other way. "Everything should be made as simple as possible, but not simpler," said Albert Einstein. The acquisition business has gone to simpler, and there are legitimate concerns about the result. Acquisition methods and processes were once so established they had practically a scientific accuracy. We have replaced this state with loose guidance; innovation is constrained by dollars; and very few performance factors ultimately translate into contractual requirements.

How has the denigration of the once well-known policies and processes affected industry? Even though some of the policies (specifications and standards) are no longer included in contracts because they were considered too complicated, industry sometimes still uses the recommended processes anyway. Why? Simple: they made sense then, and they make sense now. A good example is the logistics support analysis from which database tools were designed so contractors could capture product design details as well as produce reports and other related deliverables for their logistics customers. Attempting to justify why he was loading his logistics support analysis into his Eagle database, one contractor said to me a few years ago, "How else are we going to figure this stuff out?"

Before working in civil service and while employed by a prime contractor, I read many of the government's standards and specifications associated with the contracts I was working on. They gave me a reasonable idea of what my customer's expectations were. These days, expectations are often—to some degree—proposed, negotiated and renegotiated, then later refined. It's actually a more complicated process driven by over-simplification. There is significant risk when policy-driven requirements are turned into guidance. To some extent, everyone—contractor and government alike—is playing a guessing game, with only a few able to comprehend the rules.

This isn't Wal-Mart

Buying for the DoD to support the warfighter is not the same as going into a retail shop. Our prime contractors and their vendors are not Wal-Mart. The acquisition of a weapon system is a complicated business. Innovation can be a wonderful feature, but without some degree of policy, process, calculated measurements, and structure, all parties often end up with a common feeling of dissatisfaction. Even worse, each party is vulnerable to adverse findings in all kinds of potential assessments, peer reviews, or audits that may increase costs and cause delays in scheduled implementation. The embarrassing mistakes get worse when they are uncovered by the news media and result in bad publicity and the possible cancellation of the acquisition.

When we had standards and specifications guided by mandated policies and regulations galore, production costs for items as simple as hammers and toilet seats occasionally soared into the thousands of dollars each, creating a media frenzy. These days, a lack of specifications, regulations, and well-mentored buyers, coupled with increased dependency on sole-source acquisitions, place the government in a situation ripe for over-spending and, of course, its related bad press.

Some would make the case that sole source acquisition provides for increased economies of scale, efficiencies through the commercial innovative process, and hence cost savings. If a seller, because of internal corporate pressures, is most concerned with the bottom line, why give the buyer a better deal? Some would respond, "Companies are going to offer the best deal to retain the customer." However, when a company is chosen as the seller for life, and competition does not exist, there is no pressure to be competitive. In order to accomplish true economies of scale and cost savings, competition must remain and be adequately planned for the long-term strategy.

What's the Future?

Where do we go from here? Obviously we don't want to return to over-regulation, but on the other hand, under-regulation is not working either. We need to manage expectations and have a professional understanding of the boundaries. Even in the old days of excessive regulation, we were able to build in modifications to allow for innovation. The key was awareness of what you were buying.

There are three basic types of buyers: the expert, the amateur, and one in between. A knowledgeable buyer, a real expert, is always the best. Courses that teach the acquisition milestones and the other "whats" don't create experts; they create buyers who only know the "what." Experts learn the "hows" from mentors—as happened in the early days. But these days, with a significantly leaner workforce, most potential mentors are often so busy doing, they don't have time to teach. This is hurting the acquisition community. Corporate knowledge cannot be captured completely within a database; much of it is based on situational awareness. Additionally, who has time to fill up a database? Certainly not those with corporate knowledge, who are, as we know, too busy working.

Then we come back to policies and regulations. To some degree, more are needed than we have today. People are writing acquisition documentation that is often incomplete to the point that it is sometimes nothing more than filling in a check mark on your acquisition to-do list. That is not the purpose of the paperwork. It's about identifying the requirement, visioning, planning, buying, formating, testing, and implementing. When it is done well, it's so innovative that it's practically an art form. There is much pride taken in successful acquisition. Best of all, our customers, the warfighters, are happy.

"Pendulum Swing" continued on page 36.

Developing Future Program Leaders: Part II

Timothy S. Kroecker

Part I explained that organizations need to capture the expertise of an aging, highly skilled workforce and to develop the next generation of program leaders; it explained the importance and reasons from an organizational and an employee perspective in terms of increased efficiency and individual engagement. Part I introduced a process to follow to understand the requirements of the program manager role; and it defined competencies, a key to understanding any role as well as any development effort. Part II addresses the challenges faced when defining program management, and details the process for creating a complete understanding of the program manager using a "success profile" structure with the required competencies.

Challenges in Defining Program Management

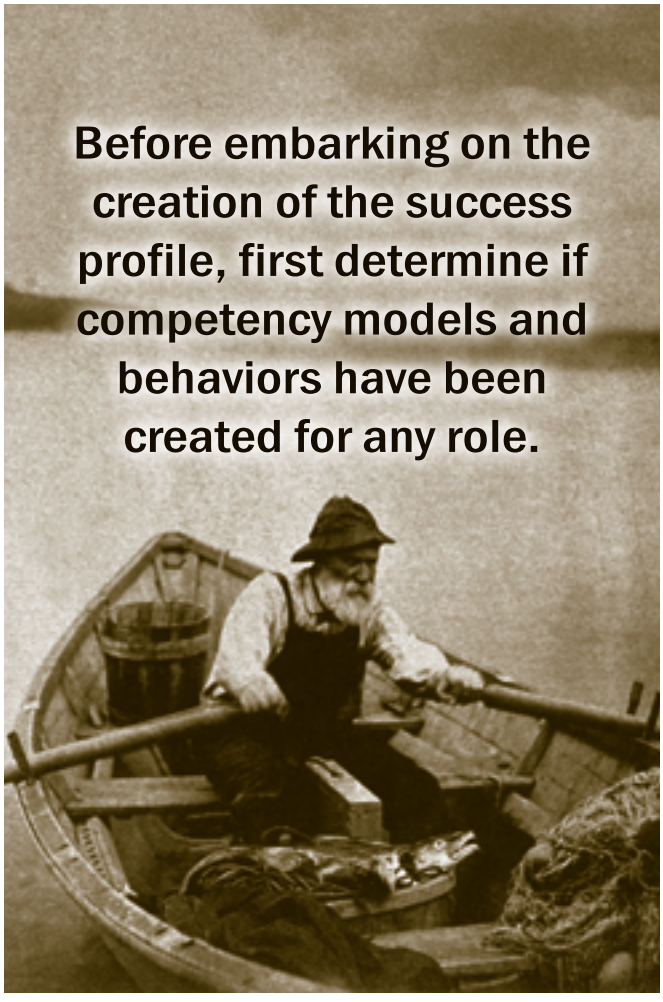
The following three challenges frequently occur when trying to understand the program manager role and competencies.

Is it Project or Program Management?

The first challenge is to understand whether the success profile is for a project or a program manager or both. Does the organization have a clear distinction between project and program management? Many organizations do not put the necessary time and effort into clearly distinguishing between the two. In such instances, there is often a hodge-podge of titles and grade levels, so in one location or function, program managers have lower grade levels and work on smaller, more discrete initiatives than project managers in the same organization in other locations and functions. It's important to have a clear concept in mind about the role in question when beginning the competency modeling process and to find those individuals who most closely align with that concept, rather than trying to work through titles, grade levels, or other potentially misleading information.

Is There Organizational Function or Industry Specificity?

A second challenge is determining if the success profile and competencies (most especially, the practices) are the same across the variety of programs within the organization. If the organization is fairly large and services a variety of industries, the responsibilities, tasks, and challenges may vary by the industry or function. If they vary, it is also possible that the competencies required for successful performance will vary. For example, how Earned Value is calculated may differ in the government sector versus private industry. As an example of an organizational functional distinction, information technology practices for program manager competencies may be intertwined with ISO 9000 processes [*ISO 9000 is a group of International Organization for Standardization standards for quality management systems*]; whereas human resources practices for program manager competencies



Kroecker *develops programs for the assessment and promotion of project managers to program managers in a variety of organizations and has a doctorate in industrial/organizational psychology.*

may be more influenced by Equal Employment Opportunity Commission guidelines. In instances where competencies vary significantly, it will be necessary to capture the distinctions and make it clear as to when the competency (or practice) is and isn't appropriate.

Is There an Existing Organizational or Leadership Competency Model?

Before embarking on the creation of the success profile, first determine if competency models and behaviors have been created for any role, but most especially for executive leadership roles within the organization. If so, these existing competency models are a significant resource to call on in the development of a program manager model. In addition, these other competency models can be used to create overlap to allow for a potential career path from the program manager role to senior executive or other roles within the organization.

Responsibilities	Challenges	Functional Competencies	Professional Competencies
• Apply understanding of customer business • Build customer relationships • Communicate with team • Educate customer • Identify opportunities for improvement • Manage PLC process • Manage resources • Schedule and track projects • Translate customer objectives to strategy	• Improving delivery to internal/external customers • Attracting, recruiting, and retaining good people for the program • Developing people (technically and non-technically) • Improving productivity (i.e., doing more with less) • Communicating across organizational boundaries • Managing a geographically dispersed workforce • Managing performance problems • Leading and managing change • Setting program and personal priorities	• Earned Value Management • PM innovation • Risk assessment mitigation	• Analytical thinking • Business acumen • Communication skills • Customer focus • Decisiveness • Drive for results • Flexibility

FIGURE 1. **Sample Program Manager Success Profile**

Creating the Program Manager Success Profile

The following are the steps for creating a Program Manager Success Profile with competencies.

Interview Senior Leaders and Stakeholders about Business Strategy

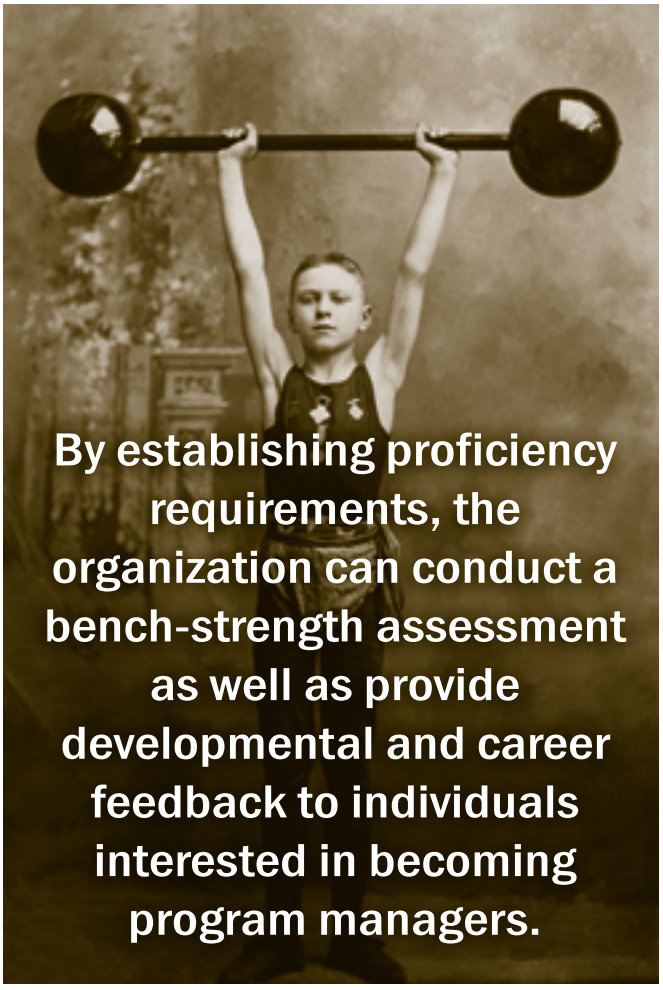
The first step in creating a success profile with competencies is to interview senior leaders and key stakeholders (who may include key customers). These interviews accomplish several things. One is achieving a perspective on the three-year organization strategy and understanding the program manager's role in the achievement of that strategy (e.g., he or she may play a key role in achievement of profit levels, strategic customer accounts, or the creation of new products or services). Another benefit is gaining an understanding of the stakeholders' perspective on the most important responsibilities and competencies of program managers to use as a draft outline of the job itself. Such an outline will also serve as a way of determining if senior leaders and program managers have the same ideas of what is important about the job. The third—and perhaps most important thing gained by interviewing senior leaders and stakeholders—is getting their support and buy-in to the success profile with competencies and to any resulting development programs. Few major initiatives within an organization are successful and survive without senior leadership input, support, and championship.

Identify High-performing Program Managers

The conversations with senior leaders and stakeholders are also used to identify high-performing program managers. These people will be the best of the best, the men and women you would want to have every program manager emulate. These stars may have varying styles, but they are the ones who are sought after to lead the most important and challenging programs and initiatives. In order to create a draft list of program managers to interview, try to combine the nominations from these interviews with information from performance ratings or human resources information systems. It is important to strike a balance between the nomination process and the use of human resources information systems and/or performance rating databases. If only the nominations are used, the resulting number of interviews may be too few. If only performance ratings or human resources information systems are used, it may serve up more individuals than would be useful.

Conduct Interviews with High-performing Program Managers

Once a pool of high-performing program managers has been identified, the next step is to conduct a standard-



ized, structured interview with each of them. Each program manager is asked to provide a description of his or her key responsibilities and tasks, describe the major difficulties or challenges of the job, provide an idea of what competencies or skills contribute to success, and offer any insight into what sorts of development experiences helped him or her to develop needed skills.

A critical component of the interview is the key event or "war story" section. This involves asking the program manager to describe an event, project, program, or incident where he or she was either particularly challenged or where there were significant chances of failure, but he or she managed to turn the situation around. Using the story to ground the program managers in real situations allows for the capture of concrete examples of exactly what people said, did, and thought. That information can then be used to teach others how to best respond to, or avoid, similar situations.

Analyze Leader and Program Manager Interview Information

Analyzing the leader and program manager interviews requires that patterns, themes, or categories be identified and written up at a high enough level that they would be applicable and meaningful to all of the individuals in the role of program manager. Differences by geography, grade, or organizational level, functions, or other key demographics are also noted so that the competencies and success profiles can be customized where it is essential to do so. Compare what the senior leaders and program managers say about the jobs to make sure that similarities are acknowledged and significant differences are addressed.

Draft Success Profile and Competencies

Once the data are analyzed and summarized, a draft Program Manager Success Profile with competencies can be created. The success profile is a one-page document that highlights the key responsibilities, challenges, and competencies for the program manager role (Figure 1 on the previous page). The competencies should be the most important and include behaviors that describe successful performance in the role: for example, analytical thinking; business acumen; communication skills; customer focus; decisiveness; drive for results; flexibility; innovative problem-solving; interpersonal astuteness; planning and organizing; self-confidence; skillful influence; strategic thinking; team building and leadership; vision and direction. Figure 2 gives an example definition of a competency and the behaviors associated with it.

Validate the Success Profile

Once drafts of the competencies and success profile have been created, it is necessary to validate them with a larger group to ensure that they are well-defined and appropriate for the role. The validation process ensures that all of the key responsibilities, challenges, and competencies are identified and meaningful to the greatest majority of individuals in the role of the program manager. It ensures the success profile is clearly related to successful performance in the program manager role, and it enables use of the success profile as a training and development tool.

The validation process can use one or several methodologies. If the organization is relatively small, it is best to

Vision and Direction…

Creates a clear view of the future that mobilizes people to focus efforts and work toward key goals on the program.

- Communicates a clear and compelling vision for the program
- Provides clear goals and expected results to program team members and challenges them to determine how best to accomplish them
- Communicates positive expectations that challenging program goals can be accomplished
- Keeps team members focused on program vision and goals as they deal with problems, obstacles, or changes

FIGURE 2. **Sample Program Manager Competency**

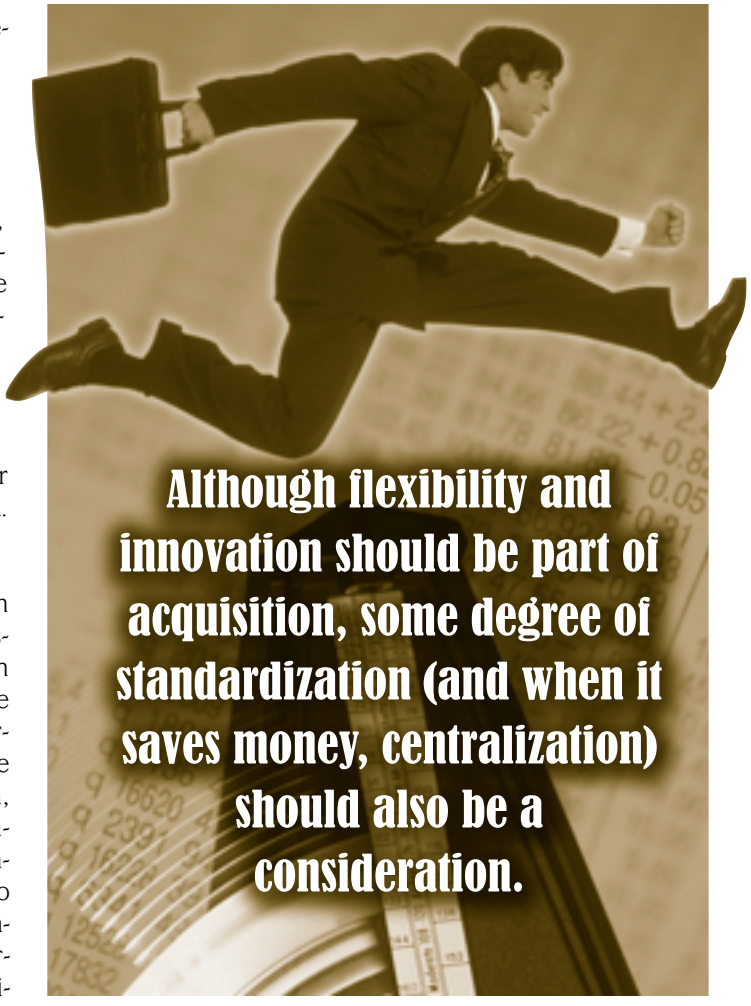
have individual conversations with senior leaders, stakeholders, a subset of interviewed program managers, and program managers who were not interviewed (but are still high performers). Including these individuals in the validation process enables the review of what has been summarized; demonstrates that they were heard; and allows for the clarification of any issue, controversy, or differentiation by level, function, or geography. Including high-performing program managers who have not been interviewed in the validation process helps ensure the findings apply to a broader audience. If the organization is relatively large, it is necessary to use a more structured process to validate the competencies and success profile—focus groups or online surveys can enable validators to review each component, rate it for accuracy or importance, and capture additional feedback.

Establish Proficiency Requirements

Proficiency requirements indicate how skilled program managers need to be on different competencies. By establishing proficiency requirements, the organization can conduct a bench-strength assessment as well as provide developmental and career feedback to individuals interested in becoming program managers. To establish the proficiency levels, first determine the scale (e.g., high, medium, low, no knowledge or skill). Then use a consensus-driven focus group process (composed of high-performing program managers or their supervisors) to review each of the competencies and determine the minimum proficiency level required for successful performance in the role. The individuals providing the proficiency ratings need to use the full range of whatever proficiency scale is involved and assign high proficiency levels only to those competencies where it is truly critical for job success to have high capabilities. People in focus groups or those being interviewed will often state that it is necessary for program managers to be highly proficient in all of these competencies; but it is necessary for them to think through this process carefully so that the proficiency information will have meaning and can guide people's learning. For example, the competency of "influencing senior stakeholders" may exist in both the Program and Project Manager Success Profile, but in this instance, because program managers are more likely to need and use this competency, they would require a higher level of proficiency than project managers. Assigning the highest required proficiency level to only the most important or consequential competencies will create targeted training to develop successful program managers.

The last article in this three-part series will explore the alternatives available when creating a program manager development program.

The author welcomes comments and questions. Contact him at tkroecker@cambriaconsulting.com.



"Pendulum Swing" continued from page 32.

There are acquisition boilerplates floating around and being reused, but they are often neither tailored appropriately nor current. The acquisition community needs clear guidance with logical updates, as well as boilerplates that are kept current by subject matter experts. The Department of Defense needs to make this investment before all those with the institutional knowledge have retired, leaving behind—at best—professionals guess-timating their way through the mysterious maze of acquisition. Although flexibility and innovation should be part of acquisition, some degree of standardization (and when it saves money, centralization) should also be a consideration.

In the end, there's never any mistake so horrible that we can't learn from it. So let's take a lesson from the past and never again swing the pendulum from one extreme to the other. Instead, let's strive to keep it somewhere in the middle, where acquisition is based on a balance of policy-driven processes and the accumulated knowledge and experience of many mentors.

The author welcomes comments and questions. Contact her at lisa.kove@navy.mil.

Meet the AT&L Workforce

Parker A. Quigley
Naval Acquisition Intern Program (NAIP), Recruiting Team Leader
Naval Acquisition Career Center, Mechanicsburg, Pa.

What does your job entail?
I am responsible for hiring 300 new interns each year at 49 different duty sites and 80 participating Navy and Marine Corps training locations to meet Department of the Navy future acquisition workforce human capital requirements. Our primary recruiting focus is on campus at 200+ colleges and universities. The typical new hire has at least a bachelor's degree with a 3.0 grade point average. Nearly half the positions are professional engineering in a variety of specialties, but we also fill other positions, such as contract specialist, logistics management specialist, financial systems analyst, and operations research analyst.

What do you find most fulfilling about your job?
Being able to operate with a great degree of independence and working with great team members. It is also very fulfilling to accomplish our hiring goal and to know that I have played a role in producing the future Department of the Navy acquisition leaders.

And what do you find most frustrating?
Dealing with selecting officials who procrastinate or fail to initiate action to fill their NAIP vacancies.

What do you think makes you successful at what you do?
I think it's many things, like working with good people; being given sufficient resources; taking changes in work assignments, automation initiatives, work methods, etc., as personal challenges to excel; and having solid upper management support.

What are your interests and pastimes when you're not at work?
I enjoy fishing, cooking, traveling, swimming, and walking. I also love spending time with my family, especially my granddaughters and friends at our shore home in South Jersey.

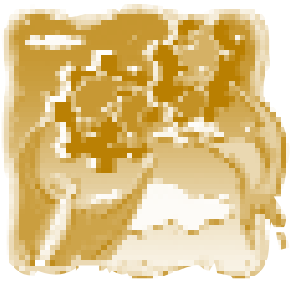
Is there anything unusual or interesting about you that you'd like to share with us?
Yes, I have nearly 40 years of federal service including 35 years in federal human resources and still enjoy my work each day. In September 2006, I was awarded the Navy Meritorious Civilian Service Award for outstanding accomplishments as the team leader for the total reengineering of the Naval Acquisition Intern Program recruitment process.

Do you have an employee you'd like to see recognized in *Meet the AT&L Workforce*?

Send us the name, military rank (if appropriate), job title, defense agency/Service affiliation, and home or business mailing address, plus the employee's responses to the italicized questions above. Please include your own contact information, and spell out all acronyms. We will contact you only if your nominee is selected for publication. Profile responses may be edited.

E-mail information (preferably in a Word file) to datl(at)dau(dot)mil (use correct e-mail format—our spelled-out form is to discourage spam generated by the online magazine).

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



In the News

ARMY NEWS SERVICE (OCT. 26, 2006)
FCS OPENS TEST COMPLEX AT WHITE SANDS MISSILE RANGE

Miriam U. Rodriguez

WHITE SANDS MISSILE RANGE, N.M.—Soldiers, civilian employees, and media representatives got a look at the future of warfighting when a robot did the honors of cutting the ribbon at a grand opening for the Future Combat Systems Test Operations Complex at White Sands Missile Range Oct. 23.

"The FCS Test Operations Complex performs a vital role in our Army modernization strategy," said Maj. Gen. Charles Cartwright, FCS program manager. "By this time next year, we will have new FCS equipment in Abrams tanks and Bradley fighting vehicles."

Part of the Army's modernization program, FCS consists of a family of 18 manned and unmanned ground and aerial vehicles linked through an advanced information network in support of the soldier.

FCS is more than a program. "It is a strategy for how to modernize the Army and bring new network-capable technology before our soldiers by providing them with the information they need on the battlefield—information that will keep them safe, information that will allow them to get their jobs done and allow them to get back home," said Dennis Muilenburg, who heads the FCS effort for Boeing in its role as the Lead Systems Integrator for the Army.

An Evaluation Brigade Combat Team is being stood up at WSMR and at Fort Bliss, Texas, to move FCS from development to testing.

Major experimentation activities are already under way, he said. Experiment 1.1, the first major field event, will put sensors and unmanned air and ground systems into soldiers' hands. Soldiers will then give engineers personal input on what works well and what needs improvement.

"Army modernization truly is about the soldier," said Cartwright. "We see that in both the design and execution of the FCS program.

ARMY NEWS SERVICE (OCT. 31, 2006)
ARMY FIELDS ITS FIRST LIGHTWEIGHT HOWITZER

Edward Murray • Martin Kane

PICATINNY ARSENAL, N.J.—With the recent delivery of 18 new M777 lightweight 155mm howitzers to the Army's 2nd Battalion, 11th Field Artillery, at Schofield Barracks, Hawaii, the King of Battle—the field artillery's nickname—took a giant step forward.

The M777 is the military's newest field artillery weapon, a lightweight 155mm towed howitzer developed jointly by the Army and Marine Corps. It will be the artillery system for the Army's Stryker Brigade Combat Teams.

The program is managed by a Joint Service program office here. The weapon systems themselves are manufactured by BAE Systems with final integration and assembly occurring at the firm's Hattiesburg, Miss., facility.

The M777 is the first ground-combat system to make extensive use of titanium in its major structures to trim weight; the howitzer is 7,000 pounds lighter than the M198 weapon it replaces.

"The weight reduction improves transportability and mobility without impacting range or accuracy," said joint program manager James Shields.

Shields said the system will be compatible with the entire family of 155mm ammunition, including the Excalibur precision munition when it is eventually fielded.

The 2-11 FA is part of the Army's fifth Stryker Brigade Combat Team. It recently completed new equipment training and a live-fire battalion exercise using the basic M777 system at Pohakuloa Training Area on the Big Island of Hawaii.

Prior to receiving the M777, the 2-11 FA was an exclusively 105mm battalion that was equipped with the M119 howitzer.

The M777 has the deployability advantages of a lightweight system like the M119, but the firepower of a 155mm weapon like the larger M198. Two systems can be transported on a C-130 at the same time.

The new howitzers have returned to Schofield Barracks, where they will be retrofitted with a digital fire control system (DFCS) in January to become M777A1s. The DFCS will provide the howitzer with the capability to communicate, navigate, and aim—an upgrade that will increase accuracy and responsiveness.

Soldiers from 2-11 FA said they were pleased with the new weapons and look forward to the added capabilities provided by the DFCS upgrade.

Murray and Kane are on the staff of The Picatinny Voice.

AMERICAN FORCES PRESS SERVICE (NOV. 8, 2006)

NEW PROGRAM PAYS OFF FOR DEFENSE LOGISTICS AGENCY'S MILITARY CUSTOMERS

WASHINGTON—Some military maintenance depots got parts and supplies faster and cheaper, and America's military services got refurbished equipment returned sooner, thanks to a pilot program called "Customer Pay."

The program demonstrated early dividends supporting the rebuilding of Army High-Mobility Multipurpose Wheeled Vehicles, commonly known as Humvees.

Customer Pay, a partnership between Defense Department elements and a defense contractor, pays contractors and suppliers at the point of delivery. That reduces the need for millions of dollars of Army inventory and lowers prices for spare parts. Additionally, supply chain costs are reduced since management at the production line minimizes handling by government personnel.

The concept was developed in a pilot program involving Army Tank-automotive and Armament Command, Defense Logistics Agency and its field activity Defense Supply Center Columbus, AM General Corp., two Army maintenance depots, and the Maine Military Authority. Results from the pilot show dramatically increased performance support and greatly reduced costs to rebuild Humvees.

"Customer Pay is a vivid glimpse of our future. [It] will be seen as a pioneer in DLA's support to the Services' industrial sites by leveraging the relative strengths of our industry, Service, and DLA partners. It has brought new efficiency and effectiveness to our logistics solutions," said James McClaugherty, deputy commander of Defense Supply Center Columbus.

Customer Pay required DSCC personnel to adjust their thinking, Eric Tranter, chief of DSCC's Tactical Vehicles Support Division, said. "To best understand the challenges of Customer Pay, you have to think retail support, not the usual DLA wholesale approach," he said. "This equates to constantly working with the people at the various depots and maintenance sites … providing responses within hours and actual support in a few days. All of our people have done a great job making this happen because they applied a retail focus to their work with urgency and flexibility. If you take a business as usual approach to anything such as Customer Pay, it won't work."

The contractor, AM General, took over tasks formerly managed by government employees: requirements forecasting, supply chain and inventory management, parts requisition from the DoD supply system, parts distribution to maintenance lines, identification of quality issues, and more. The maintenance depots—Letterkenny Army Depot, in Chambersburg, Pa.; Red River Army Depot, in Texarkana, Texas; and Maine Military Authority, in Limestone, Maine—were able to focus on the actual rebuilding of vehicles instead of inventory needs.

DSCC is the DLA program manager for the process, awards and administers the contract, and is the parts integrator and source of supply to the contractor and the maintenance depots. TACOM is the Customer Pay program manager, the source of supply to AM General, the initial production test lead, the weapons system and rebuilding manager, the centralized e-business manager, and a funding source.

The changes allow DoD to use the most cost-effective sources in the supply chain for spare parts and then provide a backup supply chain in case of support problems. This safety net creates a significant reduction of inventory while improving supply support performance.

AM General is required to maintain a 30- to 60-day supply of the 1,241 parts included in the pilot project. Results show that supply level seemed to work. The rate of incomplete vehicles dropped by 83 percent at Red River Army Depot and by 100 percent at Letterkenny Army Depot. The dual supply chains prevented parts outages on the line and addressed the challenge posed by a change in 45 percent of the items used to support each depot.

Thanks to Customer Pay, almost $820,000 was saved in reduced depot supply chain manpower expenses in just over three months last winter. Leveraging the two supply chains reduced spare parts costs, and the total cost of refurbishing the vehicle was reduced.

"The value of Customer Pay is that it allows DLA and the Army depots to move past just coordinating parts support for a Humvee production line to being interdepen-

dent partners," said Army Col. Scott D. Fabozzi, director of DSCC's Land Customer Operations.

The contract was awarded Nov. 1, 2005, and implemented just 78 days later at Letterkenny and Red River. During the pilot, AM General provided 4.1 million parts to the production lines from the 1,200-plus national stock numbers managed under Customer Pay. The depots produced more than 6,029 vehicles under the program, with only 179 coded as incomplete, or G-coded, early in the program at Red River.

Before Customer Pay, both depots had vehicles that were incomplete on a daily basis. At one point, that backlog exceeded more than 1,300 incomplete vehicles. Under Customer Pay's best business practices approach, the Army's G-coded problems with its Humvee lines have been significantly reduced and, in many cases, eliminated.

The Customer Pay partnership helped Letterkenny earn the Shingo Prize for excellence in manufacturing in the public sector. That prize is named for the Japanese industrial engineer who helped create the Toyota Production System. Customer Pay has also been nominated for the President's Quality Award and the DLA Top 10 Award.

DSCC serves more than 24,000 military and civilian customers and 10,000 contractors as one of the largest suppliers of weapon systems parts in the world. DSCC buys materiel, monitors inventory levels, maintains technical data, and assures quality conformance of spare parts, which vary from such common items as vehicle parts and accessories to complex mechanical and electronic repair parts for weapon systems.

DLA provides supply support, and technical and logistics services to the U.S. military services and several federal civilian agencies. Headquartered at Fort Belvoir, Va., the agency is the one source for nearly every consumable item, whether for combat readiness, emergency preparedness, or day-to-day operations.

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 14, 2006)
DEPARTMENT OF DEFENSE AND NETHERLANDS SIGN NEXT STAGE JOINT STRIKE FIGHTER AGREEMENT

Deputy Secretary of Defense Gordon England and the Netherlands Deputy Secretary for Defence Cees van der Knaap signed a Memorandum of Understanding (MOU) Nov. 14 to begin future cooperation in the production, sustainment, and follow-on development (PSFD) phase of the Joint Strike Fighter (JSF) Program. The Dutch, who are already contributing $800 million to the JSF Program's development phase, plan to buy 85 conventional take-off and landing variants of the Joint Strike Fighter during the production phase.

"This is a major milestone in the long-standing friendship and partnership between the Netherlands and the United States, and I thank the Dutch military and government for the strong leadership and close friendship," said Deputy Secretary of Defense Gordon England. "Our shared investment in the Joint Strike Fighter will pay important dividends for the security and freedom of both our nations for many years in the future."

The PSFD MOU provides a framework for future JSF Program efforts in production and beyond, and will extend cooperation beyond the current JSF System Development and Demonstration (SDD) MOU among the United States and the other eight JSF partner nations: the United Kingdom, Italy, The Netherlands, Turkey, Canada, Denmark, Norway, and Australia. The Netherlands joined the SDD MOU in June 2002, and has been part of the JSF program since 1997.

This agreement further strengthens the commitment between the United States and The Netherlands as the JSF program moves forward into the production and support phase. It will also impact across the entire spectrum of the U.S.-Dutch defense relationship in terms of air dominance, interoperability, defense transformation, modernization, cost reduction, acquisition excellence, and the health of U.S. and Dutch industrial bases.

Other JSF partner nations are anticipated to sign the PSFD MOU between now and the end of December 2006. This will support commencement of cooperative production, sustainment, and follow-on development efforts by all nine partner nations in January 2007.

The Joint Strike Fighter, the largest ever U.S. DoD acquisition program, continues to set new standards in development of manufacturing technologies, acquisition and business practices, technology transfer, and export licensing. The first flight test is expected for December 2006.

Once the PSFD MOU signing process is completed, the partners will cooperatively develop, produce, test, train, and operate a Lightning II JSF Air System that will en-

F-35 Joint Strike Fighter
Image courtesy Lockheed Martin

hance the interoperability, survivability, and affordability of allied future forces.

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 15, 2006)

DOD RELEASES SELECTED ACQUISITION REPORTS

The Department of Defense has released details on major defense acquisition program cost, schedule, and performance changes since the June 2006 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the September 2006 reporting period.

SARs summarize the latest estimates of cost, schedule, and performance status. These reports are prepared annually in conjunction with the president's budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent compared to the current Unit Cost Reporting (UCR) baseline and at least 30 percent compared to the original UCR baseline, or schedule delays of at least six months since the previous report. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are rebaselined at major milestone decisions.

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

The current estimate (shown below) of program acquisition costs for programs covered by SARs for the prior reporting period (June 2006) was $1,612,605.8 million. After subtracting the cost for one final report (Active Elec-

tronically Scanned Array (AESA)) and adding the costs for one new program (C-5 Avionics Modernization Program (AMP)) from the June 2006 reporting period, the adjusted current estimate of program acquisition costs was $1,612,885.2 million.

For the September 2006 reporting period, there was a net cost increase of $4,824.9 million (+0.3 percent), due primarily to revised cost estimates for the Global Hawk and the Chemical Demilitarization (Chem Demil)-Assembled Chemical Weapons Alternatives (ACWA) programs.

For the September 2006 reporting period, there were quarterly exception SARs submitted for five programs. The reasons for the submissions are provided below.

Army

Longbow Apache Block III (AB3)—This is the initial SAR submission following program initiation at the Milestone B decision in July 2006.

	CURRENT ESTIMATE ($ IN MILLIONS)
June 2006 (87 programs)	**$1,612,605.8**
Less final report on one program (AESA)	-579.9
Plus one new program (C-5 AMP)	+859.3
June 2006 Adjusted (87 programs)	**$1,612,885.2**
Changes Since Last Report:	
Economic	$ +14.1
Quantity	0.0
Schedule	+116.9
Engineering	+347.1
Estimating	+3,696.8
Other	0.0
Support	+650.0
Net Cost Change	$+4,824.9
September 2006 (87 programs)	**$1,617,710.1**

Light Utility Helicopter (LUH)—This is the initial SAR submission following program initiation at the Milestone C decision in August 2006.

Air Force

Global Hawk—The SAR was submitted to report a schedule slip of more than six months. The Operational Assessment Complete date slipped from June 2006 to March 2007 in accordance with the Acquisition Decision Memorandum (ADM) issued subsequent to the Nunn-McCurdy certification in June 2006. Program costs increased $1,676.4 million (+21.4%) from $7,815.7 million to $9,492.1 million due, primarily to higher cost estimates to complete System Development and Demonstration (SDD) (+$225.7 million); a schedule extension of two additional years of aircraft and sensors (FY12 and FY13) (+$116.9 million); inclusion of all retrofit activities consisting of aircraft, ground station support equipment modifications (i.e., Joint Tactical Radio System (JTRS), Family of Beyond Line of Sight Terminals (FAB-T), Sense and Avoid, etc.) not previously reported in the SAR (+$339.9 million); costs associated with the activation of an organic depot capability as well as increased support requirements (+$567.2 million); and higher estimated costs for completion of the Advanced Signals Intelligence Payload (ASIP) and Radar Technology Insertion Program (RTIP) (+$343.9 million).

Mission Planning System (MPS)—The SAR was submitted to report schedule slips of more than six months, specifically Increment II Full Deployment Decision Review (FDDR) slipped from June 2006 to April 2007, the Increment III FDDR slipped from May 2007 to May 2008, the Increment IV Milestone B slipped from February 2006 to March 2007, the Increment IV FDDR slipped from June 2008 to August 2009, and Increment V Milestone B slipped from February 2008 to December 2008. These slips were due primarily to software development problems, a restructuring and consolidation of the program software releases, and the incorporation of risk reduction efforts. Program costs decreased $209.1 million (-11.7%) from $1,788.5 million to $1,579.4 million, due primarily to the transfer of Operations and Maintenance funding to legacy program and the elimination of non-acquisition related funds.

DoD

Chemical Demilitarization-Assembled Chemical Weapons Alternatives (ACWA)—The SAR was submitted to report a Nunn-McCurdy unit cost breach to the program. That is, the Program Acquisition Unit Cost (PAUC) has increased by more than 25 percent compared to the current baseline estimate of April 2003. Program costs increased $3,357.6 million (+72.8%) from $4,611.6 million to $7,969.2 million, due primarily to the availability of more detailed historical data and the matura-

tion of program designs, both of which contribute to the development of a more accurate estimate.

New SARs (As of September 2006)

The Department of Defense has submitted initial SARs for the Longbow Apache Block III (AB3) and Light Utility Helicopter (LUH) programs. These reports do not represent cost growth. Baselines established on these programs will be the point from which future changes will be measured. The current cost estimates are provided below:

	CURRENT ESTIMATE ($ IN MILLIONS)
Program	
Light Utility Helicopter (LUH)	$ 1,883.0
Longbow Apache Block III (AB3)	8093.9
Total	**$9,976.9**

PROGRAM EXECUTIVE OFFICER (PEO) SOLDIER (NOV. 20, 2006)
ARMY TO SOON DEPLOY TROOPS WITH COMPUTERIZED EQUIPMENT

WASHINGTON—Following successful field testing last summer, the Army is planning to deploy its new Land Warrior System within the year, bringing the Army a giant step closer to electronic networking of the battlefield.

The wearable, computerized system includes lasers, navigation modules, radios, and other technologically advanced equipment to help soldiers shoot, move, and communicate more accurately on the battlefield. Ultimately, it will improve their ability to fight effectively and survive.

Testing of the Land Warrior package was conducted over a three-month period by the 4th Battalion, 9th Infantry Regiment, 4th Stryker Brigade Combat Team, 2nd Infantry Division, at Fort Lewis, Wash. It culminated in an Army Evaluation Command Limited User Test in September and October.

"The '4-9' has been training for anticipated deployment next summer. Based on assessment results, it looks like we will deploy with the new Land Warrior and Mounted Warrior systems," said Lt. Col. Bill Prior, battalion commander.

For the first time, infantry troops will be carrying digital gear that will help address some of the chronic difficulties for soldiers on the ground, such as locating other soldiers, identifying the enemy, and getting the latest orders.

"Thanks to the successful demonstration at Fort Lewis, we now have the first Army unit ready to go real-world operational with Land Warrior capabilities," said Brig. Gen. Mark Brown, Program Executive Office Soldier commander. "Land Warrior marks the path forward to a more capable, lighter-weight ground soldier system. The leadership of the Army takes great pains and great care to ensure that our soldiers are well equipped, well trained, and well organized to accomplish the mission that the nation sends them on."

During the comprehensive Land Warrior assessment, Fort Lewis soldiers were equipped with 440 Land Warrior Systems, as well as 147 Mounted Warrior Systems designed for combat vehicle crewmen. For the first time ever, large-scale map displays were used to show soldiers their location, the location of their buddies, vehicle locations, known enemy positions, and up-to-the minute mission plans and orders.

Weapon systems equipped with multifunctional laser sights, day- and night-vision feeds, and direct connectivity to the Land Warrior and Mounted Warrior networks increase the soldiers' combat effectiveness while minimizing exposure to the enemy. Precise navigation and real-time, common situational awareness were shown to substantially reduce the risk of fratricide or surprise enemy attacks.

AIR FORCE PRINT NEWS (NOV. 20, 2006)
JOINT TACTICAL RADIO SYSTEM FIELDED SOON

WASHINGTON—The Air Force is about to enter a new era in communications technology. Officials at the Electronic Systems Center at Hanscom Air Force Base, Mass., have signed a $7.8M contract with Thales Communications, Incorporated, for the delivery of the first Joint Tactical Radio System radios to the Air Force.

More than 1,200 JTRS-enhanced multiband inter/intra team radios, known as JEM radios, will be delivered to civil engineer explosive ordnance disposal units, security forces, and air support operations squadrons across the Air Force. The radios will provide communications for convoy operations and enhance interoperability with the Army.

JTRS is a Defense Department-mandated, software-defined radio development program. A key element of the JTRS program is the network-centric capability it will provide to the warfighter.

JTRS eventually will bring Internet-like capabilities to the battlefield, enabling the transfer of voice, data, and video between Air Force and joint users alike.

Another significant feature is the ability of JTRS radios to "port" and operate various waveforms. Porting refers to loading of a software application that emulates the capabilities of legacy radios in use in the field today.

In short, if a user needs to talk to an Air Force aircraft using a specific waveform, that waveform is loaded into the radio. If later, that same user needs to communicate with an Army convoy unit using a completely different waveform, then that waveform is loaded into the same radio.

This capability gives the warfighter interoperability in a joint environment without the need to carry and maintain numerous different types of radios.

The JEM being delivered to the Air Force, while not network capable, will provide the interoperability aspects the JTRS program is seeking to fulfill. Aside from the basic ultra high frequency and very high frequency AM voice waveforms, the JEM will work in several frequency-hopping modes, plus is capable of porting future JTRS waveforms within its operating range. Deliveries will begin later this year.

This delivery of radios is just the first installment of a multi-year migration to JTRS. The Air Force's path to JTRS is documented in the Air Force JTRS migration plan. This document, compiled by the Air Force Command and Control Intelligence, Surveillance, and Reconnaissance Center JTRS lead command office, was originally signed Dec. 29, 2003.

The JTRS lead command office has conducted numerous data calls throughout the Air Force to determine what requirements exist, validated those requirements through the major commands, and documented them in the migration plan. Version 2 of the migration plan is currently being staffed through the major commands, and is expected to be signed before the end of the year.

AMERICAN FORCES PRESS SERVICE (DEC. 4, 2006)

"NOTHING HAPPENS UNTIL SOMETHING MOVES" ILLUSTRATES TRANSCOM MISSION

Jim Garamone

SCOTT AIR FORCE BASE, Ill.—A Post-it® note over one of the computers in the Deployment and Distribution Operations Center at Scott AFB says, "Nothing happens until something moves."

You get a feeling for this saying and the mission of U.S. Transportation Command at the Balad Air Base-Anaconda Logistics Support Area complex in Iraq. Located northwest of Baghdad, the complex is the heart of logistics for coalition forces in Iraq. In 2003, it was a runway, some bombed buildings, and dust. Today, it is a military city, with C-17s offloading cargo, C-130s picking up goods, a full Level-3 trauma hospital, and convoys bringing all the "beans and bullets" servicemembers need to operate in a challenging environment.

But scratch the surface and you realize it's more than just the fact that goods are delivered to a combat area. What is the infrastructure behind the move? How do people on the ground know what is on the plane or in the convoy? How do they know where to send the goods once they arrive? How do they even know what is available in-country?

U.S. Transportation Command is a unified command that oversees military transportation around the world. Three Service components work through the command: the Navy's Military Sealift Command, the Air Force's Air Mobility Command, and the Army's Military Surface Deployment and Distribution Command. In addition, the command coordinates commercial air and sea missions that help support deployments around the world.

TRANSCOM synchronizes the various means of delivering combat power. For example, an Army brigade moving to Iraq has certain transportation needs. Heavy equipment may leave the base by train. It moves to a port of embarkation and loads aboard a ship. The ship steams

A U.S. Navy sailor removes cargo netting from supplies received aboard *USS Abraham Lincoln* (CVN 72) during an underway replenishment with fast combat support ship *USNS Rainer* (T-AOE 7) July 17, 2006.

U.S. Navy photograph by Mass Communication Specialist Seaman James R. Evans

to the port of debarkation and off-loads. The equipment may then load aboard a heavy equipment mover for the trip to the staging base.

While this is going on, soldiers load transport containers with supplies, and trucks may haul those to ports for delivery to the staging area.

Finally, the troops themselves must move. Buses may take these soldiers to commercial aircraft that bring them to an aerial port of debarkation where they then marry up with their equipment.

But even this doesn't capture all the complications inherent in moving 3,500 soldiers and all their equipment. Someone in Transportation Command has to assess whether runways are long enough for the transport aircraft and can bear the weight of the delivery, what kind of off-loading equipment is available at the seaport, what kind of diplomatic clearances the ships and aircraft need, what navigation aids are available, and what threats exist in the region.

And the ships and planes need fuel.

All this is with what TRANSCOM officials call a "mature" receiving area, such as Kuwait. And as people and supplies transit those receiving areas on their way to the front lines, usually a unit is redeploying to its home station at the same time.

Just for Operations Enduring Freedom and Iraqi Freedom, TRANSCOM has moved more than 3.4 million pas-

sengers and 8.3 million tons of dry cargo. It has moved more than 4 billion gallons of fuel. This has meant about 2 million truck and 143,000 railcar shipments, about 71,000 airlift missions, and 709 shiploads.

And this still doesn't capture the scope of the command, because the military operates in more than just the U.S. Central Command area of responsibility. Transportation Command has to meet the rest of the military's needs as well.

Nov. 17 was as good a day as any for a snapshot of the command. The Deployment and Distribution Operations Center was tracking 20 ships carrying Defense Department cargo. Another 20 ships carried DoD cargo in addition to commercial freight. This does not include tankers.

On that day, the center tracked more than 300 airlift missions and airlifted 6,880 passengers and 1,368 short tons of cargo around the world.

"We don't ever forget that we're a supporting—with an emphasis on the 'ing'—command," said Air Force Col. Doug Luhrsen, director of the operations center. "We work with the Services and the combatant commands to get them what they need, when they need it."

With all the transportation modes at its disposal, the command must make decisions on how best to send things. "It doesn't make sense to ship Abrams tanks on C-17s," said Craig Koontz, a spokesman for the command. "You ship those by sea."

Airlift is the most responsive and flexible transportation medium, Koontz said, and sometimes a mix of modes is needed. When it became apparent that Humvees in Iraq needed to be armored, he explained, the command sent a certain number of sets via air to get the process moving forward. Once those were delivered, TRANSCOM dispatched a ship with hundreds of sets of armor. The airlifted sets allowed the process to start, the sealifted sets allowed the process to continue. There was no pause or hold-up in placing the armor on the vehicles.

"Everyone is intent on providing the best service we can for the men and women in the combat zones," Luhrsen said. "That is our core. That is why we exist."

Garamone is with American Forces Press Service.

DEPARTMENT OF DEFENSE NEWS RELEASE (DEC. 7, 2006)

COMPARATIVE TESTING OFFICE ANNOUNCES PROJECTS FOR FISCAL 2007

The Department of Defense announces the selection of new projects being funded in Fiscal 2007 under the Comparative Testing Office's (CTO) Defense Acquisition Challenge (DAC) and Foreign Comparative Testing (FCT) programs.

The Services and the U.S. Special Operations Command (USSOCOM) nominated more than 85 projects for CTO funding consideration. Each proposed project was carefully reviewed by the Services, USSOCOM, and the Office of the Secretary of Defense to ensure that the mature equipment or technology addressed valid warfighter needs. Each project's Service sponsor also had to have a viable acquisition strategy to procure and field the equipment should it test successfully and offer the best value.

The DAC and FCT programs support the warfighter by leveraging mature equipment and technologies from domestic and coalition industry to satisfy U.S. defense requirements. Performance measures include accelerating the acquisition process, reducing development costs, and providing opportunities for the introduction of innovative and cost-saving technologies into existing defense acquisition programs.

By staying focused on the capabilities required for the global war on terrorism, DAC and FCT enhance interoperability with our coalition partners, strengthen defense relationships, and frequently serve as a catalyst for partnering between domestic and overseas defense industries.

The DAC program allows domestic industries, especially those that are not major defense contractors, to compete with current acquisition programs at the component, system or sub-system level. The FCT program demonstrates the U.S. commitment to the two-way street in defense procurement and the willingness of our allies and coalition partners to share their technology and compete in the U.S. defense market.

Of the 37 new FCT and DAC projects for fiscal 2007, nine are sponsored by the Army, 11 by the Navy and Marine Corps, eight by the Air Force, and nine by the USSOCOM. Additional information on the DAC and FCT programs is

available on the CTO Web site at: <http://www.acq.osd.mil/cto/>.

Defense Acquisition Challenge (DAC) and Foreign Comparative Testing (FCT) Programs

Army

FCT
- Lithium-Ion Polymer Batteries—Republic of Korea
- Real-Time Geospatial Information Sharing—Canada
- Secure High-Capacity Tactical Radio System—Sweden
- Type II Superlattice Focal Plane Arrays and Cameras—Germany

DAC
- 10kW Tactical Vehicle Inverter System
- Fiber Optic Gyro Rate Sensors for Combat Vehicles
- Improved Performance Environmental Control System
- Land Warrior Cable Connector System
- Portable Oxygen Concentrator for Patient Transport and Treatment

Navy and Marine Corps

FCT
- Deployable Instrumented Training System for Urban Warfare—Sweden
- Enhanced Underwater Breathing Apparatus—Canada, Italy, United Kingdom
- Mobile Oxygen Ventilation and External Breathing Apparatus—Canada
- Steel Strip Laminate Rocket Motor Case for 5-Inch Zuni Rocket—United Kingdom
- Tactical Paging Buoy for Submarine Communications at Speed and Depth—Canada, United Kingdom
- Waterjet Engine Qualification for Naval Combatants—Netherlands, Sweden

DAC
- AN/BSN—2 Digital Depth Detector
- Combat Rubber Raiding Craft Product Improvement
- Improved Loader's Weapon Station for M1A1 Main Battle Tank
- Non-Gasoline Burning Outboard Engine
- Portable Receive Communications Suite

Air Force

FCT
- Ceramic-Aluminum Engine Coating—Germany
- Helmet-Mounted Cueing System for A 10 "Warthog"—Israel
- Spatial Disorientation Trainer—Austria
- X-Band Synthetic Aperture Radar Satellite Data—Germany

DAC
- Angel Fire—Situational Awareness of Large-Area Urban Operations
- C2 Resource Management: Master Control Panel
- Cost-Effective Light Aircraft Missile Protection
- Low-Plasticity Burnishings to F-100 Engine

U.S. Special Operations Command (SOCOM)

FCT
- Anti-Material Rifle—Croatia, Republic of South Africa
- Hostile Forces Tagging, Tracking and Locating—Canada, France, Italy, United Kingdom
- Lightweight Deployable Universal Communications Systems—Sweden
- MK47 Crew-Served Weapon Trainer—Norway
- PSYOP Radio Broadcast Platform—Norway

DAC
- Crew-Served and Heavy Weapon Aiming Laser
- Improved Radio Frequency (RF) Micro-Chip Assemblies
- Lithium-Ion Battery System for SEAL Delivery Vehicle
- Modular Composite Armor Kits

A brief description of each project is available from the Public Affairs Office (media only), (703) 697-5131; Public Communications (non-media only), (703) 428-0711.

ARMY NEWS SERVICE (DEC. 11, 2006)
ARMY UNVEILS LIGHT UTILITY HELICOPTER UH-72A LAKOTA

Lt. Col. Martin Downie • Kim Henry

COLUMBUS, Miss.—Gen. Richard A. Cody, Vice Chief of Staff of the Army, and Joe RedCloud, a chief of the Oglala Sioux Tribe, Lakota Nation, accepted the Army's first Lakota Light Utility Helicopter, UH-72A, in a ceremony here today.

"The Light Utility Helicopter—from concept development to material fielding to rapid deployment—is not only serving as a catalyst for change across the Army, it is also accelerating the speed of Army aviation modernization and integration with other Services and government agencies," said Cody.

The Army has a long-standing tradition of using American Indian names, such as terms, tribes, and chiefs for its helicopters. In the case of the Lakota aircraft, the linkage is between the Lakota legacy as stalwart defenders

of their homeland and the nature of the aircraft's intended domestic missions.

"We're pleased that you honor our tribe by naming this helicopter Lakota. You are not only honoring our past, you are recognizing that we are still here, joint partners in the heritage of the promise of America." RedCloud told the audience.

The fielding of the LUH is part of an ongoing Army-level effort to transform its aviation capability through the deliberate reinvestment of funds from the canceled 2004 Comanche program.

The Army National Guard will receive the majority of the 322 new aircraft. Initial aircraft will be sent to the National Training Center, Fort Irwin, Calif., for medical evacuation missions in January 2007. The UH-72A Lakotas will replace UH-60 Black Hawks, which will be transferred to the National Guard for operational missions.

"The Lakota heralds a new beginning for our Army and for our communities across every state," said Cody. "It is our nation's responsibility and the Army's duty to provide our National Guard soldiers with the tools they need to respond fully and rapidly to homeland security missions and national disasters.

"This exceptional platform will fly for years to come in America's skies. It is an aircraft we needed, and we are proud to see it take flight," he said.

The UH-72A is a commercial aircraft designed to conduct light general support tasks in permissive, non-com-

The Army's new Light Utility Helicopter UH-72A Lakota will gradually replace the UH-60 Black Hawk.
Photograph by Dianne Bond

bat environments. Those tasks include civil search and rescue, personnel recovery, evacuation, counter-drug, and limited civil command and control operations in the conduct of Homeland Security.

Downie serves with the Office of the Chief Army Public Affairs, Henry with Army Aviation and Missile Command.

U.S. ARMY NEWS RELEASE (DEC. 13, 2006)

ARMY MOVING QUICKLY TO EQUIP AND RESET FORCE

The Army's current plan to equip and reset the force is ahead of schedule. With the entire $17.1 billion supplemental allocated by Congress at the beginning of fiscal year 2007, the Army has obligated $9.8 billion for reset—$4 billion has gone for depot and field-level repair, while $5.8 billion has been allocated for new procurements.

After the Sept. 29 signing of the bridge supplement, the Army moved at unprecedented speed to distribute funding; both operations and maintenance and procurement funds were released within six days of receipt. The rapid release of those funds allowed the Army to front load new procurements within the initial 90 days of the fiscal year. The majority of procurement funding will be obligated by February 2007. The Army will spend the entire $17.1 billion before the end of FY 07.

The Army has moved rapidly to restore battle losses and repair equipment through an aggressive reset program, despite entering the long war against global terrorism $56 billion short of equipment, as Army senior leaders have testified before Congress.

Additionally, the Army has had to quickly equip the Reserve Component as it transitioned from a strategic reserve to an operational force in meeting warfighting requirements. The Reserve Component has historically been underfunded in its equipping and modernization programs.

Across the country, Army depots, program managers, and headquarter staffs are expediting the reset plan. Depots' temporary and permanent workforces are increasing, further demonstrating the Army's unprecedented agility and flexibility in order to stay ahead of the dynamic and rapidly changing requirements of a ground force at war in some of the harshest conditions in the world.

To do that, the Army, with its industry partners, has implemented several initiatives to acquire, field, maintain, or reset thousands of pieces of equipment to include:

- Up-armored Humvees
- Rapid Equipping Force and Rapid Fielding Initiatives
- Aviation Survivability Equipment
- Radios
- Night Vision devices
- M4 Carbine rifles
- Improvised Explosive Device jamming devices
- Fragmentary armor kits
- Helicopters and tracked vehicles.

All timelines in the Army's plan have been designed with a full appreciation of unit rotation timelines and continued changing requirements from theater. The plan executes reset in synchronization with unit training and deployment schedules.

To ensure continued, rapid execution of our reset program, proper management and oversight procedures are in place. The Army remains committed to and has applied resources aggressively to maintain the best trained, the best-equipped, fully manned, and best-led ground force in the world.

Spotlight on DAU Learning Resources

DEFENSE ACQUISITION UNIVERSITY 2007 CATALOG

The Defense Acquisition University 2007 Catalog has been posted online at <http://www.dau.mil/catalog/default.aspx>. You may request a hard copy from the DAU Student Services Office at studentservices@dau.mil. Information in the hard copy catalog is current as of Oct. 1, 2006. However, the online catalog is updated periodically throughout the training year, and new CDs are produced with each update. (DAU is printing fewer hard copy catalogs because the information is readily available and current online. In general, we will limit the number of hard copies to one per requestor.) Currency of information contained in hard copies and CDs should always be confirmed on the catalog Web site shown above.

WHAT INCENTIVIZES THE AT&L WORKFORCE TO SHARE KNOWLEDGE?

Kenneth Nicholas

If we are fortunate, we still have some old-timers around us who seem to have all of the answers. But those old-timers are retiring from the AT&L workforce in waves, and there is no end in sight. When we no longer have the seasoned AT&L workers to turn to, where do we go for assistance?

And what about all of the new initiatives that the old-timers may not be able to help with? Those who are ahead of the rest of the pack getting experience with the new initiatives may have some lessons learned or new processes that can be shared—but where to find them?

One place is the AT&L Knowledge Sharing System (AKSS) developed by the Defense Acquisition University specifically to serve the evolving needs of the AT&L workforce. The AT&L Knowledge Sharing System is available at <http://akss.dau.mil/jsp/default.jsp>.

How can you contribute to the AT&L Knowledge Sharing System?

There is a tutorial at <https://acc.dau.mil/CommunityBrowser.aspx?id=102349> that shows how to make a contribution to the AT&L Knowledge Sharing System. It provides guidance regarding the submission. The submission will be reviewed by an AT&L subject matter expert before it is posted on the Web site.

What are the common barriers that AT&L workers find to sharing their knowledge?

Most frequently cited is time—or rather, lack of it. The workload is significant in most cases and increases when workers retire or leave government service. In some cases, employees are not replaced or positions are gapped, placing additional tasks upon the workforce in that business area. The dynamics in the workplace make it challenging to find time to share knowledge. Additionally, there may not be formalized incentives to encourage workers to share their knowledge.

Why should we care?

The acquisition environment is undergoing significant changes as a result of the push for performance-driven outcomes and program managers' sustainment responsibilities under the total life cycle systems management directive that—together with acquisition responsibilities—greatly increase the scope of the PM's role. There are many new initiatives that show promise, but as some famous person probably said, "It is no fun to go first!" Whenever we can learn from the mistakes, failures, or successes of other initiatives or programs—especially when things are so rapidly changing—from those who go first, we are wise to use that shared information to reduce the risks in our own program. The strategic use of knowledge can be leveraged in ways that support our strategy for desired business outcomes and warfighter outcomes.

How to incentivize?

Leaders must find ways to extrinsically and intrinsically motivate AT&L workers to share knowledge with other workers via the AT&L Knowledge Sharing System if they desire the capability to leverage knowledge from across DoD. This needs to be accomplished not by quota but by the quality of the submission, its applicability to other programs, and assessment of the value that the submission holds for other AT&L workers who successfully use it.

In order for PMs to take advantage of this emerging business tool, AKSS leaders must fully integrate knowledge-sharing practices in their organizations with the core business processes, and properly incentivize their AT&L workers. Knowledge management is an integral business

process in the commercial sector and shows much promise of providing key contributions in government.

Nicholas is a professor of logistics at the Defense Acquisition University.

FROM KAREN PICA, DIRECTOR, FEDERAL ACQUISITION INSTITUTE

Welcome to the start of a new fiscal year! We hope some of the new Federal Acquisition Institute (FAI) initiatives will help you during your work day. From the new training courses in FY07 to the new online training registration system, we've implemented some changes in how we manage your training and hope you find them useful. We're also working on some ways to help you apply for your Federal Acquisition Certification in Contracting and are completing work on the recommendations for Federal Acquisition Certification for Program and Project Managers. FAI will be offering the full suite of contracting certification courses (including CON 353) in FY07, with many of the courses already under way and the CON 353 offerings, which began in January 2007. FAI will once again be of-

Defense Acquisition University headquarters employee Jenny Sorenson (left) helps serve Thanksgiving dinner to Bryant Adult Alternative High School students Stoja Savich, Debbie Adomako-Jones, and Shukria Farhadi on Nov. 21, 2006, in Fairfax County, Virginia. Bryant offers an alternative educational program for a diverse population of more than 450 students who reside in Fairfax County, allowing them to earn their high school diplomas outside the traditional school setting. DAU, in partnership with Bryant, provides opportunities for job shadowing, mentoring, and tutoring. In addition, the university has assisted Bryant by designing brochures and producing a video about the school, as well as donating excess computer equipment. Technical support, training, and consulting are provided in the areas of computer automation, library services, and the school fitness program.

Photograph by Barbara Zenker

fering the popular performance-based contracting team training, also starting in January 2007.

Through our partnership with the Defense Acquisition University, there are many new seminars and training courses you can take to achieve your continuous learning points or recommend to your contracting, program management, or contracting officer's technical representative colleagues. As DoD transitions to a new contracting certification curriculum, be assured FAI will continue to offer the current courses required under FAC-C through 2007 and will be looking to transition to the new courses in 2008. For more information, contact your acquisition career manager. If you have any suggestions or wish to provide feedback, contact your agency ACM or visit our Web site at <http://www.fai.gov>.

NEW DAU CONTINUOUS LEARNING MODULES

The following new module is available on the DAU Continuous Learning Center at <http://clc.dau.mil> through both "browse" and "register" options:

- Proper Financial Accounting Treatments for Military Equipment
- New Modules from Harvard Business School Publishing—additions to the Harvard ManageMentor series
- Thinking Strategically (HBS 138)—not available in browse mode
- Creating a Business Case (HBS 139)—not available in browse mode
- Measuring Business Performance (HBS 140)—not available in browse mode
- Developing Employees (HBS 141)—not available in browse mode
- Contracting with Canada
- Quality Assurance Auditing
- Structuring Contracts for Emerging DoD Requirements
- SCORM (Shared Courseware Object Reference Model)
- Introduction to Defense Distribution (JKDDC—Joint Knowledge Development & Distribution Capability)

NEW RISK MANAGEMENT GUIDE

An all new and improved version of the Risk Management Guide for DoD Acquisition (6th ed, version 1.0) is now available on the Web. This streamlined edition reflects lessons learned on the application of risk management on past programs and presents concepts and ideas that encourage the use of risk-based management practices that all programs should find useful. The new guide places emphasis on:

- The role and management of future root causes
- Distinguishing between risk management and issue management
- Tying risk likelihood to the root cause rather than the consequence,
- Tracking the status of risk mitigation implementation vs. risk tracking
- Event-driven technical reviews to help identify risk areas and assess the effectiveness of ongoing risk mitigation efforts.

With all the high-level emphasis on reducing risk in programs to help ensure program cost, schedule, and performance objectives are achieved at every stage in the life cycle, this guide serves as a great communication tool for all stakeholders on the process for uncovering, determining the scope of, and managing program uncertainties. View the guide at <https://acc.dau.mil/rm> or <http://www.acq.osd.mil/se/publications.htm>

CAPELLA UNIVERSITY, DAU FORM STRATEGIC PARTNERSHIP

DAU signed a strategic partnership with Capella University on Nov. 21, 2006, at DAU's Fort Belvoir, Va., campus. Capella, at <http://www.capella.edu>, is an accredited online educational institution headquartered in Minneapolis, Minn. The partnership allows AT&L workforce members to transfer DAU course credits towards Capella's baccalaureate and graduate degrees. Capella will also soon join DAU in DAU's new Excelerate program, which allows DAWIA Level II certification to transfer towards graduate degree credit.

Career Development

U.S. ARMY ACQUISITION SUPPORT CENTER (NOVEMBER 2006)
TEST AND EVALUATION ACQUISITION CAREER FIELD CERTIFICATION CHANGES

The beginning of the fiscal year is traditionally the effective date for Acquisition Career Field (ACF) certification changes. These changes are officially announced and maintained in the online Defense Acquisition University (DAU) catalog <www.dau.mil>. Effective Oct. 1, 2006, significant changes in the Level I, II, and III certification training requirements have been introduced for the Test and Evaluation (T&E) ACF. A quick summary of the changes follows.

Effective Oct. 1, 2006, the training requirements for T&E Levels II and III acquisition certification have been revised to state that an individual seeking certification must have completed the prior level's training requirements in order to gain the next level acquisition certification. The choice of these particular words was intentional by the DoD T&E Functional Integrated Product Team (FIPT). The FIPT felt that due to extensive changes in the T&E curriculum at all levels, it was necessary for students to also complete the lower level training requirements in order to be successful in the next level T&E courses. The intent was neither to burden the T&E students nor to diminish the previously granted T&E certifications. These FY07 certification requirements were approved by the DoD Technical Management Functional Advisor memorandum dated April 13, 2006.

This means that if you were previously certified at Level I in T&E and are seeking Level II certification (post Oct. 1, 2006), you must now meet both the Level II T&E training requirements in addition to the current Level I T&E training requirements. This may necessitate your completing some additional training since the T&E Level I training requirements changed on Oct. 1, 2006. Similarly, if you were previously certified at Level II in T&E and now seek Level III certification, you must now meet both the Level III T&E training requirements in addition to the current Level II T&E training requirements. This may necessitate your completing some additional training since the T&E Level II training requirements changed on Oct. 1, 2006.

Other T&E Training Changes

The training certification requirements for TST 101 (Level 1), TST 202 (Level 2), and TST 301 (Level 3) shall remain in effect until each new successor course (TST 102, TST 203, and TST 302) is fielded. The exact date for this to be completed has not yet been determined.

The new required course CLE-011, Modeling & Simulation for Systems Engineers, is a DAU Continuous Learning Module and has been available online since May 2006. Completion of this CLM is a mandatory for Level I certification; others are strongly encouraged to complete this short course.

If you have additional questions, please contact your designated acquisition career manager, send an e-mail to asc.acq.career.management@asc.belvoir.army.mil, or contact the T&E Functional Point of Contact, Larry Leiby at 703-695-7389.

U.S. ARMY ACQUISITION SUPPORT CENTER (NOVEMBER 2006)
UPCOMING SPRDE-SE CERTIFICATION CHANGES

Much has been recently discussed and written about the challenges facing the DoD Systems Planning, Research, Development, and Engineering–Systems Engineering (SPRDE-SE) community (see article entitled: "Systems Engineering Revitalization" in the July-August 2006 issue of *Defense AT&L* magazine at <www.dau.mil/pubs/damtoc.asp>. The DoD SPRDE-SE Functional Advisor, with support from the SPRDE-SE Functional Integrated Product Team, has instituted certification changes affecting both SPRDE-SE experience and training requirements. As with all acquisition certification changes, these changes are officially announced and maintained in the online Defense Acquisition University catalog at <www.dau.mil/catalog/default.aspx>.

Effective Oct. 1, 2006, the SPRDE-SE experience requirements were revised to recognize technical experience from other acquisition career fields (i.e., SPRDE-SE; SPRDE-Science and Technology Manager; Information Technology; Test and Evaluation; Production, Quality, and Manufacturing; Facilities Engineering; Program Management; and Life Cycle Logistics). Previously, only acquisition experience in science or technology was rec-

ognized for certification purposes in this acquisition career field. Please check the DAU catalog for specific language as it might apply to your situation.

From an acquisition training perspective, required courses have been added at each SPRDE-SE certification level. SPRDE-SE Level I certification now requires completion of SYS-101, Fundamentals of SPRDE (in addition to ACQ 101); Level II now requires the completion of the continuous learning module CLE 003, Technical Reviews, and completion of one of the following: SYS 201 (Parts A&B), or SYS 201 (Part A) and SYS 203; or both SYS 202 and SYS 203 (each in addition to ACQ 201 (A&B)). A new Continuous Learning Module, CLL 008, Designing for Supportability, has also been added to Level III certification training requirements (in addition to SYS 301).

Upcoming Changes

In addition to the above certification changes already in effect, the SPRDE-SE acquisition community should expect further changes in this acquisition career field. Although these changes have not been finalized, nor an effective timeframe determined, a brief summary of the expected changes follows. Please note that at this writing these changes are not final and subject to change.

In the future, the SPRDE-SE acquisition career field is expected to diverge into two separate acquisition career paths: SPRDE-SE and SPRDE-General. Each of these paths will have its own certification requirements and associated Position Category Description. The expectation is that Army acquisition positions currently coded as SPRDE-SE ("S") will transition to the new SPRDE-General Path. This transition should be seamless to the affected employees and will not disturb acquisition SPRDE-SE certifications already achieved by employees. Employees who seek a new certification level shall be held to the certification standard in effect at the time certification is sought.

AMERICAN FORCES PRESS SERVICE (NOV. 1, 2006)

NEW IDENTITY CARD MORE SECURE THAN EARLIER VERSIONS

Gerry J. Gilmore

WASHINGTON—New identification cards now being issued to some Defense Department employees will help standardize federal workforce identification and enhance security, a senior DoD official said here today.

The new common access card is part of departmental transformation efforts that harness common business practices to make the organization more efficient, David S.C. Chu, the under secretary of defense for personnel and readiness, told reporters at a Pentagon news conference.

"A key element of this new card is it is a more secure document" than its predecessor, Chu noted.

The new card, he said, accomplishes three main objectives:

- It makes the identification process more efficient
- It helps prevent identity theft or fraud
- It better protects personal information, thus enhancing individual privacy.

The department began issuing the new ID cards Oct. 27. They will be provided to employees over the next three years as the old cards reach their expiration dates.

The new card looks similar to the old one, but it features several enhancements, said Mary Dixon, director of the Defense Manpower Data Center in Arlington, Va. For example, the new CAC contains two fingerprints and a digital photograph, she noted.

Additionally, "we're going to check to make sure you've had your background checks before we issue the card," Dixon said. "That is something we have not done in the past, but we will be doing this now."

President Bush directed that a single ID card be developed that's interoperable across all federal agencies, Chu said. The Defense Department, he noted, has had CACs for some years now.

"So we're using that foundation as our stepping-stone to reach the president's goal," Chu said.

Using one common ID card throughout the federal government "builds trust across agencies, because there is then just one credential," Chu said.

Gilmore is with American Forces Press Service.

AIR FORCE PRINT NEWS (NOV. 1, 2006)
PCS POLICY COULD EXTEND OFFICER ASSIGNMENTS TO FOUR YEARS

Staff Sgt. C. Todd Lopez, USAF

WASHINGTON—Some officers could now spend as many as four years at a duty station before getting a new assignment.

Air Force officials are looking for ways to reduce the number of permanent change-of-station moves for officers, particularly for those in the United States.

By extending the average assignment length for an officer from three years to four years, Air Force officials believe they can reduce the number of yearly officer PCS moves. Any moves occurring before four years would primarily be for professional development reasons only, said Lt. Gen. Roger A. Brady, deputy chief of staff for manpower and personnel.

"We don't necessarily want to move people around as quickly as we may have in the past, if there is not a developmental reason for that," he said. "And there is a lot of development that can take place in your first few years of service, wherever you are."

The general said that for many young officers, lieutenants in particular, the greatest professional development comes from gaining expertise and experience at one stable location. For higher-ranking officers, professional development comes from attending schools or by taking a command position. Real professional development, the general said, does not come from simply moving to a new assignment.

"We have always been a force that wanted to develop people, and part of developing people is to give them different opportunities," he said. "But if you are not careful, you can confuse movement with development. So what we are looking at are policies that might create moves that are not necessarily related to development."

Brady also said fewer moves for officers will put less stress on their families by allowing children to stay in a single school for a longer time and by allowing spouses to find more stable careers.

While the change to PCS policy mostly will affect officers inside the continental United States, it also will affect officers stationed overseas, especially at those assigned to European bases.

"We find that some of our traditional overseas assignments ... are perhaps as stable as [in the Continental United States], and so it begs the question as to whether or not you really need to have that disparity in how you manage units," he said.

Manning overseas units at higher levels increases PCS moves and the costs associated with them. Air Force officials now will be more amenable to extending officers who want to stay longer at an overseas tour and will look closer than they have in the past at officers who want to shorten their overseas tours, Brady said.

Air Force officials have other reasons for limiting the number of officer PCS moves. One of those reasons is recouping the cost of the moves and applying that funding in other places.

"We have budgetary issues in a lot of areas: fighting the global war on terror, high ops tempo, aging aircraft fleets, and growing manpower costs," the general said.

Brady said more effective management of officer moves will better help their professional development, and also will free up funding so it can be applied to winning the war on terrorism and to recapitalizing aging Air Force aircraft.

Lopez is with Air Force Print News.

96TH AIR BASE WING PUBLIC AFFAIRS (NOV. 7, 2006)
COMMAND PARTNERSHIP COUNCIL EXPANDS COMPUTER ACCESS

Lois Walsh

EGLIN AFB, Fla.—The Air Force Materiel Command Partnership Council continued its discussion of how to meet civilian workforce needs in the face of budget and manpower reductions during a series of meetings Nov. 2-3.

The council's latest initiative is to buy licenses to put computer stations in industrial areas for people who don't have access to computers outside traditional work centers. The cost will run approximately $177,000, and the licenses will be distributed throughout AFMC bases.

Barbara Westgate, AFMC executive director, and Scott Blanch, American Federation of Government Employees Council 214 president, chair the council, which brings together union and management representatives to improve understanding of each group's initiatives and chal-

lenges and to seek common solutions. Since its inception, the council has championed many initiatives to benefit civilians, including allowing duty time for physical-fitness activities, earned days off, and alternate dispute-resolution practices (ADR).

"There have been a lot of successes," Blanch said. "There were hundreds of regulations that languished for years before we wiped those out and instituted Air Force instructions. ADR has also been a fantastic success story."

Speaking to concerns about civilian reductions, Westgate said she is confident that attrition will absorb most civilian reductions slated for 2007. "We're doing all we can to find a place for those who focus on core mission and do their job well," she said.

The council's latest initiative will place computers where people without regular online access can use them. "We take computers for granted, but there are people whose normal duty day is not sitting at a desk," Westgate said. "People are not being productive if they have to go to the base exchange, commissary, or hospital to access My Pay (the online leave and earnings management site). "They don't have time to do their normal record keeping, to change an allotment, or apply for a job."

One of the main functions of the Partnership Council is to provide an opportunity to establish and improve labor-management relationships at all levels.

"If we're One Materiel Command, we need to address the issues with everyone who is a part of AFMC," Westgate said. "The labor side, which does most of the sustainment so we can perform our mission on behalf of the warfighters, needs to understand management taskings, and we need to understand the issues on the labor side."

Blanch agrees. "We have to keep the lines of communication open," he said. "Back in the old days, there were layers of bureaucracy before reaching senior leadership; now we can meet with the people who can do something about the issues."

Walsh is with 96th Air Base Wing Public Affairs.

ARMY NEWS SERVICE (NOV. 21, 2006)

DIMHRS BRINGS SELF-SERVICE CAPABILITIES TO SOLDIERS

WASHINGTON—The Army plans to transform the way it manages its human resources by launching the Defense Integrated Military Human Resources System in early 2008.

DIMHRS is a secure, self-service Web system that will give soldiers 24/7 access to personnel data and the ability to update and review key personnel and family information without seeing a personnel specialist.

"DIMHRS is a congressionally mandated program spearheaded by DoD, and will result in the Army's significantly transforming the way it delivers military personnel and pay," said Maj. Gen. Carlos "Butch" Pair, Defense Business Systems Acquisition Executive. "DIMHRS will provide soldiers significant Web-based self-service capabilities, integrate all components on one database, and significantly reduce workload for commanders and soldiers."

The self-service system will help soldiers avoid traditional written or verbal processes that can be time-consuming and costly.

DIMHRS will enable soldiers to initiate requests for assignments, training, retirement, record updates, awards, family-member travel, transition from the Reserve to Regular Commission, enlistment extensions, various waivers, and enlisted commissioning programs.

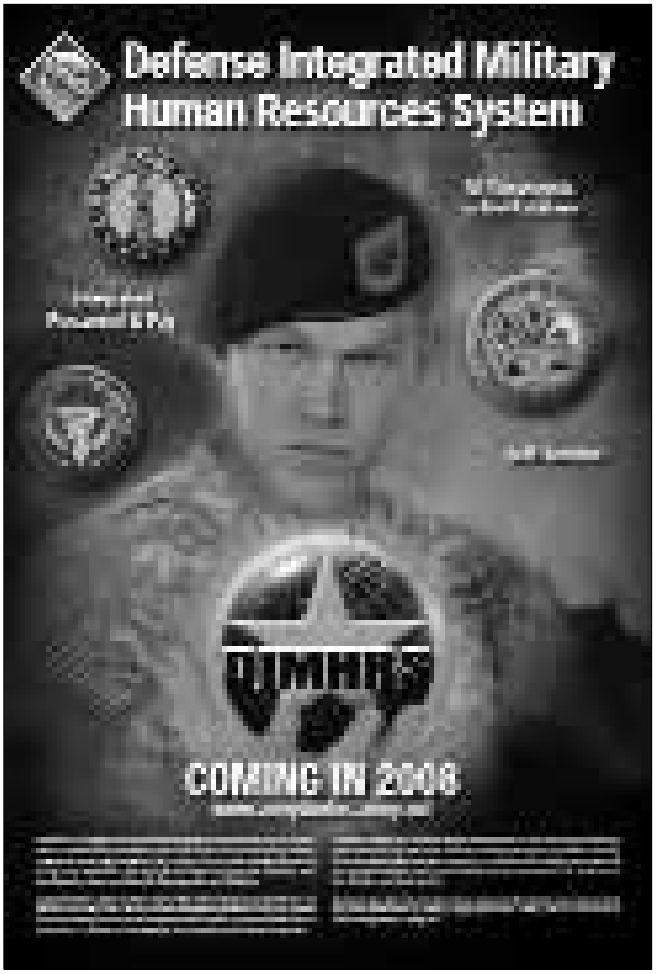
DIMHRS self-service capabilities will also allow soldiers to more efficiently start, stop, or modify discretionary allotments and savings bonds; complete an Employee Withholding Request (Form W-4); complete an Employee Reissue W-2 Request; change personal direct deposit information; and change their state of legal residence declaration.

"This real-time functionality will decrease processing time for personnel-action requests and improve customer service by virtually turning the personnel-action process into an almost paperless environment," said Sgt. 1st Class Jose Miranda, DIMHRS Clearinghouse NCO.

Soldiers will be able to track the progress of their requests from initial submission to final approval. Electronic signatures, e-mail notifications, and automatic routing are also available.

Another key function in DIMHRS is the view-only screen, which lets soldiers view such personnel and pay items as family member information; Certificate of Release or Discharge from Active Duty (DD 214) and any corrections to their DD Form 214; Service Members' Group Life Insurance (SGLI) election; Leave & Earnings Statements and Wage and Tax Statement (Form W-2); Record Brief; currently assigned checklists; a record of civilian and military education, awards, contracts, and evaluations; and a Department of the Army photo.

For more information, visit the Army DIMHRS Program Office Web site at <http://www.armydimhrs.army.mil> or the DIMHRS AKO page at <https://www.us.army.mil/suite/page/308853>.



The *Soldiers* magazine January Almanac, available the last week of December, included this poster announcing the new Defense Integrated Military Human Resources System—DIMHRS. Photograph by Paul Crank

AIR FORCE PRINT NEWS (DEC. 27, 2006)
OFFICIALS SELECT CIVILIANS FOR LEADERSHIP PROGRAM

WASHINGTON (AFPN)—Sixty-nine Air Force civilians were selected recently for a new leadership development program that provides a total force development vision for Air Force civilians in the GS-15 grade, preparing them for senior roles in the Department of Defense.

The civilians were selected from 115 candidates by a board consisting of three general officers, including a three-star board president, and two Senior Executive Service members.

Because of the implementation of the National Security Personnel System, General Schedule grades are in the process of being converted to various pay schedules and pay bands. With NSPS on the horizon, the previously named GS-15 LD program will now be known as the Civilian Strategic Leader Program.

CSLP is based on the following five foundational principles:

- Integrate other senior leader deliberate development efforts
- Incorporate broader force development initiatives
- Advance career field management initiatives
- Create broad avenues to develop a cadre of GS-15s with multiple perspectives
- Enhance career management and development services for those who are committed to this vision.

Any Air Force civilian in a position with permanent grade of GS-15 or GS-15 equivalent was eligible to apply for the program, provided they have not declined a GS-15 LD position within the past two years. The selectees will now be considered first for premiere developmental assignments, as well as be given various educational and developmental opportunities.

The initiative was designed to help institutionalize the Total Force development vision for GS-15 and equivalent pay bands throughout the Air Force.

"Our mission is to identify, develop and support a leadership cadre that will successfully execute the evolving

Air Force mission," said Lt. Gen. Roger Brady, chief of staff for manpower and personnel at the Pentagon, "and be prepared to successfully lead at the senior executive level."

WORKFORCE MANAGEMENT

HUMAN CAPITAL STRATEGIC PLAN: THE BIG PICTURE

The Department of Defense acquisition, technology and logistics community supports and safeguards our nation's warfighters. It is essential that AT&L continues to champion a knowledge-based workforce capable of delivering equipment and services to warfighters in need. To achieve this, AT&L has developed an overarching Human Capital Strategic Plan (HCSP) to right-shape the current workforce and retain top-quality personnel for the future. The plan provides components and functional advisors with the necessary strategies for strengthening the DoD communities. To learn more, read the AT&L Human Capital Strategic Plan at <www.dau.mil/workforce/>.

The Contracting Community

The Director of Defense Procurement and Acquisition Policy (DPAP) serves as functionaladvisor for the Contracting, Purchasing, and Industrial/Contract Property Management career fields. Working hand-in-hand with DoD's senior procurement executives, DPAP will develop a human capital plan for the contracting community. The objective of this initiative is to draw upon the strengths of the community and establish an execution strategy for continued workforce success. To learn more about DPAP's role in the HCSP, read the Workforce Management fact sheet at <www.acq.osd.mil/dpap/Docs/new/HumCap.pdf>.

Additional Resources

- Acquisition Community Connection <https://acc.dau.mil/CommunityBrowser.aspx>
- Acquisition, Technology & Logistics Workforce Resources <www.dau.mil/workforce/>
- Continuous Learning at Defense Acquisition University <http://clc.dau.mil/>

Conferences, Workshops & Symposia

23RD ANNUAL TEST AND EVALUATION CONFERENCE

The 23rd Annual Test and Evaluation Conference will take place March 12–15, 2007, at the Westin Resort Hilton Head Island, Hilton Head Island, S.C. This national conference is invaluable to those tasked with directing and executing system development programs for the Department of Defense, Department of Homeland Security, Department of Energy, and other government departments tasked with various elements of our nation's security. Test planners, modeling and simulation users and developers, range operators, program managers, military personnel charged with system acquisition responsibilities, industrial professionals, and others under contract with the government to provide support to our nation's defenses will also benefit. For registration or more information on this year's event, consult <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

23RD ANNUAL NATIONAL LOGISTICS CONFERENCE AND EXHIBITION

The 23rd Annual National Logistics Conference and Exhibition will be held March 19–22, 2007, at the Hyatt Regency Miami, Miami Convention Center, in Miami, Fla. Share insights with senior DoD leadership, top industry executives, project directors and program managers, information technology providers and developers, government policy makers and regulators, defense contractors and design professionals, third party logistics providers, and equipment suppliers and manufacturers. For more information on this year's event, contact Meredith Geary, meeting planner, at mgeary@ndia.org or call (703) 247-9476. For details on registration, watch the conference Web site at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

DEFENSE FORUM BREAKFAST

The National Defense Industrial Association (NDIA) Central Florida Chapter is sponsoring a Defense Forum Breakfast at the Radisson University Hotel, Orlando, Fla., on March 21, 2007 (0800-1100). The theme of the breakfast will be "Evolving Research, Development and Acquisition Strategies in the Global War on Terror". Register online at <https://www.riptidesoftware.com/non-profit/luncheons/>.

5TH ANNUAL U.S. MISSILE DEFENSE CONFERENCE

The 5th Annual U.S. Missile Defense Conference will be held March 19–23 , 2007, at the Ronald Reagan Building and International Trade Center, Washington, D.C. A key objective of the 2007 conference is to continue building the Ballistic Missile Defense System (BMDS) team relationships that will in turn make development of a global missile defense system a successful reality. The BMDS Team includes members of the Missile Defense Agency (MDA), Department of Defense, military service staffs, and industry.

The conference—hosted by the American Institute of Aeronautics and Astronautics (AIAA), in cooperation with Northrop Grumman Corporation and supported by MDA—will expose the BMDS to the entire missile defense community, educate conference participants on the system-level approach to BMDS development, and serve as an exchange of ideas on BMDS evolution. Discussions will focus on the evolutionary development of a global, layered, integrated BMDS; the integration and testing of BMDS capability; the status of fielding BMDS elements; and the current political/policy environment, including the merits of extending BMDS capabilities to allies. Consistent with this focus is the theme of the conference, "Global Ballistic Missile Defense—A Layered Defense." Register for the 2007 conference at <www.aiaa.org/content.cfm?pageid=230&lumeetingid=1475&viewcon=overview>.

5TH ANNUAL AFCEA-BELVOIR/PEO EIS INDUSTRY DAY

The Armed Forces Communications and Electronics Association–Fort Belvoir Chapter hosts the 5th Annual AFCEA-Belvoir/PEO EIS Industry Day to inform the IT community about the recent successes and the forward-thinking opportunities that the Department of Defense and the Department of the Army have asked PEO EIS to develop. The 5th Annual AFCEA-Belvoir/PEO EIS Industry Day will be held March 28-30, 2007, at the Marriott Bethesda North Hotel and Conference Center in Maryland.

This will be the 20th year that the PEO has been in the acquisition business. PEO STAMIS (Standard Army Management Information Systems) began in April 1987 with five programs. PEO EIS now boasts an organization with more than 40 programs. The PEO, deputy PEOs, and

PMs will talk about the year ahead and the milestones they face. Industry Day 2007 promises to be bigger and better than ever.

For information on government participation at Industry Day, call Dean Sprague at (703) 806-4557 and for industry participation, contact Mark Gable at (800) 878-2940 x235. For information on AFCEA-Belvoir visit their Web site at <http://belvoir.afceachapter.org> or contact David Livingstone at (301) 399-4231.

GUNS AND MISSILE SYSTEMS CONFERENCE AND EXHIBITION

The 42nd Annual Armament Systems: Guns and Missile Systems Conference and Exhibition will be held April 23-26, 2007, in Charlotte, N.C. The 2007 conference will present topics that demonstrate how our nation's current gun, munition, and missile system technologies can be adapted and evolved to meet tomorrow's missions and operations. For more information on the conference, contact Heather Horan, meeting planner at hhoran@ndia.org or call (703)247-2570. Watch for registration details at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

DEFENSE ACQUISITION UNIVERSITY ACQUISITION COMMUNITY CONFERENCE/SYMPOSIUM 2007

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

DAU AND NDIA TO SPONSOR DEFENSE SYSTEMS ACQUISITION MANAGEMENT COURSE OFFERINGS 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 at the following location during fiscal 2006:

- May 7-11, 2007, Gaylord Opryland Resort & Convention Center, Nashville, Tenn.
- July 16-20, 2007, Red Lion Hotel on Fifth Avenue, Seattle, Wash.
- Sept. 10-14, 2007, Radisson Plaza Hotel, Minneapolis, Minn.

DSAM presents the same acquisition policy information provided to DoD students who attend the Defense Acquisition University courses for acquisition certification training. It is designed to meet the needs of defense industry acquisition managers in today's dynamic environment, providing the latest information related to:

- Defense acquisition policy for weapons and information technology systems, including discussion of the DoD 5000 series (directive and instruction) and the CJCS 3170 series (instruction and manual)
- Defense transformation initiatives related to systems acquisition
- Defense acquisition procedures and processes
- The planning, programming, budgeting, and execution process and the congressional budget process
- The relationship between the determination of military capability needs, resource allocation, science and technology activities, and acquisition programs.

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

JOINT SERVICES ENVIRONMENTAL MANAGEMENT (JSEM) CONFERENCE

The Joint Services Environmental Management (JSEM) Conference will be held May 21-24, 2007, at the Greater Columbus Convention Center in Columbus, Ohio. JSEM 2007 is a comprehensive summit on the evolving world of environment, energy, and geospatial information within DoD. JSEM 2007 will highlight the many new and innovative ways the Department of Defense, other federal agencies, states, and the defense industry are meeting mission needs while protecting the environment. The conference affords the opportunity to share ways to integrate environment, energy, and geospatial information management into Defense operations. It also will address a wide range of perspectives, including policy, implementation, best management practices, data management, and technology.

The JSEM 2007 Conference and Exhibition is evolving, just as Defense business practices are evolving. Conference organizers are merging Energy and Geospatial Information Management into the 2007 event, which is now recognized as the most significant event for environmental policy makers, practitioners, and profession-

als. Future registration details will be posted to the conference Web site at <www.jsemconference.com/2007/registration.htm>.

FEDERAL ACQUISITION CONFERENCE & EXPOSITION (FACE)

The Federal Acquisition Conference and Exposition (FACE) will be held June 19-20, 2007, at the Ronald Reagan Building in Washington, D.C. The 2007 theme is "Acquisition Frontiers: Blazing New Trails." This year's conference will offer new sessions for several members of the acquisition workforce and will provide toolkits for use back at the office. FACE will offer best practices and lessons learned for contracting professionals, program managers, contracting officer technical representatives, and acquisition career managers. Attendees will have an opportunity once again to earn continuous learning points, create important new relationships with team members, and gain insight from sessions exploring best practices, new acquisition human capital achievements, and how to make these work on the job. For more information, visit <www.fai.gov/face>.

DARPA ANNOUNCES THIRD GRAND CHALLENGE

The Defense Advanced Research Projects Agency (DARPA) has announced plans to hold its third Grand Challenge competition on Nov. 3, 2007. The DARPA Urban Challenge will feature autonomous ground vehicles executing simulated military supply missions safely and effectively in a mock urban area. Safe operation in traffic is essential to U.S. military plans to use autonomous ground vehicles to conduct important missions. DARPA will award prizes for the top three autonomous ground vehicles that compete in a final event where they must safely complete a 60-mile urban area course in fewer than six hours. First prize is $2 million, second prize is $500,000, and third prize is $250,000. To succeed, vehicles must autonomously obey traffic laws while merging into moving traffic, navigating traffic circles, negotiating busy intersections, and avoiding obstacles. The DARPA Grand Challenge Web site <http://www.darpa.mil/grandchallenge> is the primary resource for information about the Urban Challenge event.

AIR FORCE PRINT NEWS (NOV. 20, 2006)

ASC LEADERS TACKLE REQUIREMENTS, ACQUISITION PROCESSES

Col. Ginger Jabour, USAF

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—Starting new programs correctly, ensuring customers have realistic expectations, and ending the "shoot-the-messenger" mentality were among the initiatives Aeronautical Systems Center leaders considered at a November off-site meeting.

Lt. Gen. Jack Hudson, the ASC commander, along with senior leaders and staff members, discussed acquisition challenges at the Air Force Smart Operations for the 21st Century off-site.

Lt. Col. Ron Jobo, ASC's AFSO 21 office deputy director, said he was pleased with the results from the off-site.

"Just the fact that senior leaders would clear three days from their busy schedules points out the center's commitment to process improvement; in fact, this is ASC's second AFSO 21 off-site in four months," Jobo said.

"What's really significant about these initiatives is that we've focused on our core mission objectives that were identified through the (ASC) balanced scorecard," said Chuck Jackson, the 326th Aeronautical Systems Wing director. "The requirements that we accept, along with our strategic planning, are obviously interconnected, and they basically drive everything we do in acquisition. We'll also benefit from the synergy between these objectives, so the potential benefits are huge."

Beginning with a lengthy list of challenges generated from the major objectives of ASC's balanced scorecard, participants identified challenges in three major areas: transforming requirements into high-confidence programs, influencing future requirements, and institutionalizing realistic planning.

They came up with problem statements, goals and objectives, process owners, and initial action plans for each of the 14 initiatives. ASC's executive steering group will prioritize the 14 initiatives on the basis of the impact and cost of implementing each one and decide which processes are the best candidates for improving.

The November meeting focused on cause and effect analysis.

"It's a formalized way of identifying a problem, then looking into its causes," Jobo said. "It encourages people to not just start throwing out solutions, but look deeply into the root causes.

"At this off-site, participants did a great job of locating root causes and creating action plans to improve those processes," Jobo said. "Obviously, we can't just go charging out and take care of 14 deep-rooted problems all at once, so the executive steering group will work to prioritize the initiatives to see which ones we tackle first, as well as chart out the way ahead to address all the initiatives."

Jabour is with the Aeronautical Systems Center's AFSO 21 Office.

AMERICAN FORCES PRESS SERVICE (DEC. 7, 2006)

SPECTRUM SUMMIT FOCUSES ON CURRENT, FUTURE WARFIGHTER NEEDS

Donna Miles

ANNAPOLIS, Md.—Servicemembers on patrols and convoy missions in Iraq and Afghanistan sometimes have to decide if they would rather have access to their radios to call in close-air support if they need it or jammers to disable improvised explosive devices they encounter along the route.

That's a decision troops shouldn't have to make, Paige Atkins, director of the Defense Spectrum Organization, told reporters attending the Annual Defense Spectrum Summit 2006 here yesterday. The Defense Spectrum Organization was established as part of the Defense Information Systems Agency in April as DoD's focal point for radio frequency spectrum analysis, planning and support.

Both tactical radios and electronic countermeasures operate through the electromagnetic spectrum, so they can sometimes interfere with one another, Atkins explained. "It may boil down to an operator making a choice (about which system to use)," she said. "And we want to prevent them from having to make a choice between critical functions and protecting lives."

Atkins and her staff are part of a sweeping transformation under way to ensure that troops have access to the information and communications they need without having to worry about other systems degrading them. "And that is what we are trying to ensure: that they have the right capabilities in place to do their mission," Atkins said.

Electromagnetic interference doesn't come just from other U.S. military systems, Atkins explained. Sometimes it comes from systems used by coalition partners or the host nation where U.S. forces are operating. It can come from an enemy who intentionally jams a "friendly" system.

It can also come from a commercial system, Atkins said, noting that the demand for "spectrum-dependent systems" and the band width they need to operate is skyrocketing in the commercial sector.

"We're under a lot of pressure to share our large inventory of spectrum," John Grimes, assistant secretary of defense for networks and information and integration, told participants at the weeklong Defense Spectrum Summit. "A lot of people have a need for it and want it."

DoD and other federal agencies recently auctioned off spectrum from 1710 to 1755 megahertz to the private sector. The auction yielded a whopping $14 billion, much of which will go toward migrating military and government systems to other electromagnetic frequencies.

The government is more likely to share rather than give up additional band width, Atkins said. She noted that officials working on the Presidential Spectrum Reform Initiative are looking into ways to promote sharing between military, federal, and commercial entities in a way that doesn't compromise security or access for military users.

"We need to look at the way we manage spectrum from a national perspective and ensure we have the right mechanisms in place to enable economic prosperity and innovation while protecting federal government interests and the national security," she said.

Grimes urged participants at the Defense Spectrum Summit to try to come up with ways to achieve that balance. At the same time, he urged them to help work toward DoD's goal of net-centric operations and warfare in which troops can tap into all the information they need through a secure global network.

"The most important thing is to understand the warfighter issues we have to satisfy," Grimes said.

As DoD builds the foundation for its future network, referred to as the Global Information Grid, Atkins said, it's also working to protect troops in the field today. That includes ensuring that U.S. military systems don't interfere with each other and aren't degraded by allied, host-country, or civilian systems, while blocking as much "intentional interference" from an enemy as possible.

Among the immediate issues addressed by the network is the problem with some electronic countermeasures and communication systems.

An analysis cell within the Defense Spectrum Organization operates around the clock, evaluating different systems to determine what, if any, interference they'll cause. Once its staffers identify that, they offer tactics, techniques, and procedures warfighters can use to reduce or eliminate the problem.

But the office's focus extends far beyond "deconflicting" U.S. electronic warfare systems and communications systems, Atkins said. It extends to the full range of systems and devices the military uses that operate over electromagnetic waves: from tactical radios and cell phones to radar systems to wireless computers and other wireless systems.

As part of that effort, DoD is working to keep closer tabs on what spectrum-dependent systems it has in the combat zone, where specifically they're operating, and what frequencies and domains they're using. The Global Electromagnetic Spectrum Information System, a new high-tech database, will go a long way toward getting the most out of the military's band width, Atkins said.

"As the environment gets much more crowded from a spectrum-use perspective, we have to find new ways of sharing and … perhaps reassigning or understanding when systems are not using pieces of the spectrum, to be able to more efficiently use them," she said.

AIR FORCE MATERIEL COMMAND NEWS RELEASE (DEC. 7, 2006)

AFMC SENIOR LEADERS CONVENE

Mitch Shaw

HILL AIR FORCE BASE, Utah—Men and women who are the keepers of decades of Air Force history and wisdom convened this week to discuss current and future issues facing Air Force Materiel Command and the Air Force.

As the biannual AFMC Senior Leaders Conference convened on Dec. 7, Hill acted as host to a four-star general and all the senior civilian and military leaders within the Air Force Materiel Command.

"This is the one time Gen. Bruce Carlson (commander, AFMC) has to get all of his leaders together and to give the vision and set the tone for the command," said Maj. Steven Storch, director of operations for the 75th Operations Support Squadron, who spearheaded preparations for the conference.

The conference is normally held at Wright-Patterson AFB, Ohio, but Carlson made a special request to hold the fall conference at Hill.

"The theme for this conference is 'Leadership in One Air Force Materiel Command,' and Gen. Carlson really wants to unify his leaders. We have a great atmosphere here for team-building," said Storch.

"We have had a ton of dedicated Americans from Hill working long hours in preparation to take great care of our senior leaders," said Col. Scott Chambers, 75th Air Base Wing commander.

In addition to briefings and discussions, the senior leaders were scheduled to exercise in teams at the new fitness center and to attend a special dinner at the Hill Aerospace Museum.

FALL 2006 PEO/SYSCOM COMMANDERS' CONFERENCE: THE WILL TO CHANGE

Collie J. Johnson

Institutionalizing cultural change throughout the defense acquisition process was recognized as a key component of acquisition reform when Under Secretary of Defense (Acquisition and Technology) John Deutch championed the establishment of the Office of the Deputy Under Secretary of Defense (Acquisition Reform) in 1993. A constant refrain since the mid 1990s has been the necessity for a cultural change in DoD's acquisition process.

Since then, the acquisition, technology, and logistics senior leadership has brought to the forefront the companion concept of inculcating in the workforce the *will* to change as paramount to the Department's ability to meet the challenge of developing and maintaining needed warfighting capability. Incorporating and institutionalizing a will to change into the cultural fabric of the procurement business is a tall order, but the benefits of such an approach are clear: buy-in from the Services to work together, buy-in from the program executive officers/program managers to work together, and a proactive approach to optimizing processes that work through sound change management.

Responding to this challenge, the 2006 PEO/SYSCOM Commanders' Conference, held at Fort Belvoir, Va., Nov.

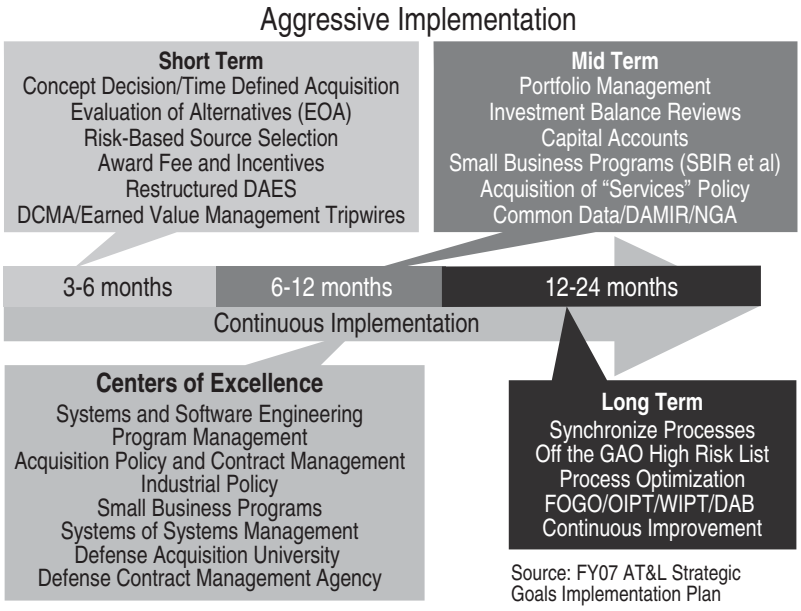


FIGURE 1. **DUSD(A&T) Goals Over Next 24 Months**

7-8, was dedicated to a single theme: "The Will to Change." Keynote speeches, panels, workshops, and networking all focused on instilling a will to change DoD's high-risk program areas that result in cost overruns, schedule delays, and overpayments to industry for cost-plus programs. The conference further expanded its reach by providing webcasts of keynote speeches and panels to the field.

The Best of the Best

Deputy Under Secretary of Defense (Acquisition and Technology) Dr. James Finley delivered this year's keynote address, stating that "The bottom line is the will to change. There is nothing new here," he told the conferees, "but the will to change and work together starts right here at this podium, with myself.

"The ideas that I have used in industry do not necessarily work here, and the ideas that we will work [during this conference] will not necessarily work for where we have to go in the Department of Defense. But, between the two of us, I really believe we can come up with the best of the best; and listen, process feedback, work as a team, and be willing to make changes as we go forward to maintain our competitiveness."

It all starts with leadership, Finley noted. "I am a strong advocate of leadership; without it, we really do not set the pace and the up tempo for where we want to go." Finley also expressed a strong interest in innovation, competition, and "furthering the agenda on communications, up, down, and side to side," leading to broadened globalization.

Three Major Stovepipes

He spoke of the three major stovepipes or the "The Big A" in acquisition: requirements, programmatics, and budgeting. "Typically, these three stovepipes … do not talk to each other very well," said Finley, who called for "communication, communication, and more communication."

Finley sees PEOs/PMs as an important part of the "Big A" in acquisition. "It's OK to work the requirements process as a PEO or PM. In fact, we are counting on you to help be part of this process," he added.

Acquisition of services is another area in which Finley sees the potential for big savings. "Acquisition of services, where it's costing us hundreds and hundreds of millions of dollars, for virtually no value-added service, is potentially an area of big savings for DoD," he said.

Speaking about funding stability, Finley equated it with predictable performance. "When you have a good program and it's running to schedule," he cautioned, "it is a prime time to get nicked: 'You don't need that money; we'll take that money.' We are trying to stop that, and capital/corporate accounting is one of the ways to do it."

THE NEXT 24 MONTHS

Finley called for aggressive implementation of goals he has set for the Department over the next 24 months (Figure 1). "Making a program start right and making those decisions that balance the trade space takes a will to change," he said. "We are starting to at least work the system to start to talk about integrating additional assessments so the PEOs and the PMs can have very successful programs starting from the get-go."

Optimally, Finley would like to see DoD removed from the high-risk list published by the Government Accountability Office. GAO's audits and evaluations identify federal programs and operations that, in some cases, are high-risk due to their greater vulnerabilities to fraud, waste, abuse, and mismanagement. That achievement, Finley said, brings DoD full circle back to the will to change. "We all have to have the ability to listen, make the business case, and work together. Let's go forward."

Johnson is a contributing editor and former editor in chief of Defense AT&L. *View other conference presentations, including a presentation by Comptroller General David Walker, at <http://view.dau.mil/dauvideo/view/channelCategory.jhtml;jsessionid=GFA3XCBPCLKKFAF4VLHSFEQ?categoryID=72>.*

AMERICAN FORCES PRESS SERVICE (OCT. 26, 2006)

ENGLAND: TECHNOLOGICAL DEVELOPMENT CRITICAL TO OUTPACING TERRORISTS

Donna Miles

WASHINGTON—The same globalization that's created vast opportunities for economic growth and information sharing among freedom-loving people has become a favorite tool of terrorists trying to destroy their way of life, Deputy Defense Secretary Gordon England told industry representatives Oct. 26.

Speaking at the Military Communications Conference 2006, England called rapid technological change, and particularly the ways it can be abused, "the fundamental technical and operational challenge of our time."

Terrorists are "technologically very savvy," he said, and see no conflict in using their technological expertise to close doors it's helped open.

"Though they aim to undo centuries' worth of progress, they are not at all reluctant to take full advantage of that progress," he told the group, who he described as "today's rock stars of science and technology."

Terrorists "use the latest technological innovations to communicate, recruit, and transfer money," the deputy secretary said. "They keep Web sites, and they update them in real time to share their lessons learned."

As latecomers to these cutting-edge technologies, terrorists didn't have to go through the long process of developing or studying them, England noted. Instead, they simply download them from the Internet and use them for their own purposes.

"The very technologies that you develop and the technologies that make globalization possible are used by terrorists throughout the world against freedom-loving nations," England told the group.

Faced with this reality, it's critical that the United States and its coalition partners and allies continually keep a step ahead, he said. He called on the industry leaders to help lead that charge.

England cited the Defense Department's ongoing, long-term transformation effort and the 2006 Defense Quadrennial Review and its focus on, among other topics, "netcentricity."

"Netcentric capabilities are about getting people the information they need, when and where they need it," he said. "Just as it is in business, information has become a strategic asset for the department, and using it effectively is essential to the success of our mission."

DoD is examining its system capabilities on the macro level to identify gaps and seams, eliminate unintentional redundancies, and ensure interoperability, England told the group. It's also working to improve its integration with coalition partners and allies, he said.

As these efforts move forward, England acknowledged, "antagonists out there who would be delighted to take down our systems [and] are trying, to the tune of thousands of incidents daily."

Among them, he said, are recreational hackers who hack into DoD systems for fun, "cyber-vigilantes" out to prove a misguided point, small-interest groups pushing ideological issues, transnational terrorist networks aiming to destroy the system, and hostile nation-states.

"These efforts to degrade our systems are expected to continue," England said.

England closed by calling on industry leaders to continue protecting the United States and its partners from what he called the greatest long-term threat they face: "falling behind in science and technology."

"Science and technology are the bedrock of our knowledge-based economy, as well as our military capabilities," he said.

England urged audience members to build on that bedrock by taking every opportunity to encourage science education, research, and application. "America's future, and the future of our partners, does depend on it," he said.

Miles is with American Forces Press Service.

A Six-pack of Tips for Defense AT&L Authors

1 Look at back issues of the magazine. If we printed an article on a particular topic a couple of issues ago, we're unlikely to print another for a while—unless it offers brand new information or a different point of view.

2 We look on articles much more favorably if they follow our author guidelines on format, length, and presentation. You'll find them at <www.dau.mil/pubs/dam/DAT&L%20author%20guidelines.pdf>.

3 Number the pages in your manuscript and put your name on every page. It makes our life so much easier if we happen to drop a stack of papers and your article's among them.

4 Do avoid acronyms as far as possible, but if you must use them, define them—every single one, however obvious you think it is. We get testy if we have to keep going to acronymfinder.com, especially when we discover 10 equally applicable possibilities for one acronym.

5 Fax the *Certification as a Work of the U.S. Government* form when you e-mail your article because we can't review your manuscript until we have the release. Download it at <www.dau.mil/pubs/dam/DAT&L%20certification.pdf>. Please don't make us chase you down for it. And please fill it out completely, even if you've written for us before.

6 We'll acknowledge receipt of your submission within three or four days and e-mail you a publication decision in four to five weeks. We really will remember. Scout's honor.

Acquisition & Logistics Excellence

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 2, 2006)

ANNUAL MAINTENANCE AWARDS ANNOUNCED

The Department of Defense has named the winners of the Secretary of Defense Maintenance Awards. Each year the Secretary of Defense recognizes excellence in both field- and depot-level maintenance by presenting eight awards, including the Phoenix and the Robert T. Mason trophy.

The Secretary of Defense Field-level Maintenance Awards honor military maintenance organizations for outstanding performance. The awardees—two from each category of small, medium, and large organizations are chosen from active and Reserve organizations that perform unit- or field-level maintenance. One of those organizations is singled out as the best of the best and receives the Phoenix Trophy.

The Robert T. Mason Trophy, the Secretary of Defense Maintenance Award for depot-level maintenance, is made to one program at a major organic depot-level maintenance facility that exemplifies responsive and effective depot-level support to operating units. It is named after former Assistant Deputy Secretary of Defense for Maintenance Policy, Programs, and Resources Robert T. Mason, who served as a champion for excellence in organic depot maintenance operations during three decades of government service.

The 2006 winner of the Phoenix Award for field-level maintenance is the 3D Materiel Readiness Battalion, III Marine Expeditionary Force, U. S. Marine Corps. This Okinawa-based battalion serves as a one-stop shopping center for virtually all the maintenance and supply needs of the III Marine Expeditionary Force, which in fiscal year 2005 had units deployed in support of Operation Iraqi Freedom, Operation Enduring Freedom, and various training exercises and humanitarian relief efforts. Despite the challenges of having its personnel supporting so many diverse missions, the battalion completed more than 13,500 intermediate repair orders in an average repair cycle time of 27.8 days, resulting in III MEF having an overall ground combat equipment readiness of more than 95 percent. These accomplishments continue to cement the battalion's reputation of logistics excellence and make it a worthy recipient of the 2006 Secretary of Defense Phoenix Award for outstanding field-level maintenance.

Other field-level maintenance organizations receiving Secretary of Defense Maintenance Awards: Helicopter Antisubmarine Squadron Light 47, Helicopter Maritime Strike Wing, Navy, and 303d Intelligence Squadron, Air Combat Command, Air Force, in the small category; 297th Transportation Company, 2nd Chemical Battalion, Army, and 437th Maintenance Squadron/315th Maintenance Squadron (Reserve), Air Mobility Command, Air Force, in the medium category; and 3rd Maintenance Group, 3rd Wing, Air Force, in the large category.

The 2006 winner of the Robert T. Mason Trophy for depot maintenance excellence in support of DoD operating units is the High Mobility Multipurpose Wheeled Vehicle (HMMVW) Recapitalization Program at Red River Army Depot, Texas. Through this program, the Red River Army Depot restored nearly 2,800 primarily battle-damaged Humvees to a like-new condition, exceeding planned output by 33 percent, while reducing average defects by 46 percent, shortening cycle time by 45 percent, and lowering the average cost by 42 percent. Its planned workload for fiscal year 2006 consists of another 3,500 Humvees, a 26 percent increase over the fiscal year 2005 workload. This outstanding performance has contributed significantly to meeting the equipment needs of our warfighters, and clearly warrants selection for the 2006 Robert T. Mason Trophy for Depot Maintenance Excellence.

The awards were presented to the winners at the Secretary of Defense Maintenance Awards banquet during the 2006 DoD Maintenance Symposium and Exhibition in Reno, Nevada.

AIR FORCE PRINT NEWS (NOV. 3, 2006)

AIRMEN RECEIVE TROPHIES FOR MAINTENANCE EXCELLENCE

WASHINGTON (AFPN) -- Two airmen earned trophies and praise here for their abilities to keep Air Force aircraft flying and munitions ready for the mission.

Master Sgt. Timothy Kellner, 31st Aircraft Maintenance Squadron, Aviano Air Base, Italy, and Capt. Abigail Ruscetta, 16th AMXS, Hurlburt Field, Fla., were honored with the 2006 General Lew Allen Jr. Trophy, presented at

the Pentagon by Vice Chief of Staff of the Air Force Gen. John D.W. Corley.

"We have enormously complex systems in the air and on the ground, and it takes exquisite leadership and supervision to be able to take those extremely complex systems and get them airborne, to generate the sorties for combat purposes," Corley said. "These two people have demonstrated they do it better than does anyone."

The General Lew Allen Jr. trophy is awarded annually to base-level officers and senior NCOs in aircraft, munitions, or missile maintenance directly involved in sortie generation.

Ruscetta was chosen because of her expert leadership, which led to the generation of more than 6,500 flying hours for fiscal 2006. Her unit was the only fixed-wing unit to exceed the wing's flying hour program by more than 500 hours.

Her direct involvement also was key in generating 235 Operation Enduring Freedom combat sorties, which included 730 flying hours and a 97 percent mission-effectiveness rate. Those sorties resulted in 108 enemies killed in action, 50 enemies captured, 704 troops and 128 vehicles escorted, 209 troops moved, and 1.4 million leaflets dropped.

Ruscetta credited members of her unit for her receipt of the honor.

"I'm honored to receive this award," she said. "But it really represents much more than me. It represents the entire Air Force team behind me. The men and women of the 16th Special Operations Wing and the 16th Maintenance Group are absolutely phenomenal."

Kellner was recognized for the support he provided while on deployment to Balad Air Base, Iraq. There, he directly affected the generation of 1,291 combat sorties and 5,622 flying hours supporting operations Restore Rights, Saratoga, and Steel Curtain.

His contributions to aircraft maintenance led to the destruction of 38 weapons caches and improvised explosive devices, which ensured the security of an Iraqi election poll site and resulted in the death of a senior al Qaeda facilitator. His maintenance and planning efforts also contributed to the 31st AMXS being selected for the United States Air Forces in Europe's Maintenance Effectiveness Award for 2005.

"I really owe this to all the men and women, the young airmen and noncommissioned officers, of the 31st AMXS, for their hard work and dedication. That's what made this possible," Kellner said.

AIR FORCE PRINT NEWS (NOV. 8, 2006)
FORMER TECHNICAL DIRECTOR FOR C-17 EARNS DOD AWARD

JoAnne Rumple

WRIGHT-PATTERSON AIR FORCE BASE, Ohio —The former technical director for the Aeronautical Systems Center's C-17 Globemaster III program has won a Department of Defense Distinguished Civilian Service Award for 2006.

Lawrence Fielding is one of eight this year to win the award, which recognizes exceptional achievements that benefited the entire department. It is the highest honor given by the secretary of defense to career civilians. Fielding, who retired in August, received the award Nov. 9 at a Pentagon ceremony.

Fielding's selection culminates a distinguished, 35-year career, all of it served at ASC and Wright-Patterson AFB. Among his contributions was the establishment of standards and policies that improved the Air Force's ability to conduct airlift operations and be more interoperable; numerous firsts for C-17 Globemaster III development, production and modernization; and improvements to a variety of aircraft, including three patents for improvements to aircraft subsystems.

Citations for Fielding's DoD nomination and other awards highlight his engineering achievements on numerous aircraft and subsystems, everything from parachutes, arresting systems and aerial delivery systems to the F-16 Fighting Falcon, C-5 Galaxy, KC-135 Stratotanker, HH-60 Pave Hawk, MC-130 Combat Talon, and the C-17. He also provided contract proposal guidance for some of those same aircraft, as well as the C-5 space module modification, Air Force One, the AC-130U Gunship, and others.

His work with the C-17 was what prompted his supervisor, Air Force Col. Ed Stanhouse, commander of the 516th Aeronautical Systems Group, to nominate Fielding.

Fielding was the driving force behind the creation and systematic development of the ASC-benchmarked C-17 technology roadmap process, the colonel said. Fielding's

Lawrence Fielding, former technical director for the Aeronautical Systems Center's C-17 Globemaster III program at Wright-Patterson Air Force Base, Ohio, has won a Department of Defense Distinguished Civilian Service Award for 2006. U.S. Air Force photograph

efforts allowed the combatant commander 100 percent fleet availability while maintaining an amazing 86 percent global mission-capable rate during Operation Iraqi Freedom. This accomplishment directly resulted in the C-17 providing an impressive 98 percent of Operation Enduring Freedom's airlift, consisting of 5,600 short tons of cargo and 2.5 million humanitarian daily rations over 198 missions.

Additionally, Fielding was one of the initial technical leaders responsible for successful implementation of much of the engineering work that went into making the C-17 the first acquisition program to successfully use the total system performance responsibility concept.

Thinking back over his career, Fielding had two comments.

"ASC's workforce should be extremely proud of its accomplishments," he said. "Even with all the manpower reductions in recent years, we've used ingenuity and a whole host of acquisition initiatives, as well as the close partnership we've developed with aerospace industry, to produce tremendous weapon systems, most notably the C-17.

"Also," he said, "I think it's important for folks to realize that you can accomplish your goals and dreams at ASC. When I first came on board, I had heard about all the great things the Air Force did at what was then Aeronautical Systems Division.

"I decided early on that I was going to get an engineering degree and work at Wright-Patterson AFB," said Fielding. "I wanted to work on airplanes and be a chief engineer. And I made it! Which just goes to prove rewards like good jobs and promotions are indeed given to those who work hard, have ambition, and show initiative."

Rumple is with Aeronautical Systems Center Public Affairs.

THE OFFICE OF FEDERAL PROCUREMENT POLICY AND THE CHIEF ACQUISITION OFFICERS COUNCIL ANNOUNCE **THE CHIEF ACQUISITION OFFICER COUNCIL (CAOC) ACQUISITION MANAGEMENT AWARD 2006**

Paul Denett, administrator of the Office of Federal Procurement Policy (OFPP) presented the Chief Acquisition Officer's Council (CAOC) Acquisition Management Award 2006 for excellence in acquisition workforce management on Nov. 9, 2006.

The CAOC Acquisition Management Award was established to recognize outstanding achievement by federal agencies in various acquisition-related initiatives. This year's nominees were teams that have demonstrated outstanding support of their organization's acquisition workforce—including contracting, program management, project management, and property management—resulting in improved mission delivery.

These teams recognize the importance of the organization's acquisition workforce and establish training, development, and/or workforce management programs that provide the workforce with the necessary skills and competencies to support the organization's short- and long-term needs.

The 2006 award was conferred jointly on two teams from the Department of Homeland Security, Transportation Security Administration—the Office of Acquisition's (OA) Acquisition and Program Management Support Division and the OA's Office of the Chief of Staff.

TSA's Acquisition and Program Management Support Division built a framework of certification and training, and implemented program management support tools such as the TSA Acquisition Program Status Report system, an executive-level tool to monitor key program metrics

such as program manager certification. In addition, the OA's Office of the Chief of Staff developed a program known as "Fellows—Next Generation" to recruit entry-level contract specialists and provide them with intensive training in the basics of contracting.

Additional information on the award recipients and nominees will be featured in the next edition of *FAInsight* at <www.fai.gov/index.asp>.

GSA PRESENTS THE 2006 IDA M. USTAD AWARD FOR EXCELLENCE IN ACQUISITION

Bev Cromer

The General Services Administration is pleased to announce that the recipient of this year's Ida M. Ustad Award for Excellence in Acquisition is Barbara Gerace, contracting officer, U.S. Army Research, Development, and Engineering Command Acquisition Center, White Sands Missile Range, N.M.

Gerace was instrumental in awarding a production contract to produce the improvised explosive device countermeasure system to provide support to our U.S. forces. Radio-controlled improvised explosive devices (RCIEDs) are the enemy's weapon of choice in the global war on terror. Over the last year, the use of these weapons in Southwest Asia has soared to as many as 30 a day. Their increasing use has confirmed the urgent need to develop and deploy suitable countermeasures.

The U.S. Army Research Laboratory (ARL) Survivability/Lethality Analysis Directorate, in conjunction with a contract to New Mexico State University, a minority institution, designed and developed the improvised explosive device countermeasure system (ICE) to satisfy the urgent need to have RCIED countermeasures provided to U.S. forces.

Gerace and her team reviewed 10 large and small businesses. The firms had to demonstrate they could manufacture these units and meet compressed time schedules for proposal, award, production, and delivery.

Gerace led a team of contracting and technical experts from the army research laboratory to award a production contract to produce the units. They went from concept to initial fielding of the systems in just five months. Her strategy was to proceed quickly from design and development to production by utilizing existing electronic warfare support contracts, government engineering, and extensive military input.

As a result of this acquisition strategy, the government owns the design and components of the ICE system, and all projected options are commercial off-the-shelf items. That adds up to a great value for the government and taxpayers in the production phase, and critical protection for our troops in harm's way.

Gerace was selected from 10 finalists for the award. The Ida Ustad Award is given annually in the memory of GSA's former senior procurement executive who was well known for her commitment to public service and the federal acquisition community.

Cromer is with Office of the Chief Acquisition Officer, GSA.

AIR MOBILITY COMMAND PUBLIC AFFAIRS (NOV. 9, 2006)

AMC REDUCES COSTS THROUGH FUEL EFFICIENCY

SCOTT AIR FORCE BASE, Ill.—Energy costs are a significant part of the Defense Department operating budget, and Air Mobility Command uses 54 percent of the U.S. military's consumption of aviation fuel.

Not surprisingly, efficient use of this resource has always been an AMC goal, and while fuel costs remain high, command officials are exploring new ways of wrestling maximum value from every tax dollar without undermining operational effectiveness.

"[Aviation fuel efficiency] is not a new AMC initiative, but through the use of new technology, the introduction of improved software and changes in procedures we're able to continually refine the processes that support the flying mission," said Royal Air Force Wing Commander Martin Walsh, deputy chief of the AMC Standardization and Evaluation Division.

"One significant aspect of the initiative involves moving training out of the aircraft and into the simulator, which saves money, fuel, and wear and tear on AMC aircraft," said Walsh.

Over the last decade, AMC has invested $1.4 billion to purchase additional simulators and upgrade existing ones. By training in simulators instead of aircraft, AMC estimates aircraft flight hours will be reduced by more than 270,000 hours over the next 6.5 years. This will inevitably save $2.3 billion in aircraft fuel, airframe use, wear and tear, and aircraft maintenance.

"Simulators more than pay for themselves by helping to reduce operating costs," said Air Force Lt. Col. Stephen Collins, chief, Combat Airlift Branch, AMC Standardization and Evaluation.

Modern simulators are equipped with enhanced visual systems that are so realistic that challenging tactical maneuvers can be practiced safely and effectively. Other refinements allow simulators on different Air Force bases to be connected and "fly" together on the same mission, rehearsing complex wartime activities and subsequently debriefing the lessons learned both safely and cost effectively.

In search of ways to help improve AMC's efficient use of fuel, representatives of the command visited American Airlines to observe the best practices adopted by the commercial aviation industry. As a result, AMC is placing an even greater emphasis on monitoring aircraft fuel usage.

By using the on-board Aircraft Communication Addressing and Reporting Systems (ACARS), a satellite will automatically feed back information from mobility aircraft anywhere in the world to the Tanker Airlift Control Center (TACC) at Scott Air Force Base, Ill., said Air Force Lt. Col. Mark Krusac, AMC's flight manager evaluator. "With this data, the flight managers will be able to refine mission flight plans and better match the fuel carried to the specific needs of the mission."

"We are trying to look at the feedback loop between flight plans that the flight manager produces and what actually takes place on the airplane when the mission is flown. ACARS automatically reports the fuel status so we can compare the actual fuel consumption with the fuel plan anticipated by the flight manager prior to the mission," said Collins.

"The beauty of ACARS is that it's automatic. The crew can operate the aircraft and continue their in-flight routines as if ACARS wasn't there. AMC can then verify the flight plan, identify any inefficiencies, and make corrections to the computer model so that the aircrew always has the most accurate product possible," said Walsh.

AMC's ultimate objective is to have the TACC produce flight plans that accurately cater to all variables, said Walsh. Additionally, this will help the aircrew have total confidence every time they fly.

Another aspect of the fuel efficiency initiative included a review of maximum landing weight for the KC-135 Stratotanker.

"For the first 50 years of its life, the KC-135's maximum authorized landing weight was 200,000 pounds. After a thorough structural analysis, it was determined that the KC-135 could easily cope with landing at 220,000 pounds," said Walsh.

"Now tankers finding themselves with more fuel on board than planned before the mission—possibly because the receivers did not require the planned fuel— can land at the new maximum weight instead of flying for several hours burning fuel unnecessarily," said Collins.

Another activity yielding terrific savings requires the TACC to work closely with the airspace authorities of foreign countries to identify shorter routes over their countries. Negotiations of this magnitude are sometimes delicate, yet it yields a times savings of eight to 30 minutes per trip.

"These soon add up, and last year shorter routes helped AMC save $46 million in aircraft utilization costs, including fuel," said Air Force Lt. Col. Jim Rubush, chief of the TACC Diplomatic Clearance Shop.

"People think that saving $200 on one mission will not make that big of a difference, but if we do this for every AMC mission there is a potential savings of $28 million a year in fuel costs alone, and that's a very significant figure," said Krusac.

"AMC's global mission is crucial to supporting the warfighter, but this activity does not come for free. Aviation fuel efficiency is a mindset that has always been and will continue to be a part of AMC's culture; every member of the command has a part to play. With everybody thinking fuel efficiency, AMC will continue to be the most fuel efficient major command in the Air Force," said Walsh.

DEFENSE LOGISTICS AGENCY (NOV. 8, 2006)

"CUSTOMER PAY" PAID OFF FOR DLA'S MILITARY CUSTOMERS

Some military maintenance depots got parts and supplies faster and cheaper, and America's military services got refurbished equipment returned sooner thanks to a pilot program called *Customer Pay*.

The program demonstrated early wins supporting the rebuilding of the Army's High-Mobility Multipurpose Wheeled Vehicle, commonly known as the Humvee.

Customer Pay, a partnership between Department of Defense elements and a defense contractor, pays contractors and suppliers at the point of delivery. That reduces the need for millions of dollars of Army inventory and lowers prices for spare parts. Additionally, supply chain costs are reduced since management at the production line minimizes handling by government personnel.

The concept was developed in a pilot program involving the Army Tank-automotive and Armaments Command; the Defense Logistics Agency and its field activity, the Defense Supply Center Columbus; the AM General Corp.; two Army maintenance depots; and the Maine Military Authority. Results from the pilot show dramatically increased performance support and greatly reduced costs to rebuild Humvees.

"Customer Pay is a vivid glimpse of our future. [It] will be seen as a pioneer in DLA's support to the Services' industrial sites by leveraging the relative strengths of our industry, Service, and DLA partners. It has brought new efficiency and effectiveness to our logistics solutions," said James McClaugherty, DSCC deputy commander.

Customer Pay required DSCC personnel to adjust their thinking, according to Eric Tranter, chief of DSCC's Tactical Vehicles Support Division.

"To best understand the challenges of Customer Pay, you have to think retail support, not the usual DLA wholesale approach," he said. "This equates to constantly working with the people at the various depots and maintenance sites … providing responses within hours and actual support in a few days. All of our people have done a great job making this happen because they applied a retail focus to their work with urgency and flexibility. If you take a business-as-usual approach to anything such as Customer Pay, it won't work."

The contractor, AM General, took over tasks formerly managed by government employees: requirements forecasting, supply chain and inventory management, parts requisition from the DoD supply system, parts distribution to maintenance lines, identification of quality issues, and more. The maintenance depots—Letterkenny Army Depot in Chambersburg, Pa., Red River Army Depot in Texarkana, Texas, and Maine Military Authority, in Limestone, Maine—were able to focus on the actual rebuilding of the vehicles instead of inventory needs.

DSCC is the DLA program manager for the process, awards and administers the contract, and is the parts integrator and source of supply to the contractor and the maintenance depots. TACOM is the Customer Pay program manager, the source of supply to AM General, the initial production test lead, the weapons system and rebuilding manager, the centralized e-business manager, and a funding source.

The changes allow DoD to use the most cost-effective sources in the supply chain for spare parts and then provide a back-up supply chain in case of support problems. This safety net creates a significant reduction of inventory while improving supply support performance.

AM General is required to maintain a 30- to 60-day supply of the 1,241 parts included in the pilot project. Results show that supply level seemed to work. The rate of incomplete vehicles dropped by 83 percent at Red River Army Depot and by 100 percent at Letterkenny Army Depot. The dual supply chains prevented parts outages on the line and addressed the challenge posed by a change in 45 percent of the items used to support each depot.

Thanks to Customer Pay, almost $820,000 was saved in reduced depot supply chain manpower expenses in just over three months last winter. Spare parts costs were reduced by leveraging the two supply chains, and the total cost of refurbishing the vehicle was reduced.

"The value of Customer Pay is that it allows DLA and the Army depots to move past just coordinating parts support for a Humvee production line to being interdependent partners," said Army Col. Scott D. Fabozzi, director of DSCC's Land Customer Operations.

The contract was awarded Nov. 1, 2005, and implemented just 78 days later at Letterkenny and Red River. During the pilot, AM General provided 4.1 million parts to the production lines from the 1,200-plus national stock numbers managed under Customer Pay. The depots produced more than 6,029 vehicles under the program, with only 179 coded as incomplete, or G-coded, early in the program at Red River.

Before Customer Pay, both depots had vehicles that were G-coded on a daily basis. At one point that backlog exceeded more than 1,300 incomplete vehicles. Under Cus-

tomer Pay's best business practices approach, the Army's G-coded problems with its Humvee RECAP lines have been significantly reduced and, in many cases, eliminated.

The Customer Pay partnership helped Letterkenny earn the Shingo Prize for excellence in manufacturing in the public sector. That prize is named for the Japanese industrial engineer who helped create the Toyota Production System. Customer Pay has also been nominated for the President's Quality Award and the DLA Top 10 Award.

DSCC serves more than 24,000 military and civilian customers and 10,000 contractors as one of the largest suppliers of weapon systems parts in the world. DSCC buys materiel, monitors inventory levels, maintains technical data, and assures quality conformance of spare parts, which vary from such common items as vehicle parts and accessories to complex mechanical and electronic repair parts for weapon systems.

DLA provides supply support and technical and logistics services to the U.S. military services and several federal civilian agencies. Headquartered at Fort Belvoir, Va., the agency is the one source for nearly every consumable item, whether for combat readiness, emergency preparedness, or day-to-day operations. More information about DLA and DSCC is available at <http://www.dla.mil>.

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 9, 2006)
DEPARTMENT OF DEFENSE CIVILIAN AWARDS PRESENTATIONS ANNOUNCED

Today Deputy Secretary of Defense Gordon England presented two categories of distinguished civilian awards: the 51st annual DoD Distinguished Civilian Service Awards and the 2nd annual DoD David O. Cooke Excellence in Public Administration Award. The Pentagon ceremony was hosted by Director, Administration and Management Michael B. Donley.

The DoD David O. Cooke Excellence in Public Administration Award recognizes a DoD employee with from three to 10 years of federal service and occupies a nonmanagerial DoD position who exhibits great potential as a federal executive. This employee must emulate Cooke's dedication to service and spirit of cooperation and improvement in the department. The recipient of this year's award was Lorena Castro, project engineer, Program Executive Office (Ships), Department of the Navy. Castro was responsible for the development of the acquisition and contracting strategy for procuring three research ships for the National Science Foundation.

The DoD Distinguished Civilian Service Award is the highest DoD-level award that a career civil servant can earn. It recognizes career employees for exceptional contributions to the DoD. The following received this award:

Gus Guissanie, deputy director, Information Assurance, OSD/Networks and Information Integration/Chief Information Officer; Thomas Harvey, principal director, Stability Operations, OSD/Policy; Gail McGinn, deputy under secretary of defense for Plans, OSD/Personnel and Readiness; Maurice M. Mizrahi, operations research analyst, OSD/Program Analysis and Evaluation; Victor Ferlise, deputy to the commanding general for operations and support, Department of the Army; Charles Gallaher, director, Joint Warfare Applications Department, Department of the Navy; Bhakta Rath, associate director of research, Naval Research Laboratory, Department of the Navy; and Lawrence Fielding, technical director, Aeronautical Systems Center, Department of the Air Force.

ARMY NEWS SERVICE (NOV. 16, 2006)
AMC ORGANIZATIONS AWARDED FOR LEAN PRACTICES

WASHINGTON—Secretary of the Army Francis J. Harvey presented four Army Materiel Command organizations the 2006 Shingo Prize Public Sector Award for achievement in implementing lean systems in support of the Army business transformation process in the Hall of Heroes at the Pentagon yesterday.

"The goal of Army business transformation is to achieve major reductions in cost and cycle time while improving the productivity and quality of output in all our business operations and, thereby, free up resources for our operational missions," Harvey told the audience.

"So I am extremely proud of the four organizations that we are recognizing here today," the secretary said. "The recognition by the award of the 2006 Shingo Prize Public Sector Award demonstrates that the Army is making significant progress in achieving its business transformation goals."

Established in 1988, the Shingo Prize has been referred to by *Business Week* as the "Nobel prize of manufactur-

Four Army Materiel Command organizations received the 2006 Shingo Prize Public Sector Award for achievement in lean processes at the Pentagon Nov. 15. Secretary of the Army Francis J. Harvey stands with (left to right) Col. J.B. Elliott, commander, Rock Island Arsenal Joint Manufacturing and Technology Center; Col. Robert Swenson, commander, Letterkenny Army Depot; Col. Douglas J. Evans, commander, Red River Army Depot; Col. Ron Alberto, commander, Tobyhanna Army Depot; and, Gen. Benjamin Griffin, commander, Army Materiel Command. Photograph by J.D. Leipold

ing," because it establishes a standard for world-class excellence.

In the case of the four Army organizations, the prize represents their steadfastness in manufacturing, repair, overhaul, and maintenance of warfighter equipment.

Broken into four categories—platinum, gold, silver, and bronze—the Shingo Prize was awarded to the following:

Gold—**Rock Island Arsenal, Joint Manufacturing and Technology Center, Rock Island, Ill**., for its work on the Forward Repair System. RIA is the first Army command to win at the gold level.

"We achieved the gold level primarily due to our dramatic restructuring, and the hard work, creativity, and dedication of our workforce," said Col. J.B. Elliott, Rock Island commander. "We created integrated product teams to manage our major products horizontally across the organization. In the end, our results were dramatic. We shortened the product travel distance by 81 percent, reduced the manufacturing lead time by 40 percent, resolved 36 safety and ergonomic issues and one quality issue, and increased production from four to 29 units per month."

Silver—**Letterkenny Army Depot, Chambersburg, Penn**., for its work on the Humvee. According to Letterkenny commander, Col. Robert Swenson, the efficiencies the command found by adhering to Lean and Six Sigma principles were striking.

"Letterkenny is now producing 27 extra Humvees each month—for free," he said. "Through the use of Lean on our Humvee line, we have been able to reduce defects by 85 percent, cut labor hours by 41 percent and slash parts shortages to zero. This resulted in a cost reduction of more than $11 million.

"To represent the only Army Depot to win the Shingo Prize two years in a row is a humbling experience for

me and for all our Letterkenny employees," Swenson said.

Silver—**Red River Army Depot, Texarkana, Texas**, for its work on the Humvee.

"The dedication and patriotism of the Red River members is unmatched and reflected in the quality of the Humvee that we provide daily for the warfighter," said Col. Douglas J. Evans, Red River commander. "The culture change and our willingness to adapt Lean and Six Sigma techniques have enabled us to better meet the needs of each soldier serving our nation.

"Receipt of the Shingo Prize validates Red River's commitment to quality and continuous process improvement," Evans added.

Bronze—**Tobyhanna Army Depot, Tobyhanna, Penn.**, for its work on the AN/TPS-75 radar system.

Col. Ron Alberto, Tobyhanna's commander, said his command earned the Shingo Prize for achieving a 31 percent reduction in repair-cycle time and a 25 percent reduction in repair costs on the Air Force's primary air-defense radar system.

"The prize reflects our commitment to Lean Six Sigma and quality improvement, but more importantly to taking care of our soldiers, sailors, airmen, and Marines on the battlefield," Alberto said.

According to Shingo Prize officials, the AMC organizations were all evaluated by on-site examiners. They were scored in cost improvement, leadership, empowerment, vision and strategy, innovation and development, partnering practices with suppliers and customers, environmental practices, quality and results, and consistent improvement in each of those areas.

AMC NAMES SMALL BUSINESS SPECIALIST OF THE YEAR

The Army Materiel Command (AMC) Small Business Specialist of the Year award for 2005 was presented to Kevin R. Loesch, U.S. Army Communications-Electronics Life Cycle Management Command (CELCMC) at the 10th Annual Army Small Business Conference held in McLean, Va., Nov. 1, 2006.

Army Gen. Benjamin S. Griffin, AMC commanding general, personally thanked Loesch for his contributions as he presented him an engraved plaque during the conference.

The AMC Small Business Specialist of the Year award recognizes those specialists who have provided over and above support for the small business community. By going the extra mile, these individuals have greatly contributed to the success of the AMC Small Business Program.

Loesch attributed his success to his team.

"I'm truly humbled in receiving this award since it really reflects on the outstanding work done by the entire CELCMC Small Business Programs Office team," said Loesch.

"Their professionalism and commitment to support small business and the needs of our warfighters are the foundation for our program success and achievements."

Loesch was a critical player in the development of the Strategic Services Sourcing small business participation strategy. His initiative and collaborative efforts made small business opportunities a significant consideration in the S3 acquisition that supports the command's life cycle management initiatives. As a result, three of the seven S3 prime contracts were awarded to small businesses.

Under Loesch's leadership, the CELCMC small business program exceeded $1 billion in total obligations for the third consecutive fiscal year. Loesch's competence and professionalism are recognized AMC-wide.

For further information, contact AMC News Service at 703-806-8126/DSN 656-8126 or e-mail AMC-NewsService@HQAMC-EXCHG.army.mil.

AMERICAN FORCES PRESS SERVICE (NOV. 20, 2006)

DEFENSE AGENCY DELIVERS LOGISTICS SUPPORT TO WARFIGHTERS

Gerry J. Gilmore

WASHINGTON—Whether it's an infantryman in Iraq needing a new firing pin for his rifle or a fighter pilot on a carrier in the Persian Gulf who needs to replace a cracked landing strut, the Defense Logistics Agency stands ready to support warfighters worldwide, the organization's director said in a recent interview.

Soldiers, sailors,airmen, and Marines deployed around the world supporting the war against terrorism routinely make requests from their units for critically needed supplies, Army Lt. Gen. Robert T. Dail told the Pentagon Channel.

"It may be a part that keeps an airplane down; it may be a part that's keeping a tank or a mechanized piece of equipment down. It may be something that keeps your rifle from operating correctly," said Dail, who oversees the agency's operations from its Fort Belvoir, Va., headquarters.

Requests for parts, fuel, food, and other material necessary to support troops in the field, Dail explained, are forwarded to DLA's supply requisition and delivery system, which the agency monitors.

DLA fills combatant commanders' supply requisitions from its stateside- or overseas-based depots, Dail said. The agency can track supply shipments, he noted, through the use of radio frequency tags that are fastened to all outgoing orders.

Dail said the tracking system "is very elaborate, and it allows us to better manage and make decisions to ship critical supplies to the troops that really need them in fighting locations."

The agency's partnership with U.S. Transportation Command, the three-star general noted, enables swift delivery of needed parts and other supplies to Army, Air Force, Navy, or Marine units serving worldwide.

"Whether it's a repair part, or it's an item of equipment that's very important to the troop, that will be immediately shipped, and within days, or sometimes even less than a day, depending on where our parts (are located) and the way the item is stocked," Dail said.

The agency's Deployment and Distribution Operations Centers exemplify DLA's drive to modernize and transform its business practices, Dail said. The centers, he noted, have contributed mightily to the agency's goal of maintaining timely and efficient global supply operations.

The D-DOCs are deployed directly into combat theaters, Dail explained, noting they merge DLA- and individual Services-managed supply operations with U.S. TRANSCOM's rapid-delivery capabilities.

"And because of that, we have been able to leverage the unique capabilities of the agency at forward stocking locations like Kuwait, Baghdad, Afghanistan; and it allows us to integrate the unique industry capabilities and sources of supplies from DLA into the military operations," Dail noted.

The D-DOCs have achieved notable success, the general said. Additionally, he added, they illustrate "the strong partnership and enterprise that has been created now in the Department of Defense, between the Services, Transportation Command, and the Defense Logistics Agency."

Today, DLA continues to strengthen its relationships with suppliers and industry as part of the agency's mission "to provide world-class support to America's military," Dail said.

"We will never forget that mission," he emphasized, "and we will do our best to provide them with the kind of support that American men and women who bravely serve in uniform so richly deserve."

Gilmore is with American Forces Press Service.

AIR FORCE PRINT NEWS (NOV. 28, 2006)
SCIENCE, ENGINEERING, TECHNOLOGY ACHIEVEMENTS LAUDED

WASHINGTON— Air Force officials recognized the Service's top performers in science, engineering, and technology during an awards banquet at the National Museum of the United States Air Force at Wright-Patterson Air Force Base, Ohio.

Award winners received a plaque and a certificate recognizing their achievements.

The winners of the Air Force's science, technology, and engineering awards for 2005 include:

Air Force Outstanding Scientist Awards

- **Senior Military:** Lt. Col. William Cade III, Air Force Weather Agency
- **Mid-Career Military**: Maj. Jason Quigley, Air Force Space Battlelab
- **Junior Military**: 1st Lt. Todd Turner, Air Force Research Laboratory
- **Senior Civilian:** Stephen Szaruga, AFRL
- **Mid-Career Civilian**: James Simonds, AFRL
- **Junior Civilian**: Margret Lefebvre, 36th Electronic Warfare Squadron

- **Team**: Active Denial System Bioeffects Team, AFRL: Lt. Col. Michelle Bryce, Lt. Col. Noel Montgomery, Maj. Gary Martinsen, 1st Lt. Keith White, Master Sgt. Angela Bland, Staff Sgt. John Connolly, Dr. Michael Cook, Stephanie Miller, Roxanne Constable, Leland Johnson, Charles Kuhnel, Kalyn Yaws, and Kristie Pointer

Air Force Outstanding Engineer Awards

- **Senior Military**: Maj. Jack Miner, 508th Attack Sustainment Squadron
- **Mid-Career Military**: Capt. Trent Greenwell, 580th Aircraft Sustainment Group
- **Junior Military**: Capt. David Drummond, Warner Robins Air Logistics Center
- **Senior Civilian**: James Hurst, 36th EWS
- **Mid-Career Civilian**: John Crane, 36th EWS
- **Junior Civilian**: Summer Leim, 36th EWS
- **Team**: Advanced Space Control Demonstration Team, Air Force Space and Missile Systems Center—Lt .Col. Vincent Park, Maj. Donna Shipton, Maj. James Sikra, Maj. Karl Fobes, Maj. Tim Sejba, Maj. Dan Janning, Capt. Ron Blomé, Capt. Mia Kinsey, Capt. Erik Quigley, Capt. Brian Egbert, Capt. Bill King, Capt. Stuart Stanton, Dave Hilland, Cathy Purnell, Al Bornstein, Shenell Cooper, Jack Yeatts, Greg Neldner, Jim Watson, David Homco, John Collins, William Slutter, and Tommy Troup

Air Force Outstanding Science and Engineering Educator Award

- Dr. Edward Unangst Jr., United States Air Force Academy

The Air Force John L. McLucas Basic Research Award

- Dr. Craig Denman, AFRL

Air Force Research and Development Award

- Lt. Col. Scott Fawaz, USAFA
- Maj. Jeffrey Dickson, AFRL
- Capt. James Caldwell, AFRL
- 1st Lt. Robert Patton, 674th Aeronautical Systems Squadron

Air Force Science and Engineering Award for Research Management

- Lt. Col. Daniel Miller, 718th Test Squadron
- Dr. Gregory Spanjers, AFRL
- 1st Lt. Krystal Walker, Air Force Technical Applications Center

Air Force Science and Engineering Award for Exploratory or Advanced Technology Development

- **Active Denial Team, AFRL**: Dr. Diana Loree, 1st. Lt. Carla Belote, 1st. Lt. Grady Patterson, 2nd Lt. Adam Gubbels, Senior Airman Hansen Multine, Anthony Baros, Bill McCullough, and Jim O'Loughlin
- Dr. Mark Kramer, AFRL
- Daniel Hague, AFRL
- **High Explosives Research and Development Team, AFRL**: Maj. Colin Tucker, 1st Lt. Jessica Kashka, 2nd Lt. Ryan Drinkwater, 2nd Lt. Beau Monnot, Tech. Sgt. Julie Harlow, Tech. Sgt. Wes Schuler, Staff Sgt. Jake Wise, Staff Sgt. Ira Lewis, Tim McKelvey, John Cominiello, Stephen Struck, Larry Stewart, Dr. Tom Krawietz, Chris Varner, Mark Johnson, Jonathon Sexton, John Redden, Donald Turner, Ricky Beesley, William Watts, Russ Huffman, Bill Harrison, Greg Glenn, Mike Jenkins, Voncile Ashley, Dr. Mike Kramer, Dr. Yuki Horie, Dr. Mario Fajardo, Dr. Jennifer Jordan, Thad Wallace, Russ Maines, Chad Rumchik, Wayne Richards, Karen Clayton, Al Beach, Mark Grimmonpre, Tom Sprague, Kenya Clayton, Theresa Wilson, Justin Harris, Bill Snow, John Leahy, Chuck Thames, Aaron Howell, Roy Larsen, Mitch Fleiszar, Wanda Barlow, Dr. Robert McKenney Jr., Pete Stevens, Jeff Dennis, Paula Suttles, Dr. Richard Dick, Dr. Mike Lindsay, Dr. Will Lewis, Mac Belton, and Byron Allmon

Air Force Science and Engineering Award for Engineering Achievement

- H. Vern Baker, AFRL
- Capt. Ronald Poulin, 97th Intelligence Squadron

- **Radio Over Internet Protocol Routed Network Team, Air Mobility Command**: Col. Gregory Touhill, Col. Marty Edmonds, Maj. Robert Sylvester, Maj. Carl Grant, Sqd. Ldr. Patrick Joseph Del Guidice (AUS), Capt. David Canady Jr., Capt. Robert Ault, Capt. Matthew McAlister, Capt. Ryan Mutch, Capt. Terry Scott, 1st Lt. Dennis French, 1st Lt. Alfred Tamayo, Senior Master Sgt. Curtis Fouts, Master Sgt. James Fletcher Jr., Master Sgt. Brett Slickers, Master Sgt. Robert Eiszler, Master Sgt. Robert Marquez, Tech. Sgt. Marlon Taylor, Tech. Sgt. Eric Yingling, Staff Sgt. Grant Jacobs III, Senior Airman Daniel Urbanski, Michael Byard, Richard Doe, Troy Delfs, Jeffery Visosky, Jeffrey Sapp and Thomas Brooke

Air Force Science and Engineering Award for Manufacturing Technology

- Marty Sheppard, 402nd Electronics Maintenance Group

Air Force Institute of Technology Systems Engineering Award

- Team INSIGHT: Maj. Donald Davis, Maj. Kenneth Kranz, Capt. John Fontejon, 1st Lt. David Caponio, 2nd Lt. Reed Bond, 2nd Lt. Lawrence Childers, and 2nd Lt. Micah Mossman

DEFENSE LOGISTICS AGENCY NEWS RELEASE (DEC. 5, 2006)

DEFENSE LOGISTICS AGENCY ANNOUNCES BEYOND THE CALL OF DUTY: LOGISTICIAN OF THE YEAR

FORT LEE, Va.—On November 28, 2006, Defense Logistics announced Army Col. David W. Coker as the winner of their Beyond The Call of Duty: Logistician of the Year award. Coker is the project manager for Logistics Information Systems where he directs the acquisition, management, development, implementation, deployment, training, and sustainment of the Army's tactical logistics systems encompassing supply, maintenance, property accountability, ammunition management, and movement tracking. Coker's leadership and performance put him at the forefront of the Army's overhaul of the systems and processes that support and supply the warfighter.

Until February 2006, Coker was in charge of Global Combat Support System-Army, the Army's largest Enterprise Resource Planning program, which used the SAP business suite. Coker was responsible for managing cost, schedule, and technical performance issues associated with the development, fielding, and life-cycle management of the Army's Global Combat Support System; and he helped implement state-of-the-art automation by providing superior information systems to soldiers around the globe.

Army Col. David W. Coker is winner of the Army's Beyond The Call of Duty: Logistician of the Year Award. Coker accepted the award on Dec. 5, 2006, at Fort Lee, Va.
Photograph courtesy Project Manager, Logistics Information Systems (PMLIS)

From March 2006 until August 2006, Coker had operational control for the Army's national Logistics Modernization Program (LMP), also an Enterprise Resource Planning effort using the SAP business suite, valued in excess of $1.4B under the PEO EIS.

Every day, through leadership, diversification, and guidance, Coker is laying a foundation for flexible, scalable, and modernized IT business systems and business processes that allow logisticians to see requirements, control distribution, and obtain guaranteed, precise, time-definite support. Effective, efficient, and integrated support to the warfighter are vital requirements for today, and Coker has made them his number one priority as demonstrated by the results he has achieved.

His awards and decorations include Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal with six Oak Leaf Clusters, Joint Service Commendation Medal, Army Commendation Medal, Army Achievement Medal with four Oak Leaf Clusters, Military Outstanding Volunteer Service Medal, National Defense Service Medal, Global War on Terrorism Service and Expeditionary Medals, Southwest Asia Service Medal, Kuwait Liberation Medal, Korea Defense Medal, Secretary of Defense Staff Badge, Secretary of the Army Staff Badge, Parachutist Badge, and Army Superior Unit Award. Additionally, Coker has been recognized through various industry awards including *Federal Computer Week's* Fed 100 and *Government Computer News*' IT Leadership Awards.

For more information on Coker and Logistics Information Systems, visit <http://www.pmlis.lee.army.mil>.

AIR FORCE PRINT NEWS (DEC. 20, 2006)

AIR FORCE OFFICIAL NAMES ENVIRONMENTAL WINNERS

WASHINGTON—The Air Force civil engineer announced the winners of the Gen. Thomas D. White Environmental Awards for 2006.

Maj. Gen. Del Eulberg named nine installations and one individual as winners of this year's awards.

The 2006 winners are:

- Environmental Quality Award (industrial): Tinker Air Force Base, Okla.

- Environmental Quality Award (reserve component including Air National Guard): Bangor International Airport
- Environmental Quality Award (overseas): Misawa Air Base, Japan
- Restoration Award (installation): Dover AFB, Del.
- Pollution Prevention Award (non-industrial): Luke AFB, Ariz.
- Natural Resources Conservation Award (large base): Arnold AFB, Tenn.
- Cultural Resources Management Awards (installation): Eglin AFB, Fla.
- Pollution Prevention Award (individual/team): Tinker AFB
- National Environmental Policy Act (team): Seymour-Johnson AFB, N.C.
- Cultural Resources Management Award (individual/team): Gary M. O'Donnell, Hickam AFB, Hawaii

A ceremony and reception to honor the Air Force winners will take place at the Pentagon on April 19.

The winners are eligible for the Secretary of Defense environmental awards and will go forward as the Air Force nominees. The Air Force captured three of nine Secretary of Defense environmental awards in 2005.

ADVANCED SENSOR TECHNOLOGY TEAM AWARDED DEFENSE ACQUISITION EXECUTIVE CERTIFICATE OF ACHIEVEMENT

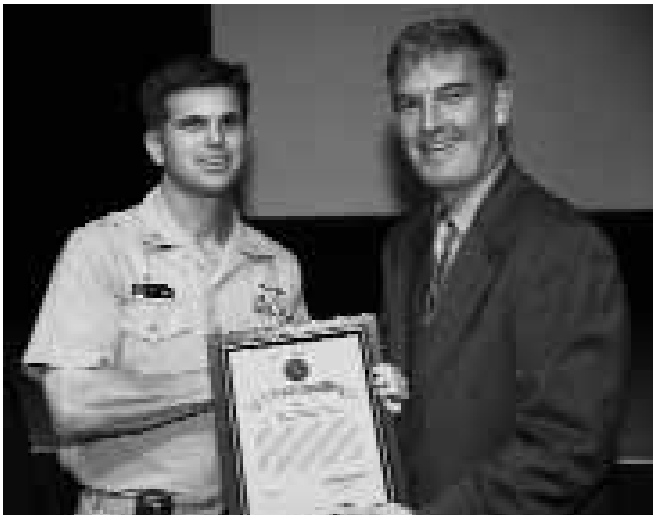
On Oct. 4, 2006, Under Secretary of Defense, Acquisition, Technology and Logistics Ken Krieg recognized the Advanced Sensor Technology (AST) government-Boeing/Raytheon contractor team by awarding the team the Defense Acquisition Executive Certificate of Achievement.

The DAE Certificate of Achievement is awarded to individuals and teams that have made exceptional contributions to improving life-cycle costs and/or the Department of Defense acquisition system through innovative acquisition management techniques.

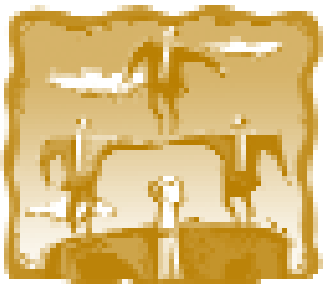
Capt. Scott Anderson, USN, AST program manager, accepted the award on behalf of the team that consisted also of Bradley Mudd, chief of contracting. Robert Colvert, Boeing Division, Texas; and Fred E. Ellis, Raytheon.

The award recognized the AST Team's demonstration of exemplary acquisition excellence while producing and delivering the Littoral Surveillance Radar System that uses advanced radar, display, and processing systems to provide new littoral surveillance capabilities for joint and naval forces. These surveillance capabilities provide a greatly improved understanding of the battle space and support the United States' objective to achieve full-spectrum dominance in fighting and winning the global war on terror.

AST achieved optimum results by implementing transformational business practices that increased efficiency, reduced cost, and enabled early delivery of capabilities. The team used innovative techniques, applying strategic workforce alignment, close teaming with prime contractors, and integrated system testing. Rigorous financial and earned value management methodologies enabled on-schedule product deliveries well within budget. The team tested the vehicle for over 2,800 hours without a single personnel safety or equipment mishap and achieved successful early operational capability to support global war on terror operations starting in 2005. The AST team demonstrated keen ingenuity and exceptional management performance for all aspects of the design, development, and production of the Littoral Surveillance Radar System, and exemplifies the under secretary's Number 1 goal to have a high-performing, agile, and ethical workforce.



Capt. Scott Anderson receives the Defense Acquisition Executive Certificate of Achievement from USD (AT&L) Ken Krieg on behalf of the Advanced Sensor Technology team.
Photograph by Dirke Williams, OUSD(AT&L) staff



AT&L Workforce—Key Leadership Changes

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 7, 2006)
GENERAL OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Army Brig. Gen. James E. Chambers has been nominated for appointment to the grade of major general. Chambers is currently serving as commanding general/commandant, U.S. Army Transportation Center and School, Fort Eustis, Va.

Army Brig. Gen. Yves J. Fontaine has been nominated for appointment to the grade of major general. Fontaine is currently serving as deputy chief of staff, G-4, U.S. Army Europe and Seventh Army, Germany.

Army Brig. Gen. John A. Macdonald has been nominated for appointment to the grade of major general. Macdonald is currently serving as deputy commanding general, Installation Management Command, Arlington, Va.

Army Brig. Gen. Patrick J. O'Reilly has been nominated for appointment to the grade of major general. O'Reilly is currently serving as program director, ground-based midcourse defense, Missile Defense Agency, Huntsville, Ala.

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 21, 2006)
FLAG OFFICER ASSIGNMENT

Chief of Naval Operations Adm. Mike Mullen announced the following flag officer assignment:

Rear Adm. (lower half) (selectee) Kathleen M. Dussault is being assigned as deputy assistant secretary of the Navy (acquisition management), Washington, D.C. Dussault is currently serving as chief, acquisition division, J33, Defense Logistics Agency, Fort Belvoir, Va.

AIR FORCE MATERIEL COMMAND PUBLIC AFFAIRS (NOV. 16, 2006)
AIR FORCE TAPS FOUR AFMC GENERALS FOR NEW POSITIONS

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—As a result of senior leader assignments announced by the Air Force Nov. 16, four generals within Air Force Materiel Command will move, and the command will gain two Senior Executive Service civilians.

Maj. Gen. Jeffrey R. Riemer is currently the commander of the Air Armament Center and Program Executive Officer, Weapons, at Eglin AFB, Fla. He will be reassigned as the Air Force program executive officer for the F-22 program, Office of the Assistant Secretary of the Air Force for Acquisition, at the Pentagon. Past assignments include serving in the Office of the Secretary of Defense as a military staff assistant for developmental testing of aircraft and air-to-air missiles. Later assignments include program manager for the MC-130H Combat Talon, and Program Executive Officer for Command and Control, and Combat Support Systems.

Brig. Gen. David W. Eidsaune will succeed Riemer as commander, AAC and Program Executive Officer, Weapons. Currently, Eidsaune is commander of the Air Force Security Assistance Center at Wright-Patterson AFB. Eidsaune entered the Air Force in 1978. He has commanded at the squadron, group, and wing levels, and was vice commander of the Aeronautical Systems Center at Wright-Patterson from July 2002 through February 2003.

Maj. Gen. Johnny A. Weida will succeed Eidsaune as the AFSAC commander. Currently Weida is the director, Intelligence and Requirements, Headquarters Air Force Materiel Command at Wright-Patterson AFB. Weida has served as a member of the Thunderbirds U.S. Air Force Aerial Demonstration Team and has held staff positions with U.S. Forces Korea and the Air Staff Plans and Programs Directorate.

Brig. Gen. Janet C. Wolfenbarger will succeed Weida as the director, Intelligence and Requirements, Headquarters AFMC. Currently, Wolfenbarger is special assistant to the AFMC Commander for Command Transformation. She has held several positions in the F-22 System Program Office at Wright-Patterson AFB, served as the F-22 Lead Program Element Monitor at the Pentagon, and was the B-2 System Program Director for ASC from April 2000 through December 2002.

Among the gains for AFMC is Susan J. Thornton. She was appointed SES director, Directed Energy Directorate located at Kirtland AFB, N.M. Air Force Research Laboratory's Directed Energy Directorate develops high-energy lasers, high-power microwaves, and other directed energy technologies for the Air Force and Department of Defense. Currently, Thornton is the director, Engineer-

ing, Airborne Laser Program for the Missile Defense Agency at Kirtland AFB.

Another AFMC addition is Dr. Patrick G. Carrick. He was appointed SES director, Physics and Electronics, Air Force Office of Scientific Research. AFOSR supports Air Force goals of control and maximum utilization of air and space by investing in basic research efforts for the Air Force in relevant scientific areas. AFOSR is located in Arlington, Va., and is part of AFRL. Currently Carrick is the NH-IV chief science, technology, and international advisor for the special assistant for Chemical and Biological Defense and Chemical Demilitarization Programs, Washington, D.C.

DEPARTMENT OF DEFENSE NEWS RELEASE (DEC. 11, 2006)

GENERAL OFFICER ANNOUNCEMENT

The chief of staff, Air Force announces the assignment of the following general officer:

Brig. Gen. Gary S. Connor, deputy chief of staff, communications and information systems, Multi-National Force-Iraq, U.S. Central Command, Baghdad, Iraq, to program director, Ground-Based Midcourse Defense Program, Missile Defense Agency, Huntsville, Ala.

AMERICAN FORCES PRESS SERVICE (DEC. 13, 2006)

RUMSFELD PRESENTS AWARDS TO DOD LEADERS

Jim Garamone

WASHINGTON—Defense Secretary Donald H. Rumsfeld thanked men and women of the Defense Department during a ceremony at the Pentagon today.

Rumsfeld, who stepped down as secretary Dec. 18, wanted to recognize all that servicemembers and civilians in the department have done in the past six years.

"I begin with the men and women of our armed forces," he said. "They risk their lives, thousands of miles from home. They bring relief and safety to victims of tsunamis and earthquakes and hurricanes, and they go for months at a time without seeing their loved ones."

Rumsfeld recalled his trip last weekend to thank the troops in Iraq for their sacrifices. "I told them how much we appreciate their service, and how important their sacrifice is to their fellow Americans," he said. "I have never ceased to be inspired by their courage, their professionalism, and their determination."

The secretary then presented the Department of Defense Medal for Distinguished Public Service to 32 military and civilian employees of the Pentagon during the ceremony.

Those honored included Meg Falk for 9/11 Family Support, Lisa Disbrow and Air Force Col. Robert Nolan for combating stress on the force, Army Col. Michael Stout for the provincial reconstruction team concept, retired Army Lt. Gen. Mick Kicklighter and his team for Iraqi and Enduring Freedom assessments, retired Army Gen. Montgomery Meigs for the Improvised Explosive Device Task Force, and Navy Rear Adm. Michael Lefever for leading Pakistan earthquake relief.

Also honored were retired Army Lt. Gen. Gus Pagonis of the Defense Business Board, Allison Barber for public and community outreach—most notably, for the department's "America Supports You" program, Theresa Whelan for her work in Africa policy, James MacDougall for his work with Central Asia policy, and Army Lt. Gen. Steve Blum for Katrina relief.

Honorees also included Air Force Lt. Gen. Trey Obering for restructuring the missile defense program, Navy Vice Adm. Stanley Szemborski for budget and analysis support, Richard Lawless for East Asia policy, and Philip Grone and his team for base realignment and closure.

The secretary honored Andrew Marshall for defense transportation policy, William Haynes and Daniel Dell'Orto and their team for legal initiatives, Paul McHale and Peter Verga and their team for homeland defense capabilities, Thomas Hall for negotiating Iceland transformation, and Dr. William Winkenwerder for military medicine enhancements.

Rumsfeld also presented awards to Ryan Henry and his team for the Quadrennial Defense Review effort, Peter Geren for all-around DoD excellence, Navy Adm. Mike Mullen and Air Force Gen. Mike Moseley for transitional support for nontraditional missions, Gen. Peter Schoomaker for Army transformation, and Steven Cambone for intelligence transformation.

Finally, the secretary presented awards to David Chu for the department's language and regional training initiative, Ken Krieg for business process transformation, and Deputy Defense Secretary Gordon England and his team for the National Security Personnel System.

Garamone is with American Forces Press Service.

AT&L Workforce—Key Leadership Changes

NEW MILITARY DEPUTY TO ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS & TECHNOLOGY)

On Nov. 1, 2006, Army Lt. Gen. N. Ross Thompson III assumed duties as Military Deputy (MILDEP) to the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT) and Director, Acquisition Career Management (DACM). Thompson previously served as commanding general, U.S. Army Tank-automotive and Armaments Command in Warren, Mich. He also brings field experience from numerous command positions including the 45th Corps Support Group (Forward), U.S. Army Pacific Command, Schofield Barracks, Hawaii.

Thompson replaces Army Lt. Gen. Joseph L. Yakovac Jr., who had served as MILDEP/DACM since November 2003, and is retiring after more than 35 years of service.

DEPUTY DIRECTOR FOR CONTRACT POLICY NAMED

Richard T. Ginman has been selected as the deputy director for contract policy, Office of Defense Procurement and Acquisition Policy, reporting Oct. 30, 2006. He is a retired naval officer whose career included tours as a contracting officer; assistant commander for Contracting at Naval Sea Systems Command; former director, Acquisition Business Management in the Office of the Assistant sSecretary of the Navy (Research, Development and Acquisition); and a former deputy director in the Office of Defense Procurement and Acquisition Policy. He retired with the rank of Navy rear admiral. Since his retirement he has held positions in industry. He most recently served as a vice president at General Dynamics.

From Our Readers

Implementing ERP

I read Col. David W. Coker's "Lessons Learned from the Army's Largest ERP Implementation" in Defense AT&L, Nov-Dec 2006, on the Army's Logistics Modernization Program (LMP). The article, however, never mentions the applications platform or any details about applications contracts (who is doing it for the Army?). What is the enterprise resource planning application being used to implement LMP? Is it SAP? I concur that implementing ERP is a business transformation, not just a technology upgrade, but any technology platform has positives and negatives. The article was silent on any lessons learned regarding the technology performance (versus availability) other than the need for better data cleansing and an advanced help desk tool. Is it accurate to read between the lines that the platform requires extensive help desk and process assistance?

I would like to see Defense AT&L get a little more into the weeds of how DoD's ERP systems are performing and whether we are all really using the best technology infrastructures in our modernization programs.

Matt Hutchens
Defense Supply Center Richmond
Defense Logistics Agency

The author responds:

In the case of LMP, the Army purchased a service, not a system. In doing so, the application service provider is responsible for delivering and sustaining a modernized enterprise resource planning solution to the Army Materiel Command. Computer Sciences Corporation is the lead system integrator providing this service for LMP. SAP is the ERP application that LMP is implementing. The software version and SAP products used for the solution are SAP R/3 4.6C, Business Warehouse, Advanced Planning Optimizer, Strategic Enterprise Management and Enterprise Portal 6.

From a technology performance perspective, LMP has been very successful and, in many areas, has exceeded industry standards. There are lessons learned, regarding processes for problem ticket management and documentation; these relate to changes made to the production solution. Both processes are critical and need to be well defined and followed. LMP established an oversight group to continually evaluate and improve all processes and a quality team to monitor and enforce compliance. There is absolutely a need for a 24/7 help desk capability, onsite customer assistance and reach-back support. In LMP's case, the application service provider is required to provide help desk capabilities for the length of its contract. The onsite customer support depends on training and education; the number of customer expert users; and functional issues, among others. Help desk capability, process assistance and sound program governance are critical.

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Surfing the Net

Acquisition Central
http://acquisition.gov/
Shared systems and tools to help the federal acquisition community and the government's business partners conduct business efficiently.

Acquisition Community Connection (ACC)
http://acc.dau.mil
Policies, procedures, tools, references, publications, Web links, and lessons learned for risk management, contracting, system engineering, total ownership cost.

Advanced Concept Technology Demonstrations (ACTDs)
www.acq.osd.mil/actd/
ACTD's accomplishments, articles, speeches, guidelines, and POCs.

Aging Systems Sustainment and Enabling Technologies (ASSET)
http://asset.okstate.edu/asset/index.htm
A government-academic-industry partnership. ASSET program-developed technologies and processes increase the DoD supply base, reduce time and cost associated with parts procurement, and enhance military readiness.

Air Force (Acquisition)
www.safaq.hq.af.mil/
Policy; career development and training opportunities; reducing TOC; library; links.

Air Force Center for Systems Engineering
www.afit.edu/cse/
Conceptualizes new processes, practices, tools, and resources for the systems engineering workforce through research, education, and consulting.

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 for the Advancement of Cost Engineering International (AACE)
www.aacei.org
Promotes planning and management of cost and schedules; online technical library; bookstore; technical development; distance learning; etc.

Association of Old Crows (AOC)
www.crows.org
News; conventions, courses; *Journal of Electronic Defense*.

Association of Procurement Technical Assistance Centers (APTAC)
www.aptac-us.org
PTACs nationwide assist businesses with government contracting issues.

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/enroll.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.esi.mil
Joint project to implement true software enterprise management process within DoD.

DoD Inspector General Publications
www.dodig.osd.mil/pubs/
Audit and evaluation reports; IG testimony; planned and ongoing audit projects of interest to the AT&L community.

DoD Office of Technology Transition
www.acq.osd.mil/ott/
Information about and links to OTT's programs.

DoD Systems Engineering
www.acq.osd.mil/ds/se
IPolicies, guides and other information on SE and related topics, including developmental T&E and acquisition program support.

Earned Value Management
www.acq.osd.mil/pm
Implementation of earned value management; latest policy changes; standards; international developments.

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 Business Opportunities
www.fedbizopps.gov/
FedBizOpps.gov is the single government point-of-entry for federal government procurement opportunities over $25,000.

Federal R&D Project Summaries
www.osti.gov/fedrnd/about
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.

Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

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.

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 Fires Integration and Interoperability Team
https://jfiit.eglin.af.mil
USJFCOM lead agency to investigate, assess, and improve integration, interoperability, and operational effectiveness of Joint Fires and Combat Identification across the Joint warfighting spectrum. (Accessible from .gov and .mil domains only.)

Joint Interoperability Test Command (JITC)
http://jitc.fhu.disa.mil
Policies and procedures for interoperability certification; lessons learned; support.

Joint Spectrum Center (JSC)
www.jsc.mil
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.

Performance-based Logistics Toolkit
https://acc.dau.mil/pbltoolkit
Web-based 12-step process model for development, implementation, and management of PBL strategies.

Project Management Institute
www.pmi.org
Program management publications; information resources; professional practices; career certification.

Small Business Administration (SBA)
www.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 datl(at)dau(dot)mil (Please use correct e-mail protocol). 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

Defense AT&L magazine is intended to instruct the DoD acquisition, technology & logistics workforce and defense industry on policies, trends, legislation, senior leadership changes, events, and current thinking affecting program management and defense systems acquisition.

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 those 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.

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 <www.dau.mil/pubs/damtoc.asp>. Select "Submit an Article to *Defense AT&L*."

Presentation

Manuscripts should be submitted as Microsoft Word files. Please use Times Roman or Courier 11 or 12 point. Double space your manuscript and do not use columns or any formatting other than bold, italics, and bullets. *Do not embed or import graphics into the document file*; they must be sent as separate files (see next section).

Graphics

We use figures, charts, and photographs (black and white or color). Photocopies of photographs are not acceptable. Include brief numbered captions keyed to the figures and photographs. Include the source of the photograph. We publish no photographs or graphics from outside the DoD without written permission from the copyright owner. We do not guarantee the return of original photographs.

Digital files may be sent as e-mail attachments or mailed on zip disk(s) or CD. *Each figure or chart must be saved as a separate file* in the original software format in which it was created and must meet the following publication standards: JPEG or TIF files sized to print no smaller than 3 x 5 inches at a minimum resolution of 300 pixels per inch; PowerPoint slides; EPS files generated from Illustrator (preferred) or Corel Draw. For other formats, provide program format as well as EPS file. Questions on graphics? Call (703) 805-4287, DSN 655-4287 or e-mail datl(at)dau(dot)mil*. Subject line: *Defense AT&L graphics*.

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Submission Dates

Issue	**Author's Deadline**
January-February	1 October
March-April	1 December
May-June	1 February
July-August	1 April
September-October	1 June
November-December	1 August

If the magazine fills before the author deadline, submissions are considered for the following issue.

Submission Procedures

Submit articles by e-mail to datl(at)dau(dot)mil* or on disk to: DAU Press, ATTN: Judith Greig, 9820 Belvoir Rd., Suite 3, Fort Belvoir VA 22060-5565. Submissions must include the author's name, mailing address, office phone number (DSN and commercial), e-mail address, and fax number.

Receipt of your submission will be acknowledged in five working days. You will be notified of our publication decision in two to three weeks.

* Please use correct e-mail protocol. The address is spelled out here to prevent spam generated when the magazine is placed online.

http://www.dau.mil/pubs/damtoc.asp


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