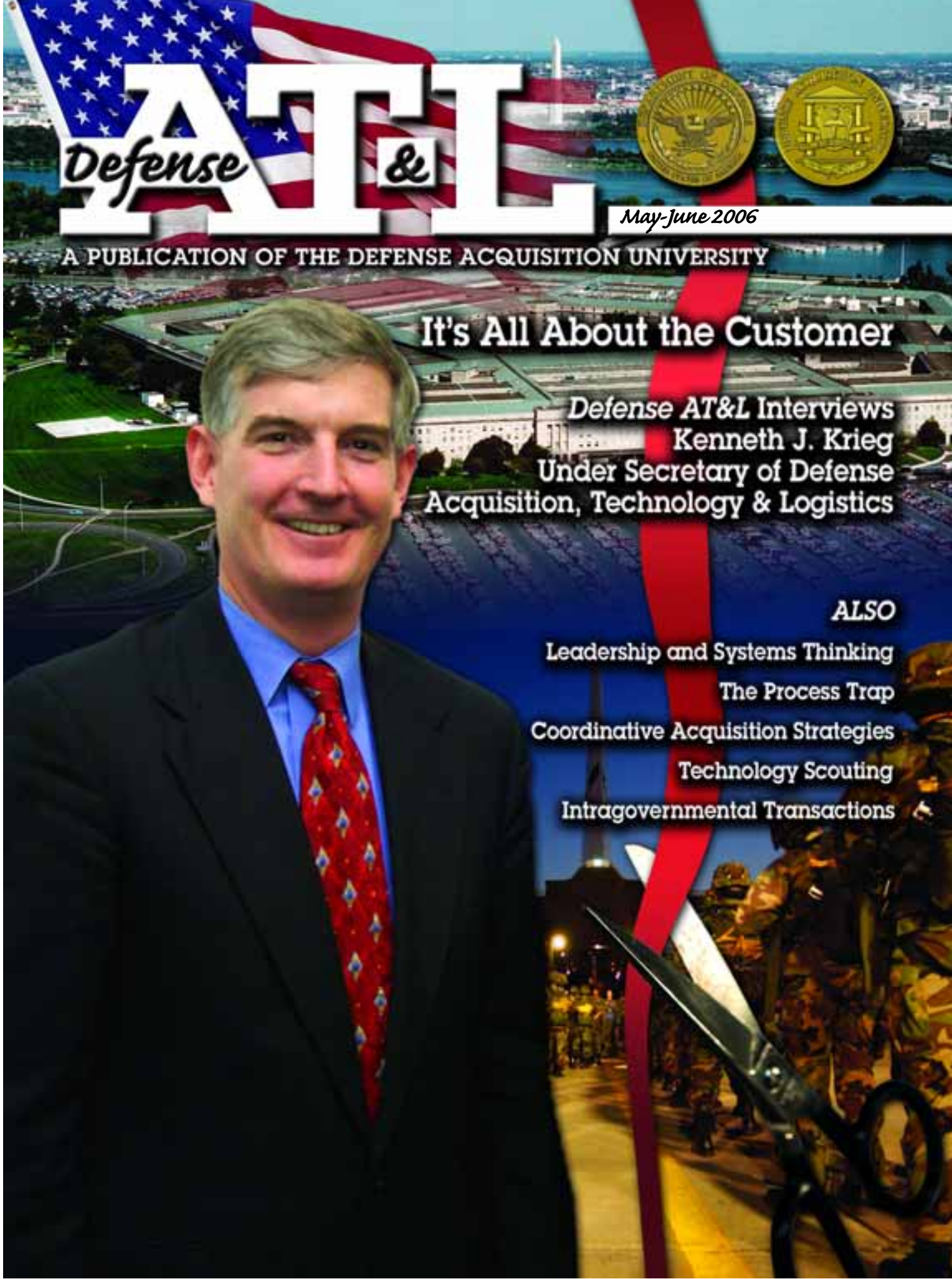
Defense AT&L

May-June 2006

A PUBLICATION OF THE DEFENSE ACQUISITION UNIVERSITY



It's All About the Customer

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Under Secretary of Defense
Acquisition, Technology & Logistics

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Technology Scouting

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Defense AT&L

A Publication of the

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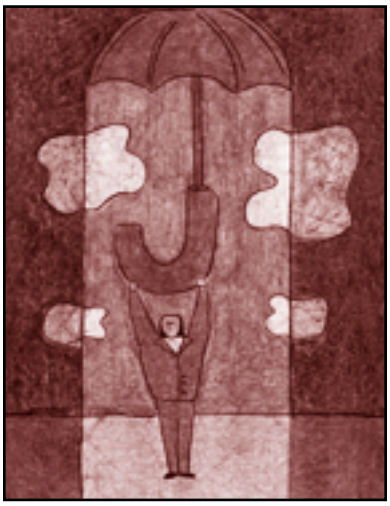

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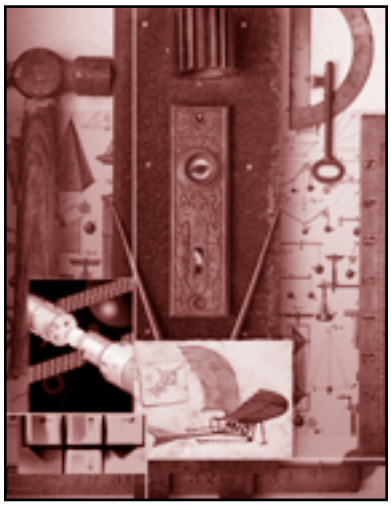

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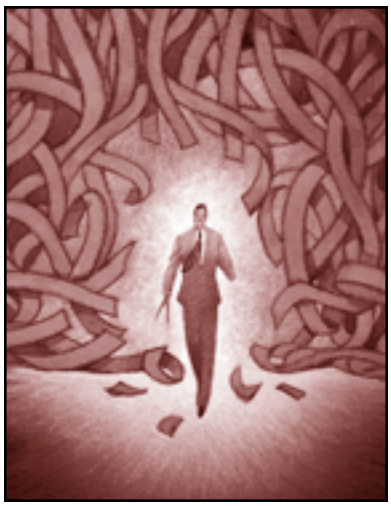

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DEFENSE ACQUISITION UNIVERSITY

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Defense AT&L (ISSN 1547-5476), formerly *Program Manager*, is published bimonthly by the DAU Press and is free to all U.S. and foreign national subscribers. Periodical postage is paid at the U.S. Postal Facility, Fort Belvoir, Va., and additional U.S. Postal Facilities. **POSTMASTER: Send address changes to:**

DEFENSE AT&L
DEFENSE ACQUISITION UNIVERSITY
ATTN DAU PRESS STE 3
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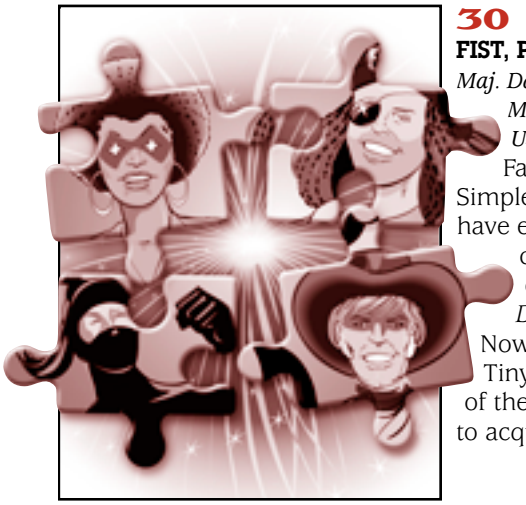

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It's All About the Customer

Kenneth J. Krieg, Under Secretary of Defense (Acquisition, Technology and Logistics)

In February, eight months after being confirmed as the under secretary of defense (acquisition, technology and logistics), Kenneth J. Krieg, set aside some time to speak with Paul McMahon, DAU-OSD liaison, for *Defense AT&L*. Krieg brings a business perspective to the job, beginning with the philosophy that focusing on the customer is always the priority. He also seeks to keep the AT&L workforce refreshed, motivated, and informed.

Q

Before we get started on the business-related questions, first let me ask you: What experience and skill sets did you bring to the position of under secretary of defense for acquisition, technology and logistics?

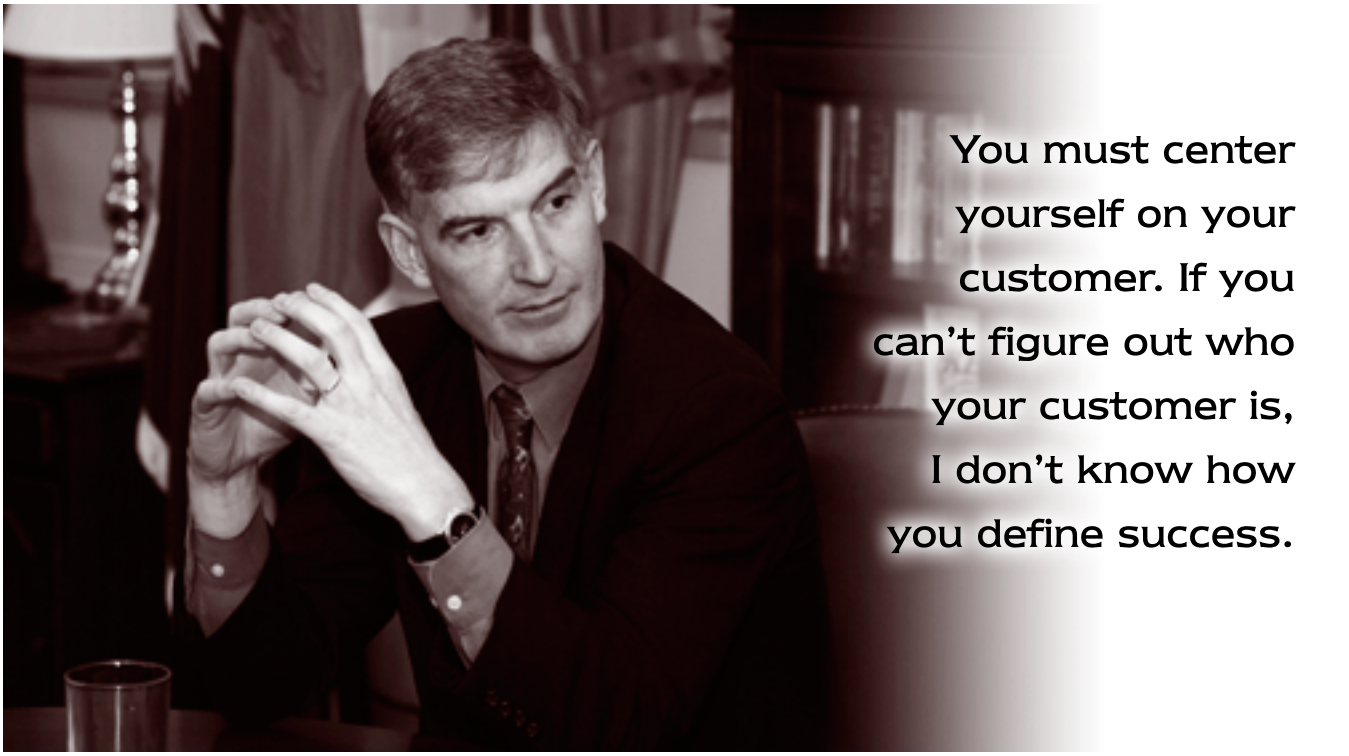
A

Whoa! Well, let's start with experiences. I've now spent half my career in government and half in the private sector. I've been mainly in large, mature organizations, dealing with changing market circumstances; in organizations that were heavily capital-intensive and because of that, inherently conservative by nature; and in organizations that were culturally dominated by engineering. As the strategic-planning, liberal-arts-educated type, it has been my job to think about creative ways to move the enterprise from its current direction to the new direction dictated by current market changes.

For example, the market changes in the paper industry were the declining paper consumption rates, modernization needs, increasing globalization, and competition from non-traditional sources—e-mail replacing snail mail, digital replacing paper. [*Krieg worked for International Paper for 11 years.*]

The DoD model has changed just as much. It's fundamentally different post-Cold War. We no longer have the organizing construct of a single enemy; we now face very diverse and very uncertain competitors, which presents a whole new set of challenges.

In most of my jobs, I've spent time thinking, "How does one take the best of what we had, that which made us great at what we were, and transition it to the challenges of the new era? How do we align our inherent qualities of success to our new role?"



Photographs by Dirke Williams, OUSD(AT&L).

Q

What is your philosophy regarding dedication to duty and performance in a challenging, demanding position of such importance to our nation, versus a healthy quality of life?

A

My personal philosophy is that balance is very important. It's critical to my personal life—I've got an 11-year-old and a 12-year-old, and I try very hard to be a good dad. But I also view professional balance not just in terms of balance with the personal life, but also as finding balance among the various components of your job.

For example, if you look at the goals of my job, you will find we have people goals, technology goals, supply chain goals, acquisition goals—that is all the balance of my responsibilities. If I emphasize only one of them, I may optimize performance in one but miss the overall goal of a healthy organization.

You must center yourself on your customer. If you can't figure out who your customer is, I don't know how you define success, because success ought to always be defined in the eyes of the person who is receiving your product. That is piece one. Piece two is how you make knowledge transparent—how do you make knowledge available for everybody who needs it, as opposed to the more traditional need-to-know-only organization?

Obviously, from a security and secrecy standpoint, we have a need-to-know reality about certain information. However, for the rest of it, the modern age, with all of the information available from so many sources, inverts the pyramid of knowledge. The question is now: How does one make data readily available to all need-to-know people horizontally as well as vertically?

Q

I think you hit the nail right on the head—that is a significant paradigm shift.

A

Right. Frankly, it has been the hardest thing for the old-line, conservative enterprises to do right. Knowledge did define power in the Industrial Age. In the Information Age, the speed and quality of decisions are what now define power. That means you have to distribute knowledge as opposed to localizing knowledge.

Those will clearly be the themes that I will continue to work: understand your customer, understand your strategy, and understand the data that link your strategy to your customer.

Q

After taking the USD(AT&L) title, you laid out your philosophy and six new goals. Can you briefly run through

Kenneth J. Krieg

Under Secretary of Defense (Acquisition, Technology and Logistics)

The Senate confirmed Kenneth J. Krieg to the position of under secretary of defense for acquisition, technology and logistics in June 2005.

As the USD(AT&L), Krieg is responsible for advising the secretary and deputy secretary of defense on all matters relating to the DoD acquisition system; facilitating the end-to-end logistics process to deliver to the warfighter: research and development; advanced technology; developmental test and evaluation; production; logistics; installation management; military construction; procurement; environmental security; nuclear, chemical, and biological matters; as well as logistics policy matters.

Before his appointment to USD(AT&L), Krieg served at the Department of Defense as special assistant to the secretary and director for program analysis and evaluation. In that capacity, Krieg led an organization that provides independent advice to the secretary of defense in a range of areas including defense systems, programs, and investment alternatives; and analytic support to planning and resource allocation.

Krieg joined the DoD in July 2001 to serve as the executive secretary of the senior executive council. The SEC, composed of the secretary, deputy secretary, Service secretaries and USD(AT&L), is responsible for leading initiatives to improve the management and organization of the DoD.

Before joining DoD, Krieg worked for International Paper, Stamford, Conn., most recently as vice president and general manager of the Office and Consumer Papers Division. He had responsibility for the company's $1.4 billion retail, commercial office, and consumer papers businesses. During his 11 years with the company, Krieg held marketing and sales positions and was actively involved in the merger of three major paper companies into International Paper.

Before moving to industry, Krieg worked in a number of defense and foreign policy assignments in Washington, D.C., including positions at the White House, on the National Security Council staff, and in Office of the Secretary of Defense.

Krieg received his bachelor's degree in history from Davidson College and his master's degree in public policy from the Kennedy School of Government at Harvard University.

We need a workforce that knows a little about a lot and can connect lots of dots, rather than focus on one particular dot and be an expert on that one dot.

those and tell us why you chose these six areas as your focus?

A

Ok, let me start with my basic philosophy, because that will probably answer the second part of your question.

I believe that our primary focus in AT&L should be on the customer, the warfighter of both today and tomorrow. These customers are demanding—or at least should be—and expect us to prepare and provide the capabilities they will need to defend America and its interests not just today, but into the future.

Secondly, as staff, those of us in AT&L must also provide timely information, insight, and support to Secretary [*of Defense*] Rumsfeld to help him better manage the Department and provide his advice to the president of the United States.

Lastly, we have a responsibility to the American people, particularly as taxpayers, to wisely invest their hard-earned money in their nation's common defense. And as the representatives of the American people, Congress must also be well-informed about our efforts.

In serving all of these stakeholders, we must first define performance and make decisions using facts; second, we must align authority with responsibility and assign accountability for success; third, balance the costs and risks of our various choices; and fourth, we must build business processes that have both agile performance and strong oversight.

To succeed, we must rely on people working together in extremely complex processes. Therefore, we need to build the capacity of our workforce—both as individuals and as groups.

We must help them to develop professionally so we can continue to serve our customer even better tomorrow than we do today. And we must attract the next generation of talent to these endeavors.

While performing all of our duties within this framework, we must exercise discipline in our processes and oversight so that we can avoid major surprises. Above all, we must demand the highest integrity that is due to the public interest we serve, and work in an atmosphere of transparency.

Q

To achieve your vision, you've set out goals for the AT&L workforce.

A

Yes, let me explain them. First, I want to have a high-performing, agile, and ethical workforce. We need to align the skills of the workforce to modern challenges, recruit and retain the talent necessary (especially in light of the average age of our workforce), and continually train and reinforce ethical standards.

My second goal is to create strategic and tactical acquisition excellence. On the strategic—or what-we-buy—side, we intend to experiment with the idea of portfolio management. This idea looks at larger groupings of investments tied to the capabilities they would provide, and it will, therefore, help us to better understand how specific investments contribute at the margin. This will be combined with the tactical side, which brings the requirements, acquisition, and resource communities closer

together to consider trades among cost, schedule, and performance earlier in a system's life.

Next, I want to focus technology to meet warfighting needs. Two areas of note are to better integrate the views of the combatant commanders into the process, and to define the strategic technology vectors of this next era of competition.

Fourth, we have the goal of bringing cost-effective joint logistics support for the warfighter. One of the outcomes we'd like to see here is integrated, effective, end-to-end supply chain operations.

The fifth goal for AT&L is to create reliable and cost-effective industrial capabilities sufficient to meet strategic objectives. I think more competition is better than less competition, and I would like to see more small businesses and non-traditional companies work with us.

And finally, the sixth goal is to have improved governance and decision processes. This goal has three levels: governance, management, and execution.

Q

Can you explain further those three levels that contribute to the improved decision process?

A

Oh, sure. I believe the Department must organize for success with the three distinct roles of any strategy-driven organization. This is critical. In fact, it's an important part of the Quadrennial Defense Review's business practices section. I was co-chair for that section of the report.

The first level is that of governance. This level includes senior leadership like Secretary Rumsfeld and me. The governance level needs to stay strategy-focused.

We need to provide strategic direction and empower the next level, management, to carry out their specific responsibilities. Management is that group of people who translate strategy from the governance level to specific tasks and outcomes for the third level.

Those people at the execution level—the third level—then implement the strategy by carrying out specific tasks and achieving outcomes as determined and monitored by the management level.

All three levels are aligned by a common strategy, ordered by a set of strategy-driven goals, and tracked and measured by outcome-oriented metrics in a transparent enterprise data framework. I realize that's easy to say and a lot of work to actually do, but I'm confident that the Department is up to the challenge.

Q

When writing your goals, you placed "high performing, agile, ethical workforce" as the main goal for the AT&L workforce, and you've urged the workforce to "constantly reinvent ourselves to stay on top." Can you expand on the importance and impact of these imperatives for the AT&L workforce?

A

You know, we don't make much in the way of actual products. So if the 140,000 people who are in the AT&L workforce don't make much, than what *do* we do? Well, we create, distribute, and use intellectual property.

That intellectual property can be in research—actually inventing the property. It can be in program management—managing lots of complex information in order to drive a program to success. Or it can be in supply chain—thinking through what the customers need, finding out where everything is they might source it from, and directly linking those. What our workforce members do is apply their intellectual property to the problems of the customer—the joint warfighter.

The joint warfighter's challenges are changing from a fixed-force sitting across a defined battlespace in a highly linear model of engagement, to a very distributed force

We are a process-heavy organization, and we tend, in the Pentagon, to optimize our process: Leave my resource process alone and I am just fine! Leave my requirements process alone and I am just fine! Leave me alone in acquisition and I can do just fine! The success of a program, however, is dependent on those three processes coming together.

that can show up anywhere without any clear lines of battle. Agility, speed, and precision are more critical than overwhelming mass.

The changing challenges of our customer change the nature of how the supply system has to react in order to make that customer effective. This puts a premium on a big chunk of the supply system. Whether it's the research side, the technology side, the acquisition side, or the logistics side, we are back office for everything other than human capital.

I think the challenge of adapting to this new world means learning new tools and dealing with different types of problems, a lot of horizontal integration, and a lot more speed. Therefore, the importance of knowledge and education (as opposed to just training and the development of routine tasks) becomes important. This means we need a workforce that knows a little about a lot and can connect lots of dots, rather than focus on one particular dot and be an expert on that one dot.

The average person in the AT&L workforce is 49 years old and has many years of experience. However you do the math, there comes a point when the result of an equation involving years of service and age will create an economic incentive for a worker to retire. The numbers could be 55 years old and 25 of service, or 60 and 30, or whatever—but they're not going to be 82 years old and 45 years of service, or 82 and 50! We've got to refresh the workforce over time, as well as continue to grow and develop the current workforce.

The last piece—the "ethical" piece—is not to suggest that the workforce isn't already ethical. In my experience, it is a highly dedicated and ethical group, very committed to doing things right. You come to this business not because you want to be wealthy, but because you love the work. The challenge for those of us at the governance level is to continually remind people that there are shoals and rocks, there are gray spaces, and there are ethical challenges out there that everyone will face sooner or later.

Our workforce deals with incredibly complex challenges and highly intricate laws. Continually reminding ourselves where those rocks and shoals are, where those gray areas are, is absolutely critical in order to stay highly committed and highly focused.

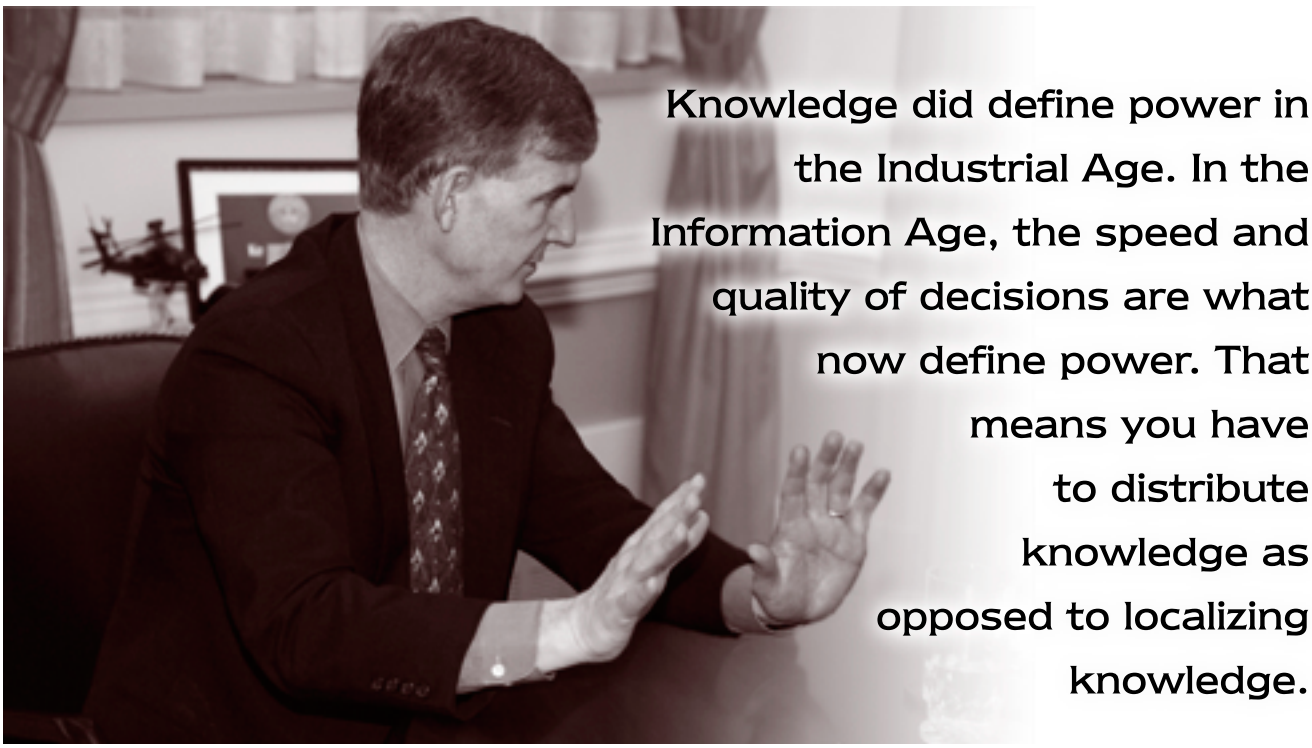
So that AT&L goal seeks to tie all three pieces together. Our people work in a complex environment, and changing market challenges create the need to keep growing our workforce and to keep them ethically aware and ethically trained, so they know how to deal with changes and challenges.

Q

Regarding the AT&L goal for "strategic and tactical acquisition excellence," you've made a distinction between "Big A" Acquisition and "little a" acquisition. Can you elaborate on how these two levels differ and interact?

A

I think our business comes down to choice. There are levels and gradations of choice as you think it through.



At the most senior governance level, we have a variety of capabilities we can buy from. The most important thing the secretary of defense does is to determine, "I want to buy more of this and less of that." That's a strategic choice.

As you work down the choice set, you come to a capability area—let's say mobility. I can have airlift, sealift, fast sealift. I can have pre-positioning. I can have the command and control that makes all that happen. I can have tankers. All of those are assets and investments that make the overall capability area of mobility better. The question then becomes: How does one decide what to buy within that portfolio of investment opportunities? That is a *Big A*, a what-we-buy kind of question.

The next part of the *Big A* question is working down. I've gone inside a portfolio area and determined that the next thing I need for mobility is tankers over airlift. Okay, now that I've said tankers are the next responsibility, what are the characteristics of that? Where is the trade between schedule, performance, and cost in those processes? What is the trade between requirements, acquisition, and resources? And the last piece of *Big A* is bringing those three processes—requirements, acquisition, and resources—together to define whatever it is we want to buy.

Now compare that to *little a* acquisitions. What we've learned tactically in acquisition about how we buy is that if we have a stable program, meaning a defined technology that has stable requirements and a good program management team, we can successfully deliver that program on time, under budget, and meeting its performance requirements. However, if we reach really far for technology, and we lie to ourselves about how long it is going to take us to do it in the short-term schedule, and we underfund it, then we are guaranteed to fail.

So *Big A* functions can be defined as determining which among the various areas in which I can invest are more important and which are less important? And within a capability area, what I should invest in next; then down at the program level, how I trade between performance, cost, and schedule.

The *little a* functions are the blocking and tackling in acquiring a system. Have I done systems engineering? Do I really understand the technology risks and how to mitigate them? Do I have a test program that has us testing components over time before we assemble so that we have surety of performance as we build it up through a system? Do I understand the dependencies of the system I'm buying to other systems and, therefore, know how I link them together? Do I have a solid cost estimate? Those are all the kinds of things that good program managers do.

I believe we do that fairly well. For those programs where we create a stable floor on which to operate, we actually deliver amazing results. When we give the program managers an over-required system, we don't give them enough money, and we limit the time they have, then no matter how good they may be at the tactics of acquisition, they are going to be challenged.

My view is that *Big A* and *little a* are intricately related. In other words, *how* you buy relates to *what* you decide to buy. What you decide to buy determines whether the how-you-buy is going to be successful. In acquisition, we do both. What we are working on, obviously, is thinking about capability areas and portfolios. We are working with the vice chairman of the Joint Chiefs to bring the requirements community and the acquisition community closer together, and force them to do trades in performance versus acquisition capability, and to start to talk about time.

If you set the requirements really high, provide only so much in the way of resources, and you allow time to float, the program will take forever to develop. We are focusing on getting people to be realistic about time. When do you really need that item? Is five years of time more important than the last 10 percent of capability? Those are the kinds of *Big A* questions we have to ask as we get into these multi-billion dollar programs.

If you are not explicit about the answers to those questions up front, then successive generations of program managers and successive generations of under secretaries or vice-chairmen will have to do so. If you are explicit about the answers, then you can make choices early in the program that will help it run more smoothly. So that is a long definition of *Big A*, and some of the things we are trying to work.

Q

Can you give us an example of that in action?

A

Yes. We had an interesting experience with the Joint Tactical Radio System, or JTRS. It was defined first as a software-definable radio, and somewhere along the line, we decided it was really a network-enabling capability. So we moved from communications-on-the-move to networks-on-the-move, yet we never changed the program plan, or the dollars put into it, or the way it was being thought about or structured as a program. And it struggled because of that.

We've been leading a group of people who have been thinking about this choice-set now over the last five or six months. They've begun to restructure the program based on having to make choices among what it costs, what we want to do, and how much time we

James I. Finley

Deputy Under Secretary of Defense (Acquisition and Technology)

The Senate confirmed James I. Finley to his position as deputy under secretary of defense (acquisition and technology) in February 2006. Finley is responsible for advising the secretary of defense and the under secretary of defense (acquisition, technology and logistics) on matters relating to acquisition and the integration and protection of technology. He is responsible for Department policies and procedures governing the Department's procurement and acquisition process.

Prior to joining the DoD in his current position, Finley spent over 30 years in the private sector. He held a variety of operational and management positions with GE, Singer, Lear Siegler, United Technologies and General Dynamics, where he was a corporate officer, president of information systems and chair of the Business Development Council. His business experience spans air, land, sea, and space programs for the DoD and includes the Federal Aviation Administration's Automatic Surface Detection Radar systems and the National Aeronautics and Space Administration Space Shuttle Program. Systems and subsystems experience includes mission analysis; design, development and deployment of weapon delivery; flight control; navigation; information management; C4ISR; battlespace management; and chemical/biological defense systems. Finley has over two decades of Joint program experience including: Air/Land Battle demonstrations integrating the Airborne Warning and Control System with 9th ID ground radar systems leading to Joint C4, utilizing the Joint Tactical Information Distribution System; deployment of the Joint Surveillance and Target Attack Radar System to Desert Storm, leading to the tracking of critical mobile targets and the "mother of all retreats"; system-of-systems battlefield awareness and data dissemination demonstrations leading to information-centric warfare doctrine for joint operations.

Leadership examples of performance awards are the Boeing Gold Certification Award, Honeywell Preferred Supplier Award, Northrop Grumman Blue Achievement, Lockheed Martin Best In Class Rating, Defense Security Service "Outstanding" Achievement Award, and the George Westinghouse Award.

In 2002, Finley formed his own consulting company, The Finley Group, LLC, to provide business assistance and advice for all facets of the business cycle, including start-up, growth, acquisition, and divestiture. Those market initiatives focused on information technology, retailing, and golf.

Finley received his bachelor's degree in electrical engineering from the Milwaukee School of Engineering and his master's degree in business administration from California State University, Fresno.

have. It has been an interesting evolutionary process for all of us.

Q

Since the first day you took office as under secretary of defense for AT&L, you have said we must focus on our customer. Can you give us an example of what that means for AT&L?

A

We are a process-heavy organization, and we tend, in the Pentagon, to optimize our process: Leave my resource process alone and I am just fine! Leave my requirements process alone and I am just fine! Leave me alone in acquisition and I can do just fine! The success of a program, however, is dependent on those three processes coming together to create a successful program. If you optimize the individual process, you could very well sub-optimize the outcome of the product.

Program managers are only partially dependent on me as an acquisition person. However, they are highly dependent on whoever defined their requirements and how much money they bring. I don't control those things, and I don't think I should. I think we ought to make those three processes—defining requirements, allocating resources, and *little a* acquisition—come together to support the customer, who, in this case, is the program manager producing the program for the joint warfighter. It is the big challenge: Can we shift our definition of the product?

If you think the product is the milestone decision, then the objective is just to get through the milestone decision. If you think the product is the budget, then the objective is to deliver the budget. If you think the product is the JROC [*Joint Requirements Oversight Council*] memo, then the process is to get that memo out. But if you think about the customer as being the program manager delivering capability in time to the ultimate customer, the joint warfighter, then it makes you change your definition of how you work together. That's why my push is to think it through to who the customer is, and why they're the customer. It is absolutely critical in any kind of process we do.

Q

DoD has seen a significant increase in collaboration with international friends and allies. The desire to create systems that can offer jointness and interoperability on a global scale is quite a challenge. How do you see global collaboration progressing in the near future?

A

I believe we will see more international cooperation and collaboration in the coming years than ever before. Such efforts are growing in importance as we work to support

To succeed, we must rely on people working together in extremely complex processes. Therefore, we need to build the capacity of our workforce—both as individuals and as groups.

national security objectives dealing with current and potential coalition-building and interoperability needs. The *Secretary of Defense Security Cooperation Guidance* specifically identifies international armaments cooperation as a key tool that can best help us achieve objectives to implement our national security strategy.

Budgets are declining all over the world. It is unlikely that a single nation, even one as well funded as ours, will ever again foot the entire bill of a state-of-the-art weapons system. Our friends and allies are developing many useful technologies, some even better than our own. We already have active programs to search out these technologies.

In fact, the business world is already increasingly global in structure—to the point where it is virtually impossible not to have products with international components. We even have laws that *require* us to work cooperatively with NATO allies and to consider international cooperative programs "to the maximum extent feasible." International cooperation ensures effective interoperability with other U.S. military forces and coalition partners.

At the macro level, international cooperative programs help strengthen our alliances, trust, interoperability, access, influence, and coalition building. Such programs can save investment costs and reduce the human capital costs of managing major programs. Specific examples of cooperative programs are Joint Strike Fighter, Multifunctional Information Distribution System, Guided Multiple Launch Rocket System, Medium Extended Air Defense System, Joint Tactical Radio System, Aegis, and other shipbuilding and shipboard weapon systems.

Q

Language and cultural differences, varying perspectives on priorities, and large differences in operating budgets are just a few of the concerns we have with international partnerships. Given that these partnerships will not only continue, but grow, what effect will these concerns have on daily AT&L operations?

A

The impact can be seen in the way we are organized, as well as the way we do business.

For example, within the AT&L staff, virtually every one of my offices and direct report components conducts significant international activities. The director of international cooperation, Al Volkman, has the responsibility for presenting a single, integrated picture of these international activities, although most do not come under his direct control.

Another example can be seen in our acquisition workforce. Most AT&L acquisition professionals will be exposed to international companies and their different cultures at some point in their careers. They will have to spend time really thinking through ways to smooth out processes and expedite cooperative programs with international partners. Among those challenges is the fact that the federal government is committed to supporting U.S. industry, but at the same time, we want to keep the door open to foreign participation. Another set of challenges exists when you look specifically at technology sharing and how it impacts U.S. technology companies when you want to pair up with a foreign competitor. The Defense Acquisition University provides a critical service to the acquisition workforce by giving the necessary training to apply acquisition skills effectively in the international arena.

Q

I think we are already about out of time, and we need to let you get back to your busy schedule. Mr. Krieg, thank you for your time.

A

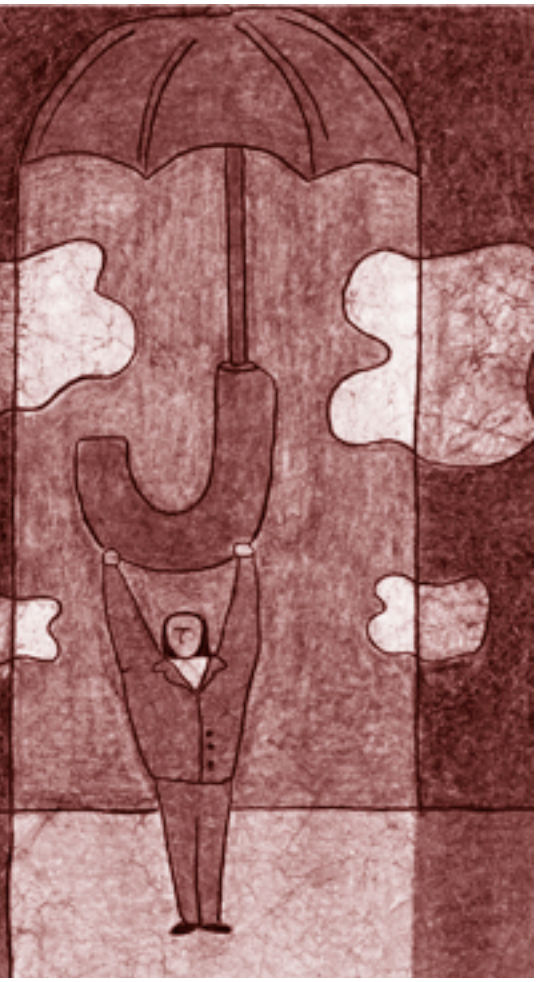
Thank you—I appreciate what you guys do.

Leadership and Systems Thinking

Col. George E. Reed, USA

"For every problem there is a solution that is simple, neat—and wrong. This maxim has been attributed at various times to Mark Twain, H.L. Mencken, and Peter Drucker as a wake-up call to managers who mistakenly think that making a change in just one part of a complex problem will cure the ails of an entire system. Everyday management thinking too often looks for straightforward cause and effect relationships in problem solving that ignores the effect on, and feedback from, the entire system."

Ron Zemke, writing in the February 2001 issue of *Training*



Leaders operate in the realm of bewildering uncertainty and staggering complexity. Today's problems are rarely simple and clear-cut. If they were, they would likely already have been solved by someone else. If not well considered—and sometimes even when they are—today's solutions become tomorrow's problems. Success in the contemporary operating environment requires different ways of thinking about problems and organizations. This article introduces some concepts of systems thinking and suggests that it is a framework that should be understood and applied by leaders at all levels, but especially those within the acquisition community.

Reed *is the director of command and leadership studies at the United States Army War College in Carlisle, Pa. He has 25 years of experience as a military police officer. He holds a doctorate in public policy analysis and administration.*

It is insufficient and often counterproductive for leaders merely to act as good cogs in the machine. Leaders perform a valuable service when they discern that a venerated system or process has outlived its usefulness, or that it is operating as originally designed but against the organization's overall purpose. Sometimes we forget that systems are created by people, based on an idea about what should happen at a given point in time. A wise senior warrant officer referred to this phenomenon as a BOGSAT—a bunch of guys sitting around talking.

Systems Endure

Although times and circumstances may change, systems tend to endure. We seem to be better at creating new systems than changing or eliminating existing ones. Sociologist Robert K. Merton coined the term "goal displacement" to describe what happens when complying with bureaucratic processes becomes the objective rather than

focusing on organizational goals and values. When that happens, systems take on a life of their own and seem immune to common sense. Thoughtless application of rules and procedures can stifle innovation, hamper adaptivity, and dash creativity. Wholesale disregard of rules and procedures, however, can be equally disastrous.

When members of an organization feel as though they must constantly fight the system by circumventing established rules and procedures, the result can be cynicism or a poor ethical climate. Because of their experience and position, leaders are invested with the authority to intervene and correct or abandon malfunctioning systems. At the very least, they can advocate for change in a way that those with less positional authority cannot. Leaders at all levels should, therefore, be alert to systems that drive human behavior inimical to organizational effectiveness. It is arguable that military organizations placing a premium on tradition and standardization are predisposed to goal displacement. We need leaders, therefore, who can see both the parts and the big picture; to this end some of the concepts of systems thinking are useful.

The Department of Defense is a large and complex social system with many interrelated parts. As with any system of this type, when changes are made to one part, many others are affected in a cascading and often unpredictable manner. Thus, organizational decisions are fraught with second- and third-order effects that result in unintended consequences. "Fire and forget" approaches are rarely sufficient and are sometimes downright harmful. Extensive planning—combined with even the best of intentions—does not guarantee success. Better prediction is not the answer, nor is it possible. There are so many interactions in complex systems that no individual can be expected to forecast the impact of even small changes that are amplified over time.

Getting Beyond the Machine Metaphor

In her book *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*, Mary Jo Hatch provides an introduction to general systems theory that is useful in thinking about organizations. She makes a point worthy of repeating: The use of lower level models is problematic when applied to higher level systems. Thus, the language of simple machines creates blind spots when used as a metaphor for human or social systems; human systems are infinitely more complex and dynamic. In other words, it can be counterproductive to treat a complex dynamic social system like a simple machine.

Noted management scholar Russell Ackoff puts it another way. He asserts that we are in the process of leaving the machine age that had roots in the Renaissance and came into favor through the industrialization of society. In that era the machine metaphor became the predominant way of looking at organizations. The universe was envisioned by thinkers such as Isaac Newton, as having the characteristics of a big clock. The workings of the clock could be understood through the process of analysis and the analytical method.

Analysis involves taking apart something of interest, trying to understand the behavior of its parts, and then assembling the understanding of the parts into an understanding of the whole. According to Ackoff, "One simple relationship—cause and effect—was sufficient to explain all relationships." Much machine-age thinking remains with us today; however, there are alternatives.

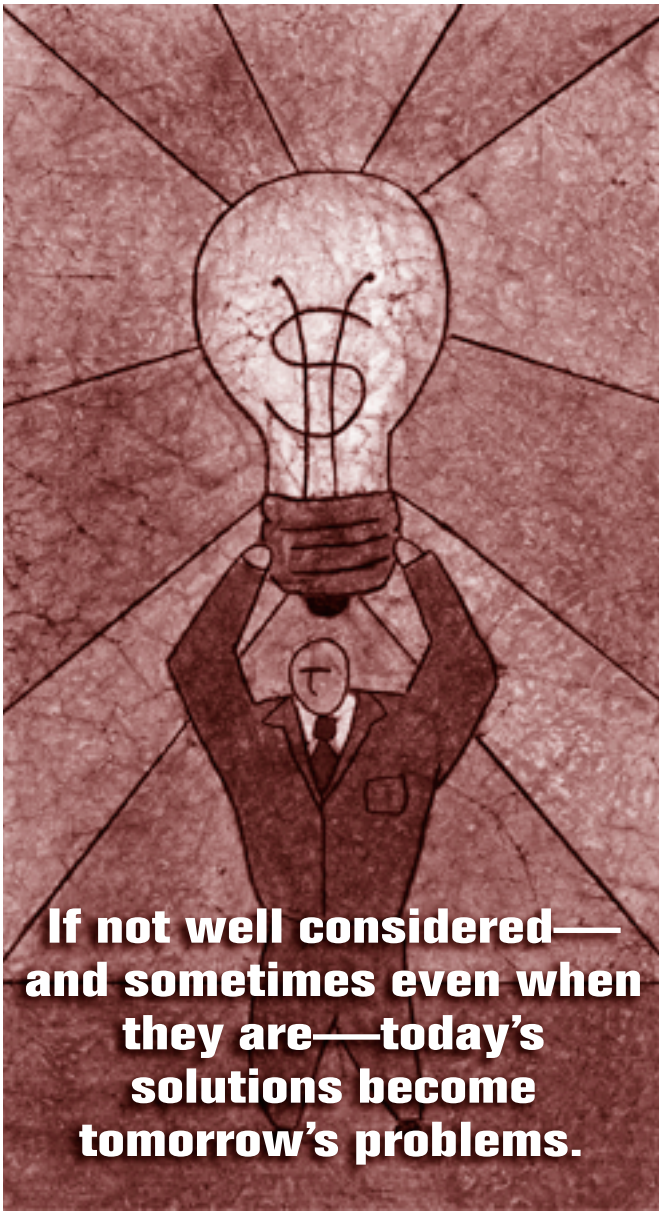
Systems Thinking

Systems, like the human body, have parts, and the parts affect the performance of the whole. All of the parts are interdependent. The liver interacts with and affects other internal organs—the brain, heart, kidneys, etc. You can study the parts singly, but because of the interactions, it doesn't make much practical sense to stop there. Understanding of the system cannot depend on analysis alone. The key to understanding is, therefore, synthesis. The systems approach is to:

- Identify a system. After all, not all things are systems. Some systems are simple and predictable, while others are complex and dynamic. Most human social systems are the latter.
- Explain the behavior or properties of the whole system. This focus on the whole is the process of synthesis. Ackoff says that analysis looks into things while synthesis looks out of things.
- Explain the behavior or properties of the thing to be explained in terms of the role(s) or function(s) of the whole.

The systems thinker retains focus on the system as a whole, and the analysis in step three (the third bullet) is always in terms of the overall purpose of the system. Borrowing Ackoff's approach and using the example of a contemporary defense issue might help clarify what is admittedly abstract at first glance.

Consider the Institute for Defense Analyses report *Transforming DoD Management: the Systems Approach*. The authors of this study suggested an alternative approach to Service-based readiness reporting, one that considered the entire defense transportation system. One section of the report suggests that knowing the status of equipment, training, and manning of transportation units is helpful but insufficient to determine the readiness of a system that includes elements such as airfields, road networks, ships, and ports. The defense transportation system includes elements of all Services and even some commercial entities. It only makes sense, therefore, to assess readiness of these elements as part of a larger system that has an identifiable purpose—to move personnel and materiel



to the right place at the right time. In this example you can clearly see the approach recommended by Ackoff.

The Problem of Busyness

Few would disagree, in principle, that senior leaders should see not only the parts, but also the big picture. So why don't we do more of it? One reason is because we are so darned busy. Immersed in the myriad details of daily existence, it is easy to lose sight of the bigger picture. While it may be important to orient on values, goals, and objectives, the urgent often displaces the important. Fighting off the alligators inevitably takes precedence over draining the swamp.

The problem of busyness can be compounded by senior leaders who are overscheduled and uneducated in systems thinking. It seems as though military officers today work excessive hours as a matter of pride. A cursory examination of the calendar of most contemporary officers, especially flag officers, will indicate an abusive pace. Consider as an alternative the example of one of America's greatest soldier-statesmen, Gen. George C. Marshall. Even at the height of World War II, Marshall typically rode a horse in the morning for exercise, came home for lunch and visited with his wife, went to bed early, and regularly took retreats to rejuvenate. To what extent are such pauses for reflection and renewal valued today? Simple cause and effect thinking combined with a culture of busyness can result in decision makers who rapid-fire short-term solutions at long-term problems without taking time to think about the actual impact of those solutions.

A common symptom of this phenomenon can be seen in leaders who unrealistically demand simplicity and certainty in a complex and uncertain environment. The drive for simplicity can lead to the need for excessive assumptions. Few contemporary issues of significance can be understood, much less solved, in a two-page point paper or a PowerPoint® slide. We might also ask whether speed and decisiveness in decision making, so valued at the tactical level, work to the detriment of good decisions at the strategic level. Absent some discipline and techniques to do otherwise, it is very hard to find time for reflection and thoughtful decision making.

> *Most people expect learning to just happen without their taking the time for thought and reflection, which true learning requires. In the past, with slower communication systems, we often had a few weeks to ponder and rethink a decision. Today we're accustomed to e-mails, faxes, overnight letters, and cell phones, and have come to believe that an immediate response is more important than a thoughtful one.* — Steven Robbins, writing in *Harvard Business School Working Knowledge* in May 2003.

Interrelationships, Not Things

Peter Senge submits, in *The Fifth Discipline*, that systems thinking provides just the type of discipline and toolset needed to encourage the seeing of "interrelationships rather than things, for seeing patterns of change rather than static 'snapshots.'" Senge argues that this shift of mind is necessary to deal with the complexities of dynamic social systems.

He suggests that we think in terms of feedback loops as a substitute for simple cause and effect relationships.

As an example, systems scholar Daniel Aronson suggests that we imagine a farmer who determines that an insect infestation is eating his crop. The conventional approach is to apply a pesticide designed to kill the insect. Our example at this point depicts the lowest level of the thinking hierarchy—reaction. In response to the appearance

of insects, the farmer applies a pesticide because he assumes that what has worked in the past will work in this instance. As additional insects appear, the farmer applies more pesticide. While the farmer's goal is to produce a crop, his activity is increasingly consumed by recurring applications of the chemical. He is surely busy, but he may not necessarily be productive. A systems thinker might step back from the problem, take a broader view, and consider what is happening over time.

For example, he might think about whether there are any patterns that appear over weeks or months and attempt to depict what is actually occurring. Recognizing the pattern of a system over time is a higher-order level of thinking. The systems thinker might notice that insect infestation did decrease after applying pesticide, but only for a short time. Insects that were eating the crop were actually controlling a second species of insect not affected by the pesticide. Elimination of the first species resulted in a growth explosion in the second that caused even more damage than the first. The obvious solution caused unintended consequences that worsened the situation.

An accomplished systems thinker would model the above example using a series of feedback and reinforcing loops. The specifics of the modeling technique are less important at this point than the observation that systems thinking tends to see things in terms of loops and patterns aided by constant assessment of what *is* happening, rather than flow charts and reliance on what *should be* happening. At the highest level of thinking, the farmer would try to identify root causes or possible points of intervention suggested by these observations.

The Importance of Continuous Assessment

In *Why Smart Executives Fail*, Sydney Finkelstein examined over 50 of the world's most notorious business failures. His analysis indicated that in almost every case, the failures were not attributable to stupidity or lack of attention. To the contrary, the leaders of well-known corporations such as Samsung Motors, WorldCom, and Enron were exceptionally bright, energetic, and deeply involved in the operation of their businesses. Up to the point of massive corporate failure, they were all extremely successful, and in almost every case, there were some in the organization who vainly raised objections to the course that eventually proved disastrous. In most instances, the executives failed to see or accept what was actually happening. In some cases, they were blinded by their own prior successes; in other cases they inexplicably held tenaciously to a vision, despite plenty of evidence that the chosen strategic direction was ill-advised. The systems thinker's pragmatic focus on determining what is actually happening serves as a preventative to self-delusional wishful thinking. Wishful thinking is no substitute for a realistic appraisal. In the language of systems thinking, the executives were trapped by their own faulty mental models.

The continuous assessment process that is characteristic of systems thinking is essential in a volatile, rapidly changing environment. It takes time and good habits of critical reflection to engage in this kind of learning, both for individuals and organizations.

A systemic approach to failure is more likely to result in effective long-term solutions. Imagine for a moment if the incidents of abuse at Abu Ghraib were chalked up merely to ineffective leadership or just miscreant behavior by some thugs on the night shift. If other factors contributed to the problem, after relieving the chain of command for cause and prosecuting the abusers, the members of the replacement chain of command might have found themselves in an equally untenable situation. While inspired leadership can make a difference under the worst of conditions, we might ask just how heroic we expect our leaders to be on a regular basis. When a system is so obviously stacked against our leaders, there is a moral imperative to change the system.

Systems thinking is no panacea. There is no checklist to work through that will guarantee someone is thinking in a way that will capture the big picture or identify root causes of difficult problems. There are some concepts and approaches embedded in the systems thinking literature, however, that can be very helpful when considering why a situation seems to be immune to intervention, or why a problem thought to be solved has returned with a vengeance. Here are some of the concepts:

- Focus on the purpose for which a system was created over the processes and procedures of the system.
- Simple cause-and-effect relationships are insufficient to understand or explain a complex social system. Patterns over time and feedback loops are a better way to think about the dynamics of complex systems.
- Think in terms of synthesis over analysis; the whole over the parts.
- Busyness and excessive focus on short term gains interferes with our ability to use a systems approach.
- Leaders must see what is actually happening over what they want to see happen.
- Thinking about systems and their dynamics suggests alternative approaches and attunes leaders to important aspects of organizational behavior, especially in military organizations that value tradition and standardization.

The author welcomes comments and questions. Contact him at george.reed@us.army.mil.

The Process Trap

Wayne Turk

Good, strong, repeatable processes are the salvation of a project manager—right? In most cases that's true. Processes make the pieces of the puzzle fit together. Knowing that things are done the same way every time gives the team and customer confidence that nothing is missed and that the results are trustworthy, useful, and usable. But at the same time, there are some pitfalls out there with processes as the bait. This article will examine the good, the bad and the ugly (apologies to Clint Eastwood), as well as some suggestions to prevent or mitigate process problems.

Let's start with some definitions. What is "process"? The dictionary says it's "1. A series of actions, changes, or functions bringing about a result. 2. A series of operations performed in the making or treatment of a product."

Standards and processes set the structure, framework, and baseline for a project. They ensure that things are done the same way each time.

From a project management view, process can be defined as "the methodologies used to produce specific interim and final results; it can include individual roles and responsibilities, activities, techniques, procedures, deliverables, workflows, tools, and measurements and metrics." Quality assurance (QA) and configuration management (CM) are normally the arbiters of standardization, but the project manager must be the person who oversees all processes.

The Good ...

Standards and processes set the structure, framework, and baseline for a project. They ensure that things are done the same way each time. Processes keep you out of the doghouse. According to the experts, the following are among the positive attributes of good processes:

- They build credibility in the products and outputs.
- The project staff can be more proactive, rather than reactive.
- Once process, templates, and procedures are in place and proven, they can be reused (sometimes with small changes) over and over.
- They create a shorter learning curve for personnel transitioning between projects or working multiple projects.
- Scope can be managed better.
- Planning is usually better.
- Problems can be resolved more quickly.
- There is better risk management because risks are identified early, strategies for mitigating them can be put in place, and risks are monitored.
- Financial management is better.
- It is easier to collect metrics; therefore, decision making is better.
- Staff morale and confidence are stronger because employees know what they are doing and how to do it.
- Testing, one of the most critical processes, provides better quality and products that work the first time around.

The Bad ...

Because of the positive attributes of processes, projects should be cheaper and faster to accomplish—but it just doesn't always work that way.

A common complaint about strong processes, especially when the processes include paperwork of any kind, is that they are cumbersome, paper-intensive, and take too much time away from the real work of getting

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a product out the door. People complain that processes are sometimes too rigid and not tailorable or flexible. For example, to meet a process requirement, it is ludicrous if your project has to develop a large document or set of documents like a full project management plan, configuration management plan, quality assurance plan, etc., when you have a total of only 300 hours, six people, and two weeks to complete the project. Admittedly that's an extreme example, but it's not out of the realm of believability. Just talk to some of the PMs out there, and they will tell you tales of equally bizarre requirements from real projects. You may have even run into them yourself.

More and more contracts require contractors to have a Capability Maturity Model or Capability Maturity Model-Integration rating of level 3 or higher. Strong processes and a CMM or CMM-I rating of level 3 or 4 is a great idea. The strong and consistent processes are in place for good reasons and have good results. It's just that they can have negative impacts too—things like a requirement for more resources and more time for reviews and for following the organizational processes. While that should not necessarily be the case in theory, in practice it is. Good processes should shorten time lines, and sometimes they do—but not always.

As Quaid and Ward pointed out ("Heroes II: Attack of the Process Clones," *Defense AT&L*, September - October, 2004), "Process is singularly ill-suited to doing something new, creative, or unanticipated. Process is designed to propagate yesterday's success rather than craft tomorrow's breakthrough." That lack of flexibility is another common complaint from PMs. The emergencies, the unanticipated, the problems that pop up in any project need a certain amount of flexibility to allow success. Quaid and Ward go on to point out two more problems in an over-reliance on process: process-dependent organizations are failure-averse (not always a good idea), and they limit personal responsibility (a boon to some folks).

Other problems with strong processes include:

- Fear by employees of a loss of control, loss of creativity, and taking the fun out of work
- Fear by management of loss of control (while it sounds contradictory to the last bullet, both sides fear a loss of control)
- Processes not fitting a specific project
- Extra and unneeded artifacts being created
- Potential for projects to cost more and take more time (already mentioned, but very important).

And the Ugly

Then we get to the final and worst potential problem with a process-driven organization: process over product. Another way to say it: form over substance. Although he wasn't describing project management, Sir Winston Churchill summed it up perfectly when he said, "However beautiful the strategy, you should occasionally look at the results."

When the focus is strictly on the process and not on the end result or product, everyone loses. QA and CM may be ecstatic about documents, procedures, and configuration items, but quality can go down, things take too long to accomplish, and end users don't get what they want or need. Please don't get me wrong. I am a strong supporter of QA and CM processes, but not when they have a negative impact because of a poor focus on what is really important.

Here are two examples I observed myself—minor I admit, but they show early vestiges of the "ugly."

On one project I was associated with, the QA branch chief held weekly meetings, in which he projected an outline of all ongoing activities from a laptop to a screen. He then went through each item with questions. However, he stated that he only wanted to hear one of three answers: yes, no, or a date. He filled the information in as the meeting progressed—although I use the term "progressed" loosely. The meetings were agony to attend. His focus was on updating his activities outline and not on where we really were in the project.

Process over product.

Processes should be guidance and not necessarily set in cement.

As a part of another project, I had to turn in a report documenting our actions at different sites. The document (in Microsoft Word®) was basically the same for each site, so we developed a template, which greatly eased the preparation and review—a good thing for us. However, as the overall project began to use templates for all documents, our template became formalized with an assigned template number. We made changes to the template, and it was given a new number. I made the changes to the documents, but I neglected to "attach" the new template to the documents (a check box that shows up only when you look at the properties of the document). The next few documents submitted were rejected because they were not in "the right template," even though the content and format were exact.

Form over substance.

You're the Judge

In this column, we feature cases that center on an ethical dilemma and invite you to be the judge. Some of the cases involve agencies outside DoD, but the issues they present are equally applicable to the defense acquisition community.

Demetris Johnson was employed in the administrative office of the U.S. Department of the Interior's Geological Survey. Her official responsibilities included purchasing office supplies and services using a government-issued credit card. Between October 2000 and March 2001, Johnson received approximately $500.00 in retail gift coupons from a vendor from whom she ordered supplies for the government. These she used to buy personal items.

You're the judge:
Is it okay for Ms. Johnson to take advantage of this commercial practice, or does she have an ethics problem?

The verdict is on page 47.

The Solution: Balance and Common Sense

As an Air Force officer, I was taught never to bring a problem to my boss without bringing a solution. A process-driven organization can be excellent if the following suggestions are integrated as a part of the organizational culture. The suggestions all work together to build an attitude and a "process" (if you can accept that term here) that make strong processes work.

The first is tailoring the processes. That is the capability to adjust processes based on certain parameters, such as the size, type, or length of the project. Tailoring deletes certain requirements that are not appropriate—for example, lengthy, complex plans for a short, simple project. My previous employer, SRA International, a CMM-I level 3 company, had an excellent tailoring process for use when setting up projects and project requirements. The different parameters were set in a spreadsheet. When you checked the right size, type, and length of the project, the first level of tailoring was automatically applied. Then the PM, in conjunction with his boss, made any other tailoring adjustments required. The final result was a list of required actions and products. It worked very well. While something that complex is not necessary in many cases, the idea of tailoring processes is.

The second is flexibility. By this, I mean that processes should be guidance and not necessarily set in cement. PMs and their people should have the ability to bypass or modify some processes in certain cases. This is not a license for the PM and his people to do what they want when they want; the departure from a given process should be approved by the overall manager (or at least he or she should be aware of deviating) and coordinated with those involved. An example might be an emergency engineering change proposal. It might go through an abbreviated process that would still include testing, but some of the other process steps would not be required. There are many other examples. In cases where there are going to be frequent deviations, a modified process could be developed, publicized, and implemented.

"Always change processes and structures while they still function" is a quote from that famous PM, Anonymous. The best idea is continuous improvement. All processes should be reviewed periodically. Don't wait until the process breaks. Change and streamlining for improvement should be ongoing. Circumstances change. Requirements change. Funding changes. The people involved change. Any of those could generate a change in the processes in a project. Processes that are based on "because we've always done it that way," may or may not be worthwhile and should be considered for change. Also looking at others' processes for best practices can lead to change.

The bottom line is to search for balance and common sense. Admittedly, common sense can be *un*common and sometimes hard to find. There need to be processes—good, strong, repeatable processes that work. The processes need to be tailorable, flexible, and continually improved. Processes can be the salvation of a PM, but they can also be a dagger to the heart if they are poor or structured so that they negatively impact the project.

> **"However beautiful the strategy, you should occasionally look at the results."**
> **Sir Winston Churchill**

The author welcomes comments and questions. Contact him at rwturk@aol.com.

Coordinative Acquisition Strategies

For Hyperswift Response to the Warfighter

Joseph P. Avery

Although not directly envisioned for large defense acquisitions, the use of coordinative acquisition strategies may provide at least one new option for a newly developing toolkit to get needed capability to the warfighter in a fraction of the normal acquisition time.

In an effort to expedite weapons and support systems to the warfighters in the field, the Department of Defense has been reviewing the acquisition structure processes with an eye toward another round of reformation. Gordon England, deputy secretary of defense, is seeking to restructure the defense acquisition system with a focus on improving the cost and performance of major defense programs. The Defense Acquisition Performance Assessment (DAPA) project seeks to examine the current acquisition architecture to devise a more simple acquisition system that will improve accountability and speed. In essence, we must be able to condense the acquisition development and fielding cycle and get needed capability into the hands of our military combat forces in a more economical and expeditious manner. Although not directly envisioned for large defense acquisitions, the use of coordinative acquisition (CA) strategies may provide at least one new option for a newly developing toolkit to get needed capability to the warfighter in a fraction of the normal acquisition time.

Development of Coordinative Acquisition

I developed and first used CA at the Defense Threat Reduction Agency (DTRA) during the invasion of Iraq in March 2003 to provide hyperswift fielding of urgently needed capability to American combat forces on the ground. CA is a cooperative and simplified administrative and management process using memoranda of understanding (MOUs) or agreement (MOAs) to facilitate the accelerated development and fielding of a product. This is accomplished through close coordination of critical acquisition activities and team members, often without a formal set of requirements, budget, or personnel. Depending how and when it is used, CA is technically a team management process that falls outside the purview of the Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS). In the case study used in this article, the government technically "acquired" nothing, although the end result was the development and fielding of a product by private enterprise at an accelerated rate.

Avery *is acquisition program manager for the Research & Development Enterprise, Acquisition Management Office, Defense Threat Reduction Agency.*

The bottom line is that it's possible for a program office to obtain its needed product and meet the warfighter's requirements without the need to "acquire or purchase" anything. What we must do is make the product available to the warfighter. The acquisition team can focus on coordinating activities to facilitate development and fielding of products and systems and let the customers purchase the completed production-ready product. Product is built to meet orders. The trade-off is an increase in risk by the company, but coordinative acquisition is voluntarily assumed by the private sector, and the decision is made similarly to any other business decision. This process will not apply to all acquisition programs.

In my estimation, CA is compliant with the policies and philosophy of DoD Directive 5000.1, The Defense Acquisition System, which exists to achieve our national security strategy and support the U.S. armed forces by acquiring quality products in a timely manner and at a fair and reasonable price. To facilitate achievement of these goals, the directive outlines the following policies to govern the defense acquisition system:

CA is an "outside-the-FAR" effort, not fitting the definition of a FAR acquisition.

- Flexibility. There is no one best way to structure an acquisition program to accomplish the objective of the defense acquisition system. Program strategies, oversight, and phases should be tailored.
- Responsiveness. Advanced technology shall be integrated into producible systems and deployed in the shortest time possible.
- Innovation. Throughout the Department of Defense, acquisition professionals shall continuously develop and implement initiatives to streamline and improve the Defense Acquisition System and shall adopt innovative practices (including best commercial practices and electronic business solutions) that reduce cycle time and cost, and encourage teamwork.
- Discipline. Program Managers shall manage programs consistent with statute and regulatory requirements specified in this Directive.
- Streamlined Effort and Effective Management. Responsibility for the acquisition of systems shall be decentralized to the maximum extent practicable. The Milestone Decision Authority shall provide a single individual with sufficient authority to accomplish program objectives for development, production, and sustainment.

The CA Technique

In the following case study highlighting coordinative acquisition techniques, the wartime requirement was so immediate and apparent that the entire formal requirements process was bypassed to produce a fielded product from concept phase to use by the warfighter, in 49 days. That timeframe could have been reduced even further. In limited circumstances, the coordinative acquisition process can be adopted to provide hyperswift fielding of new systems and capability in days, weeks, or months, rather than years and decades. Coordinative acquisition is a facilitation tool that is bound by limited applicability and circumstances. In its current rudimentary form, it will not apply to the vast majority of defense programs. It appears to be well-suited to modified commercial-off-the-shelf procurements. However, it may be used as a foundation to design a new set of behaviors and relationships between the government and contractors to streamline and speed the development and fielding process.

As mentioned previously, there is a drawback to the implementation of the CA process to field a new capability. First, it will probably work best with simple and smaller-dollar projects that need quick fielding. Second, and to its benefit, CA is an "outside-the-FAR" effort, not fitting the definition of a FAR acquisition. Consequently, the FAR and DFARS requirements do not apply. According to FAR 2.101(b), an acquisition, in part, "means the acquiring by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease." In stark contrast, coordinative acquisition does not use a contract; nor does it involve appropriated funds; nor does it plan to procure, purchase, or lease a product. Consequently, one can view this process as officially falling outside the purview of the FAR and DFARS. It comes closer to an Other Transaction Authority action, but it also fails to meet that criterion.

Action through the CA process is normally agreed to through a no-cost MOA with a private contractor; verbal agreements have been used but are not recommended. It is often used in conjunction with a government tiger team or IPT to interface between government agencies, users, and commercial contractors; however, that is not required either. In the case that follows, one government acquisition officer managed the entire coordinative acquisition process solo as a voluntary and additional task to his regular workload. He achieved the objective by coordinating the activities of others in a cooperative effort and agreement that was beneficial to all parties.

A Case in Point: RIFF Test Kit

DTRA is quickly becoming the military's go-to agency for hyperswift acquisition and fielding requirements. The first

known use of coordinative acquisition in a more formal sense was performed at the DTRA during the invasion of Iraq. DTRA is a DoD agency known for its exceptionally swift acquisition efforts. One such was development in a matter of weeks of the 5,000-pound GBU-28 "Bunker Buster" deep penetrator bomb. During Operation Desert Storm, this accelerated acquisition effort took an astonishing 129 days from concept to bombs on target. In December 2001, DTRA once again organized a quick response team to develop, in a matter of weeks, the BLU-118/B Thermobaric Weapon, designed to attack the enemy in deep cave areas.

The CA concept was based upon this history and another creative effort that was launched at DTRA to quickly supply the warfighter in the field. Ground combat forces needed a unique capability in Iraq and Afghanistan to quickly differentiate between covert hostile enemy insurgents—makers of improvised explosive devices—and more benign, peaceful civilians. DTRA's 49-day acquisition effort to develop and field the Rapid Identification Friend or Foe (RIFF) Test Kit was a remarkable accomplishment considering that the DTRA program manager had no formal requirements, no budget, no formal program office, and no assigned personnel. The user requirement was directly communicated by the commanders and soldiers in Iraq by commercial cable television to the DTRA Technology Development Directorate. The following sequence of events described the time-reducing DTRA coordinative acquisition process.

Requirements Formulation

Budget: $0
Cost: $0
Time: 2 Days

CA does not always use the formal DoD requirements process. Requirements can be obtained from a telephone conversation, watching war footage on television, listening to combat forces being interviewed, or by an e-mail message from the area of operations or unit commander. The source of the requirement is not paramount, but the validity and timeliness of the need are. Time lost is lives lost. A super-fast response to a validated field requirement in a war zone can save lives. Initially, there may not even be time to seek formal funding.

DTRA is quickly becoming the military's go-to agency for hyperswift acquisition and fielding requirements.

So what can the DoD Acquisition workforce do if the need is so immediate that there is no time to procure funding, a formal requirements document, or even allocated personnel? Improvise and use what you have available now within the limits of the law. Some may fear that the FAR and DFARS will throw in a monkey wrench and slow the entire response to a snail's pace. Yes, FAR requirements have a reputation for doing that. However, CA is an outside-the-FAR action that can be used to ensure fast acquisition response.

By observing and listening to our soldiers and commanders in the field during the invasion of Iraq, the program manager ascertained a requirement from our combat forces. The need was to "distinguish covert enemy insurgents from peaceful civilians." There was no method or tool to do so if they were not caught in the act of firing on American forces, or caught making improvised explosive devices. The need was apparent and immediate, and lives were being lost by the inability to distinguish between friend and foe.

Understanding the requirement, personnel then analyzed the situation in search of a quick interim solution. The requirement was identified in a day or two and the concept solution the next day. The PM knew that local law enforcement was currently using the Instant Shooter Identification kits (ISID) to help test criminal suspects accused of firing a weapon. (The law enforcement kits were initially developed by Sandia National Laboratory in cooperation with Law Enforcement Technologies, Incorporated, of Colorado Springs, Colo.)

Concept and Development

Budget: $0
Cost: $0
Time: 25 Days

The goal was to quickly insert such a test capability into the hands of our ground combat and special operational forces in Iraq and Afghanistan. We needed a quick-and-easy kit that could be used to test suspect civilians to discover whether or not they had been firing weapons or handling explosives—the rationale being that peaceful civilians would be doing neither. However, the problem was that the current civilian law enforcement kits initially developed by Sandia National Lab and commercial vendors were too large, flimsy, complex, and expensive to be used by thousands of combat soldiers in a war zone.

Consequently, a lot of coordination, diplomacy, cooperation, and fast talking between government representatives and civilian vendors would be needed to quickly field a usable version of this ISID kit, especially consid-

ering the lack of budget, formal requirements, office, or personnel. In this case, government personnel performed the activities as an adjunct to their normal duties. After a day of online market research, two key commercial vendors of shooter identification kits were found, and they enthusiastically agreed to miniaturize, simplify, and militarize their law enforcement products for military field use and to supply prototype samples for field testing—at no cost. These types of inexpensive but important products well lend themselves to the coordinative acquisition process.

Test and Fielding

Budget: 0
Cost: 0
Time 22 Days

Each vendor volunteered to carry out the work. No promises or guarantees were made to the vendors regarding government use or purchase. However, an agreement was made that all requests for RIFF kits throughout the DoD and military services would be directed to the two RIFF kit producers. In the test phase of the coordination process, the DTRA PM called a representative of the Army's 7th Special Forces Group at Fort Bragg, N.C., and he agreed to field test the contractor prototypes at Fort Bragg at no cost during normal firearms training.

Within a couple of weeks, the contractors forwarded their prototypes of the RIFF kits to the Army, which successfully field tested the two different kit configurations and confirmed their effectiveness. To expedite the team's efforts, the DTRA manager agreed to serve as the DoD point of contact and coordinator for RIFF Kit information and awareness, and to notify all military services of RIFF kit availability and ordering instructions. It would be the responsibility of the military services and government agencies to use their unit funds to independently order the RIFF kits from the two vendors. The entire development and initial operational capability process from concept to fielding took about 49 days.

The Win-Win Equation

Through CA, the government used the processes of coordination and facilitation to make a new militarized product quickly available to our military forces in the field. However, CA will work only with the creation of a win-win equation in the relationship between the government agency and the contractor. The development and fielding cost to the government for the RIFF kit was zero, and the time for provision to the warfighter was just a matter of days. The vendors were subsequently rewarded with orders for tens of thousands of RIFF kits to be used by the U.S. Marines, Army Special Forces, Army Ranger and infantry units, U.S. Central Command, and the Federal Bureau of Investigation, among other organizations. Furthermore, the use of the kits by the Department of Homeland Security is also a possibility since the RIFF Kit can detect many of the explosives and ammunition on the market.

CA will work only with the creation of a win-win equation in the relationship between the government agency and the contractor.

Another consideration in the win-win equation is working with nontraditional defense companies. Many do not know or understand the DoD acquisition system or process. Consequently, these nontraditional vendors must be protected; the government project manager or team lead must look after their interests. For example, the vendors should be warned not to mass produce developed product until orders are received from government agencies or the armed forces. Since there is not always a guarantee of future orders, to do so is too much risk for a company to assume. The only exception to this rule is if the MOU or MOA states that the government promises to order a minimum quantity of the product by a certain date and time after development is completed, and the program manager has confirmed that funds will be available to purchase such product.

Considered an outside-the-FAR tool, CA may not have general applicability across the DoD acquisition spectrum, but it can be used in limited situations that lend themselves to its application. The process can be used in isolation, or it may form the front end of a major defense acquisition program, permitting high priority programs to start while providing time for the defense acquisition system to catch up with funding, personnel, and definitive requirements.

The future of acquisition will demand flexibility, creativity, and manageable risk, and CA provides one tool to reduce time and expense while meeting these key requirements.

The author welcomes comments and questions and can be contacted at joseph.avery@dtra.mil.

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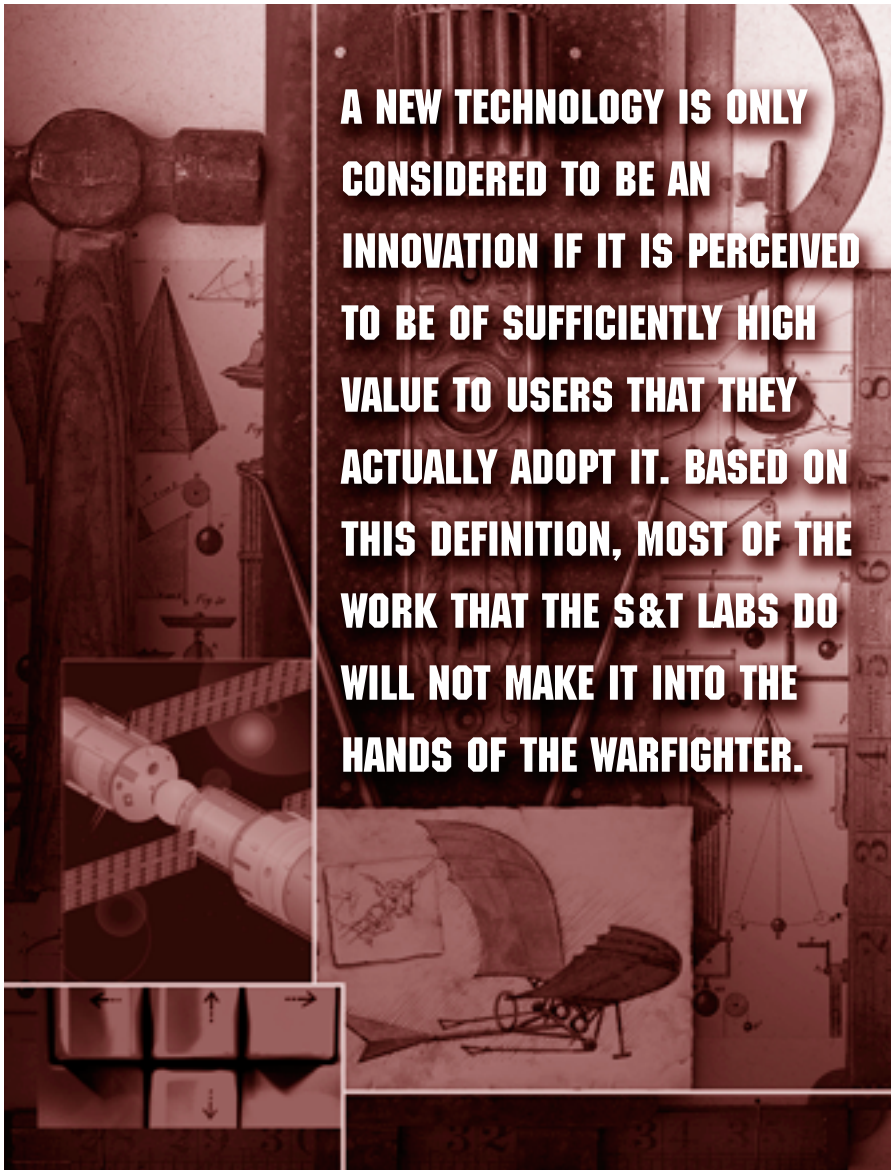
Technology Scouting

A Transformational Role for the Science and Technology Community

Mark T. Dertzbaugh

The goal of the DoD's science and technology (S&T) community is to maintain the nation's military technical superiority by providing innovative solutions that meet the warfighter's needs. One aspect of the innovation process involves identifying new concepts or developing new technologies, and the S&T labs are replete with bright and knowledgeable people who are very good at doing that. However, by definition, a new technology is only considered to be innovative if it is perceived to be of sufficiently high value to users that they actually adopt it. Based on this definition, most of the work that the S&T labs do will not make it into the hands of the warfighter.



Problems and Challenges

Why is that? Let's look at it from the perspective of the S&T and the acquisition communities. From the S&T community, one often hears, "The acquisition guys never transition our technology!" From the acquisition community, one often hears, "The S&T guys never provide me a useful solution!" The reality is that both are right! The problem lies in how the acquisition process is defined in DoD 5000.

The first challenge lies in a gap in timing between technologies that the S&T labs are working on and the point at which requirements get sufficiently defined to articulate a need. A key role for the S&T labs is to do cutting-edge research. However, this means that the labs are often working on technologies in the early concept refinement phase of pre-systems acquisition for which an initial capabilities document (ICD) has not yet been defined. As a result, most of the technologies the S&T labs are working on will never be identified as meeting a requirement as defined by the user community. Some wonderful technologies may have been developed by the S&T

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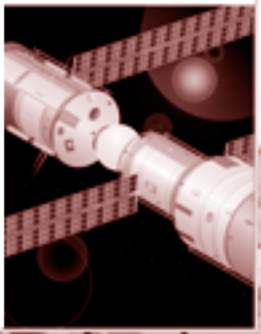
labs, but the acquisition customer simply doesn't have a need with which to justify allocation of funds for their transition.

The second challenge can be attributed to the DoD 5000-mandated hierarchy of materiel alternatives, which gives priority to consideration of commercial solutions. Based on this hierarchy, materiel solutions developed by the S&T lab are considered to have lower priority. Therefore, technologies developed in-house by an S&T lab will seldom get transitioned into an acquisition program unless a solution cannot be found elsewhere or the technology is transferred to a commercial entity for development. This makes it very difficult for the S&T community to show value-added to the warfighter.



BETTER INTEGRATION OF THE S&T COMMUNITY WITH THE ACQUISITION AND REQUIREMENTS COMMUNITY IS ESSENTIAL FOR SUCCESS.

Looking for Solutions

Integrate

An essential component of making this process work is to leverage everyone's strengths. Better integration of the S&T community with the acquisition and requirements community is essential for success. The requirements community is best able to articulate warfighter needs, but they may have difficulty translating those needs into specific functional requirements. The S&T community is best able to identify potential technology solutions, assuming that needs have been clearly defined, but they are usually not the best qualified to make business decisions related to development of the technology or issues related to manufacturing of the product. The acquisition community is best qualified to ensure the development and procurement, but they may not be the most knowledgeable about the technology and its limitations. What we have often seen in the past within the Joint Medical Biological Defense Program is that there has not been good coordination between these three communities. The S&T program manager has often gone off in one direction, without confirming with the requirements community or the acquisition community that a need exists for technology, or that the acquisition program manager will accept the technology if it is successfully developed. In this scenario, the outcome of the S&T program is predictable: usually some interesting technical information is reported, but no tangible product that directly benefits the warfighter is produced.

Define the Requirement

To give the S&T community a fair chance to meet a requirement, it is essential that an ICD be established in the very early concept refinement phase of the pre-systems acquisition, before the S&T program begins investing funds in an effort. There is frequently finger-pointing among the three communities regarding who is responsible for articulating these early requirements. In fairness to the requirements community, they are usually not sufficiently knowledgeable about the technology options available to define the specific materiel solution. However, it is essential that they articulate the general needs of the warfighter in sufficient detail so that the S&T community can focus their efforts. Once the basic level of needs is articulated, the S&T and acquisition communities can work on translating them into possible materiel solutions. For example, in the DoD Biological Defense Program, we have seen a shift in the requirements community towards defining broad-based generic capabilities. However, the capabilities are *so* broad and nonspecific that the acquisition and S&T communities don't know the specific threat agents towards which they should prioritize their efforts or what some key performance parameters are for each type of materiel solution that, if developed, the warfighter would find acceptable. Without this information, the S&T and acquisition communities will be using a shotgun approach to developing a materiel solution, resulting in a dilution of effort. Again, the key to developing a good ICD early in R&D is to have a close dialog between the requirements, S&T, and acquisition communities; otherwise, efforts and funding will be wasted.

Make the S&T Community Technology Scouts

In the past, we have observed a tendency in acquisition programs to ignore the valuable technical resource the S&T community offers. This is in part due to the fact that the S&T labs are often competing with other commercial entities for transition of their technology into an acquisition program and the general lack of interest on the part of many researchers in supporting product development efforts. As a result, acquisition program managers often view the S&T community as being, at best, uninterested in their efforts, and, at worst, biased in their evaluation of technologies under consideration. But what if the S&T labs could be more closely connected to the acquisition

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programs and used as the scouts for new technologies that meet user needs? Sounds heretical? There is precedent for doing this.

Implement Customer-focused Technology Planning

Based on a recent analysis by the American Association for the Advancement of Science, less than one-fourth of all R&D funded by the federal government is performed in intramural laboratories. This means that the majority of the technological innovation will occur outside the DoD S&T laboratory system. However, for the DoD to harness these investments, there must be a way to systematically identify technologies that address user needs. One method for doing this is called customer-focused technology planning (CFTP), described in detail by Jay A. Paap at <www.jaypaap.com/articles/CFTP-09-2002-mod.pdf>. Developed and refined over the last three decades, the origins of this approach are rooted in the model of innovation developed by Don Marquis at the Massachusetts Institute of Technology; the model is currently used within a broad range of industries. The goal is to increase the innovation potential of an organization by using a systematic approach for comparing and evaluating technologies for their fit to customer needs. Many of the principles are grounded in fundamental concepts used in systems engineering, but they have been adapted to be more amenable for use in an S&T organization. Basically, the process involves translating general user needs into specific functional requirements. The S&T community is probably best equipped to know the latest technologies out there and how they could best address a user

IN AN ERA WHERE THE DOD S&T COMMUNITY IS UNDER INCREASING PRESSURE TO SHOW VALUE-ADDED FOR THE FUNDING THAT IS RECEIVED, IT IS IMPORTANT TO LOOK AT TRANSFORMATIONAL APPROACHES FOR MANAGING OUR SCIENCE INVESTMENTS.

need. This approach requires the S&T community to abandon a "not invented here" mentality and look at all the options and sources of technologies that are available. These options then get ranked by "fit" to functional requirements, technical maturity, and risk. Once a prioritized list of technologies is established, the S&T community can gain consensus from the requirements and acquisition communities on the technology options being considered. This includes such downstream issues as affordability, producibility, and supportability.

The CFTP process provides a framework for S&T managers to integrate various sources of information in a way that allows them to make informed decisions regarding investments in technologies. The process is based on the following steps:

- Identifying who are your key customers and why
- Determining the needs of the customer, in order of perceived priority to them
- Identifying the technology options that best address or improve upon these needs
- Assessing opportunities for investing, leveraging, and/or maturing these technologies.

An important aspect of this approach is to ensure that S&T managers consider user needs that cannot be articulated directly by the users themselves, but that are felt to be critical to enhancing the innovative value of the product. This is where the S&T community must apply some insight and interpret user needs beyond those that the users can readily describe.

The CFTP process can be tailored to provide the key information needed by S&T planners to be able to make an informed decision. The real value of the approach is that it allows different and/or competing technologies to be compared for their fit and impact on user needs. It also allows other issues to be considered, such as the relative maturity of the technology, competing sources of the technology that may be available, and their relative strengths. For example, such information would be invaluable for managers in the Joint Biological Defense Medical S&T Program to use as they weigh what technology options to invest in for countermeasures. In those cases where multiple companies have similar competing technologies, it would provide the S&T managers a tool for comparing and evaluating technologies that would best meet user needs.

Align the S&T Program Investments to Match Priorities

Once the requirements and acquisition communities have bought in, the S&T program manager can develop a strategy for evaluating and comparing lead technologies within the S&T laboratories. The maturity and risks associated with each of the lead technology options can also be assessed. Technical personnel in the S&T laboratories who have gained first-hand experience working with the technologies can act as advisors to the acquisition program manager, allowing the DoD to make good investment decisions based on their assessment of the technologies during the concept refinement phase of pre-system acquisition. The result is a greater probability that a technology option identified in the concept phase gets transitioned to the technology development phase of pre-system acquisition, and closer integration of the S&T laboratories with the rest of the acquisition community.

Support Technology Development Efforts

There are several ways in which the S&T community can continue to provide support to the acquisition community once a technology has transitioned from the laboratory. Many of the DoD intramural S&T laboratories have unique facilities and capabilities that would be difficult to duplicate in industry. The key selling point in the S&T laboratories' favor is their ability to act as the independent and unbiased evaluators of technologies offered by competing companies that the acquisition customer is considering. Such a role would be particularly important during the technology development phase of pre-system acquisition, where down-selection of technology options would be important. Another important role for the S&T community is to anticipate and provide the underlying science base required to support the development of the technology. The objective of such efforts is to reduce technical risk, make improvements to the technology, and ensure that it meets key performance and/or regulatory requirements. For example, to license medical biological defense countermeasures with the Food & Drug Administration, the efficacy of the product may need to be demonstrated in a relevant animal model of the human disease. If the underlying science on characterization of the animal model has not been done in parallel with development of the product, licensure will be significantly delayed. To avoid this downstream problem, it is critical for the S&T program manager to coordinate with the acquisition customer and ensure that the underlying science base is there to support development of the technology.

Importance of Transformational Approaches

The S&T community has an important role to play within the DoD acquisition community. However, in an era where the DoD S&T community is under increasing pressure to show value-added to the warfighter for the funding that is received, it is important to look at transformational approaches for managing our science investments and securing the long-term future of the DoD S&T community.

The author welcomes comments and questions. He can be contacted at mark.dertzbaugh@us.army.mil.

Intragovernmental Transactions

More Important Than Ever for DoD's Acquisition, Procurement, and Supply Chain Communities

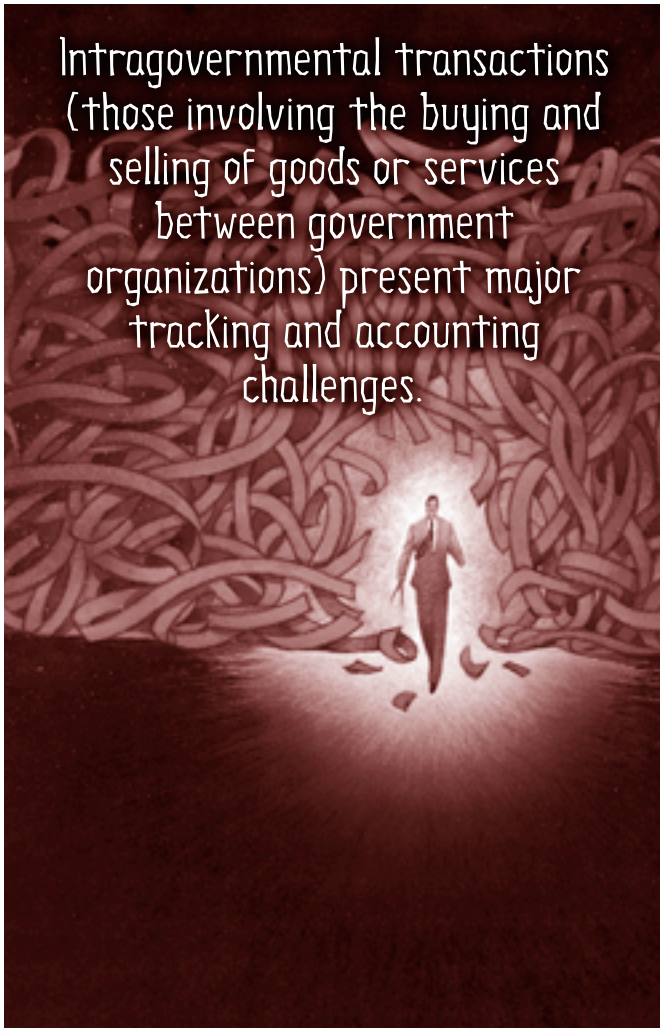
Herbert Kaskoff ▪ *Lisa Romney*

An Air Force fighter squadron based in Alaska obtains jet fuel for its A-10 Thunderbolt IIs through the Defense Logistics Agency (DLA) while en route to support Operation Enduring Freedom. The United States Pacific Command negotiates satellite imagery services with the National Aeronautics and Space Administration in relation to regional operations. A Navy research team leases workspace in downtown Washington, D.C., from the General Services Administration (GSA) for a special, short-term project.

What do these seemingly diverse scenarios have in common? They all involve buying and selling between Department of Defense organizations or between DoD and civilian organizations. Transactions like these happen daily in locations around the globe and range in scale from hundreds to millions of dollars.

As anyone who's involved in DoD acquisition or financial management knows, intragovernmental transactions (those involving the buying and selling of goods or services between government organizations) present major tracking and accounting challenges. Although federal regulations make transactions between the DoD and commercial companies fairly straightforward in terms of ordering, delivery, invoicing, and payment, it can get very complex when, for example, the Navy purchases Web hosting services from the Defense Information Systems Agency, or the Army buys field meals from DLA. Because each of these organizations has different procurement procedures, data standards, reporting requirements, payment terms, and other key elements of the intragovernmental process, it's surprisingly difficult to get an accurate picture of what exactly is being purchased, from whom, and how—or when it's received and accounted for. Extended across the DoD, inconsistencies like these have a significant cost in terms of both dollars and productivity. And, equally important, they represent a missed opportunity to do true strategic sourcing—using the results of critical spending analysis to make better, faster, and more efficient acquisition decisions.

Kaskoff *is team lead, buyer and seller management, and* **Romney** *is team lead, common supplier engagement, Transformation Priorities & Requirements Directorate, Business Transformation Agency.*



Intragovernmental Transactions and Defense Business Transformation

Until recently, most DoD businesspeople would have considered intragovernmental transactions to be mainly an accounting problem. But as the Department's progress in enterprise-wide business transformation gains momentum, it's clear that this topic is also highly relevant to the acquisition, procurement, and supply chain communities. Why? The key issue is "visibility," a primary focus of the new Defense Business Transformation Agency. Established in late 2005, the BTA is aggressively pursuing its mission to transform business operations to achieve

improved warfighter support, while also enabling financial accountability across DoD. By centralizing business modernization programs that create department-wide capabilities, the BTA is, in the long term, expected to result in increased supply chain efficiencies, full visibility into business processes, more effective human resource management, timely and accurate reporting, and measurable transformation results. Creating a seamless process for intragovernmental transactions that's based on commercial best practices is one of several opportunities for BTA to achieve focused improvements that result in increased efficiency and cost savings.

The IGT Initiative

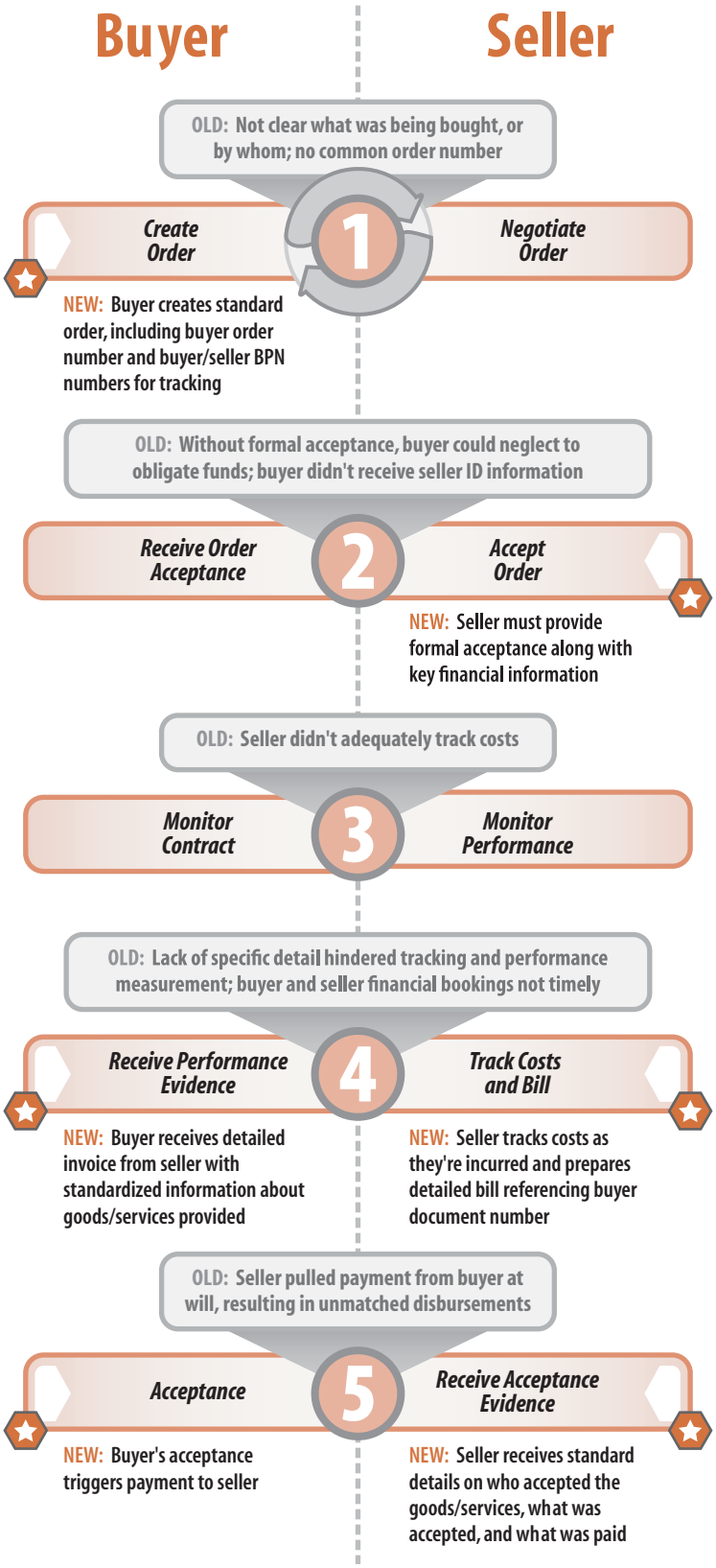
To understand how a new approach to intragovernmental transactions will benefit different areas of DoD, it's helpful to take a high-level look at how BTA is managing transformation. BTA transformation efforts center upon six strategic business enterprise priorities that, in the simplest of terms, encompass people, assets, investments, and suppliers. One of several enterprise-wide efforts aimed at achieving these priorities, BTA's Intragovernmental Transactions (IGT) Initiative will have the biggest impact on two of them: financial visibility and common supplier engagement. At the highest level, the goal for financial visibility is more efficient and effective decision making throughout the Department and assistance in achieving DoD-wide financial auditability. The main goal of common supplier engagement is to simplify and standardize how DoD interacts with commercial and government suppliers in acquiring goods and services. It also improves visibility of related information to the warfighter and Defense core business missions to enable better acquisition decision making.

The IGT Initiative (an extension of foundational work done by the Office of Management and Budget (OMB) and within DoD) is focused on developing an enterprise-wide solution for properly tracking and accounting transactions involving sales, services, or transfers within DoD or between DoD and other federal government organizations. From an accounting perspective, IGT will support a clean audit report for the Department. It will also address financial eliminations—a material weakness that's been identified by OMB and the Government Accountability Office (GAO)—ensuring that sellers' revenue matches buyers' expenses and that both are eliminated (removed from the consolidated total) with no adjustments required.

However, there are also a number of ways in which the IGT Initiative will benefit the acquisition com-

Improving Acquisition Visibility:

A Common Process for Intragovernmental Reimbursables



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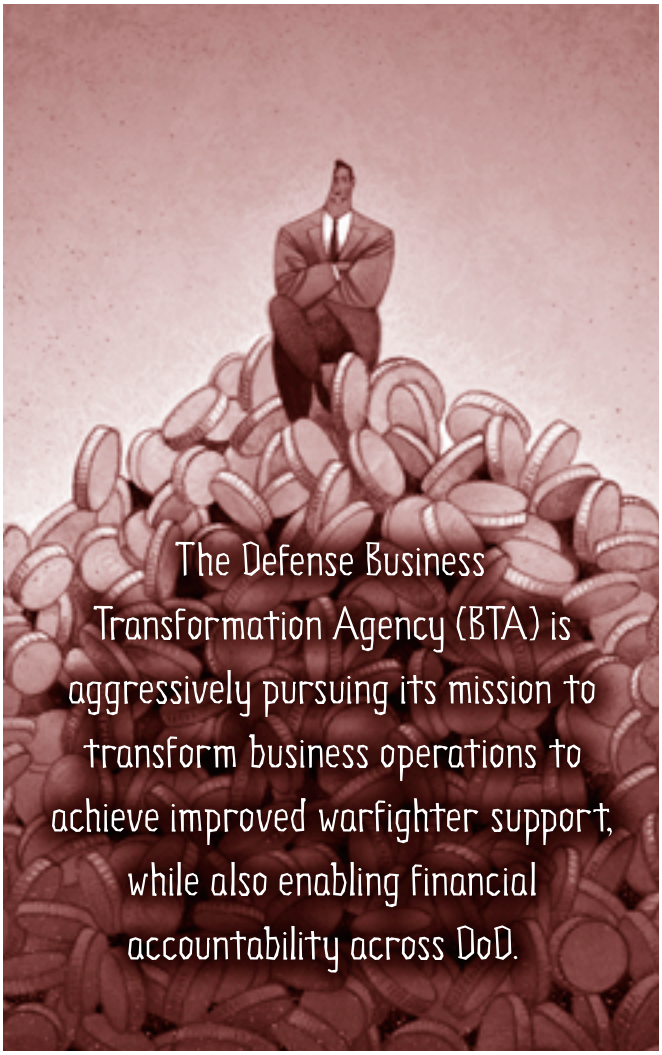
munity. Most notably, IGT will provide the first-ever, DoD-wide business process and data standards for creating and routing requisitions, purchase orders, billings, payments, and collections associated with intragovernmental transactions. This will significantly enhance visibility into the details of both purchases and sales within the Department and across the federal government, yielding more timely and reliable information for decision makers. A key aspect of this improved visibility—and one that directly supports strategic sourcing—will come through IGT's use of the Business Partner Network (BPN), the single source for vendor data for the federal government. Better visibility will also result in an accurate big-picture view with which to conduct in-depth spending analyses and planning. Another important benefit of the IGT Initiative is that it will help buyers document and evaluate how suppliers and their products and/or services perform, providing valuable information for future procurement decisions. This will help achieve an important linkage from execution and performance to budget, supporting requirements of the Government Performance and Results Act.

IGT Progress: Past and Present

Since April 2005, IGT efforts have been centered on developing a holistic, end-to-end solution that meets the diverse needs of the Department's financial, acquisition, and logistics communities. The IGT Initiative team is composed of staff from the Office of the Secretary of Defense comptroller and acquisition, technology, and logistics organizations, as well as leaders from the Defense Finance and Accounting Service.. The initiative now falls under the BTA, where it's sponsored by the Transformation Priorities and Requirements Directorate. Within TPR, financial management has the lead role and is aided by extensive participation from the supply chain management group.

One of the team's first major accomplishments results in a significant change for the acquisition community. In fall 2005, the IGT team finished defining requirements for the largest (in terms of dollars processed) and least automated area of IGT: reimbursables. Reimbursables involve exchanges of goods and services in which the seller uses his or her organization's own funds and gets reimbursed by the buyer, usually through a military interdepartmental purchase request (MIPR). Working with the Services and DLA on developing a complete process model that's based on DoD's Business Enterprise Architecture (BEA) 3.0 (updates are incorporated in the recently released BEA 3.1), the team identified the data elements, business process changes, policy changes, and business rules needed to handle reimbursables in a standard, enterprise-wide manner that's consistent with private industry best practices. As a result, the model establishes a new requirement that reimbursables be processed through the acquisition contact of the buyer's organiza-



tion. Although this creates an expanded role (and likely workload) for acquisition, it will give procurement officials unprecedented visibility into purchases and enable them to make the best business decisions based on their agency's needs and requirements.

Specifically, the following business process changes have been established for intragovernmental reimbursables: The new process requires the acquisition community to manage the creation and acceptance of an intragovernmental order. It requires the seller to provide performance evidence (billing), and also requires receipt and acceptance processes. It results in the addition of the "acquisition seller" and "financial management seller" processes to BEA 3.1. It also puts the onus on the buyer to provide payment to the seller upon acceptance of goods. This "push" versus "pull" model will rectify unmatched disbursements that, in the past, would result from the seller's pulling payment funds from the buyer without adequate notice or documentation. (However, it also recognizes that some buyers will be tardy in pushing payment, and it therefore provides specific guidance on when/how the seller can pull payment.) And finally, it results in timely financial postings, including accruals, triggered by agreed-to business processes.

Another powerful aspect of the new model that's consistent with commercial best practices is that it requires the buyer and seller to provide key information at the initiation of an order, enabling accurate tracking and accounting. For example, the seller is required to capture the buyer's order number, and both the buyer and seller must exchange their Business Partner Network numbers at the beginning of the process. Additionally, important data elements (such as the budget activity number, main and sub account codes, and department regular and department transfer codes) are captured up front. Combined with the transaction amount, these data elements support the financial eliminations process by enabling the correct matching and identification of the buyer's and seller's transactions. They also enable spend analysis, helping an organization accurately slice and dice data about its expenditures (for example, determining how much it spent on rent with GSA over a given period of time) rather than having to derive estimates from accounting data. And, since the new reimbursables process incorporates DoD's Standard Financial Information Structure (SFIS) in its data model, it assists in improving DoD financial visibility and links performance to budget.

The Road Ahead: IGT Goals

Having established a common process for reimbursables, the IGT Initiative team is now conducting a thorough analysis of implementation options. In addition to identifying necessary changes in policies and procedures, the team is examining existing enterprise automated solutions such as the Standard Procurement System (SPS), Wide Area Work Flow (WAWF), and Business Enterprise Information Services (BEIS) as possibilities for implementing the reimbursables process. At the same time, the IGT team is defining the scope and gathering data regarding other types of intragovernmental transactions, including interfund, purchase card, transportation, fiduciary transactions, fuels, and transfers.

When implemented, the solutions developed for intragovernmental transactions will provide the accountability desired by Congress and other federal organizations, such as GAO and OMB. At the same time, they will achieve enhanced visibility for the Department regarding the goods and services it's buying, from whom, and how well they've performed. In the long run, this will improve support for the warfighter through more efficient, effective purchasing, and will also result in better stewardship of taxpayer dollars.

The authors welcome comments and questions. They can be contacted at herbert.kaskoff@bta.mil and lisa.romney@bta.mil.

FIST, Part 5

Putting the Pieces Together

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

The FIST values contend that for military program management and technology development, speed is good, lower costs are good, simplicity is good, and smallness is good.

This is the fifth-and-final article in a long-planned but previously unannounced series titled "FIST—Fast, Inexpensive, Simple, and Tiny." Our initial FIST research started to take shape in March 2003, and the actual series began in the November-December 2004 issue of *Defense AT&L*, with an article entitled "Doing Less With More."

That first article illustrated the I (Inexpensive) portion of the FIST model and argued that smaller budgets foster innovation. The second installment was published a year later, when "The Simplicity Cycle" (November-December 2005) explained the relationships between simplicity, complexity, goodness, and time. Installment three, "It's About Time," appeared in the January-February 2006 issue and explored the history and future of technology-development timelines. The fourth installment was a two-FISTed comic (our editor prefers "graphic article) in the last issue. It literally illustrated the application and interaction of the four FIST values. (*See reader comments in "From Our Readers" on page 52.*)

The Word Of The Day Is ...

That brings us to the key word in this series: values. The components of FIST are, first and foremost, statements of professional values. They are characteristics, attributes,

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Illustration by Jim Elmore.

or entities that are judged to be of greater worth than the alternatives. They describe principles, standards, and qualities that are deemed worthwhile and desirable.

Specifically, the FIST values contend that for military program management and technology development, speed is good, lower costs are good, simplicity is good, and smallness is good. These are professional judgments, based on extensive research and experience, not merely opinions or theoretical conjecture. However, they are "theory" in the scientific sense of the word. They make predictions that can be tested and proved ... or disproved. In the previous four articles, we offered some results of our tests, and we invite our readers to do their own experiments and investigations as well.

"Better, faster, cheaper: pick two." Picking two may be conventional wisdom, but it's short-sighted and both intellectually and experientally unjustifiable.

Like any set of values, FIST can be understood as a collection of philosophical assertions, designed to drive actions and inform decision making. It may be indelicate to point this out, but the truth is, we often pay public lip service to the values embodied in FIST, while disparaging and denouncing them behind the scenes. For example, "Yes, of course we want to avoid wasteful spending—but by the way, make sure your expenditure rates are not too low, otherwise we'll lose our money and we won't get as much next year … and you won't get promoted." Thus, these values are not universally accepted as principles within the DoD program management community, much less are they put into practice on a regular and widespread basis. That's a shame. We hope these articles can help fix that.

The Final Piece

Alert readers may have noticed the series has so far only addressed the F, I, and S of FIST. This final article explores the concept of Tiny (as expressed in the statement "small is beautiful") and then ties all the pieces together. We almost didn't write this one because it is, in some sense, redundant. Tiny is basically the inescapable outcome of the three previous values. If your project is Inexpensive, it has a Tiny budget. If it is Fast, it has a Tiny schedule. A Simple project has a Tiny degree of complexity. Further, a Fast, Inexpensive, and Simple project necessitates a Tiny program office. You get the picture.

Could there possibly be a project, program, or team that's Fast, Inexpensive, Simple, and Huge? No, FISH makes little sense because the first three values are generally inconsistent with Hugeness. If your project is already F-I-S, it will logically tend towards T as well.

Even so, we believe Tiny is a sufficiently significant concept to merit a focused exploration of it as a distinct value. Tiny may be an outcome that springs naturally from the previous three values, but an in-depth understanding of and appreciation for the value itself can contribute greatly to a program's success. Any readers who wish to explore the value of Tiny in more detail than this brief article can afford might want to check out Bo Burlingham's recent book *Small Giants*, which examines 14 companies "that choose to be great instead of big."

Dr. Dolittle and the Elephant

At a meeting long ago, in a place far away, Dr. Dolittle stated that Project Pachyderm is small. Maj. Myopia quickly concurred, observing, "It's not a lot of money." We were rather surprised by their assertion. We had previously heard the burn rate for Project Pachyderm was approximately $700,000 per day, but we didn't want to sidetrack the discussion since the meeting was already hours longer than originally planned. By the way, names and figures have been changed to protect the guilty.

Back in our office, we did some digging and found out that Project Pachyderm's two-year contract was valued at $600 million. Assuming work is performed every day of the year, we calculated a burn rate over $800,000 per day ($600 million divided by 730 days equals $822,000 per day). Surprisingly, the rumored $700,000 per day was actually on the low side!

Interestingly, we also had intimate knowledge of Project Cheetah, a lean and rapid prototype-to-operations development effort with a budget under $400,000 (that's right, thousand, not million), a four-month schedule, and a team of two government people plus two contractors, all working the project part time. They were chartered to address what turned out to be a significant portion of Pachyderm's requirements. In a matter of months, this tiny project delivered a powerful capability using less money than Pachyderm spends by lunchtime every day of the year for two years straight The larger effort? It failed to deliver anything at all. Now tell me again who's big and who's small?

Everything Is Relative?

We gladly admit size is relative, and Pachyderm's budget is certainly a small effort compared to some, but it is also rather large compared to Project Cheetah's. How then should we distinguish between large and small? On what basis can we say a particular project is "not a lot of money"? Perhaps the thing being purchased should be taken into consideration. For example, $100 is a lot to pay for a candy bar, but not a lot to pay for Pablo Picasso's *Garçon à la Pipe*.

In the Pachyderm-vs-Cheetah example, we are definitely talking apples-to-apples. In fact, the Elephant ended up basically doing a cut-and-paste job of the speedy Cat's software (then happily collected a fat award fee for the "effort"). The warfighters got what they needed, so it worked out—but the point is, there was nothing small about the Pachyderm, despite assertions to the contrary.

Perspective Matters

Of course, perspective counts too. When you're very young, $100 is a lot to pay for anything (although my four year-old daughter favors "thirty-two hundred thousand hundred" when discussing large numbers). And in a world where programs worth multiple hundreds of millions are commonplace, it's understandable that one's perspective about size might be different from that of the average joe.

Why does this matter? Because as long as we've got high-ranking government people looking at $700,000-per-day burn rates as "small" and "not a lot of money," we're going to continue having enormous expenditures and low expectations for delivery ('cause hey, we didn't really give them very much money, so we can't really expect them to deliver very much, right?). So let's try to remember that in real life, even one million dollars is a lot of money.

The Tiny Fighter

But size isn't all about money, of course. Tiny can (and should) be applied across the board. We hope our Army, Navy, and Marine Corps readers will excuse this Air Force-centric example, but it's just too good to pass up.

As Air Force Col. James Burton explained in his amazing book *Pentagon Wars*, the guys involved with the development of the F-16 understood and embraced the value of Tiny in a big way. This aircraft was half the price and half the size of its predecessors and was developed in half the time. The statement of work was a mere 25 pages, and contractor proposals were limited to 50 pages.

The result was a remarkably agile, maneuverable, and successful fighter, despite the eventual goldplating and increases in complexity injected into the system as the program matured. Over 4,000 of these fighters have been produced, and they are in service in 24 different countries. The point is, being Tiny can really pay off.

Of course, Tiny doesn't just apply to schedules, budgets, and paperwork. It's also about people. In terms of timeliness and accuracy, smaller teams are better able to communicate with internal and external team members. Of course, you've got to be careful not to have such a small team that you don't have adequate resources to do the job, but at some point, adding more people becomes counterproductive—as the Simplicity Cycle article illustrated.

It's worth repeating that this is fundamentally a problem of values. Why does the DoD technology development community sometimes fail to be FIST? Because it is hard to do? No, we do hard things on a daily basis. Because our hands are tied? No, we are intelligent and creative enough to find innovative solutions, if we set our minds to it, to just about anything.

It is because on the whole, we often don't value speed, inexpensiveness, simplicity, and tininess. Our research indicates that all too frequently, we don't function this way because we are not looking for improvement in these dimensions. Let's fix that.

A Brief Aside

Some people are fond of saying "better, faster, cheaper: pick two." Picking two may be conventional wisdom, but it's short-sighted and both intellectually and experientally unjustifiable. This is a family show, so we won't use the colorful idiom with which we would like to respond—let's just say someone is blowing smoke. The truth is, when considering better, faster, and cheaper, we refuse to pick two. We pick all three on a regular basis. So did the team who developed the F-16 and dubbed themselves the Fighter Mafia. And you can do it too—we believe in you!

Rewards and Change

If we truly want to accept the value of Tiny, practical-minded readers are surely wondering how such a value could be integrated into the current framework. How can we reward smallness when the most prestigious programs a program manager can lead are those with enormous budgets, endless schedules, extreme complexity, and massive teams? How can we reward smallness when a PM's career path is supposed to be one of increasing responsibility, defined as dollars and people managed?

If we were lawyers and this article was a television show, this is the part where we would jump up, slap the table, and shout "Objection! We reject the premise of these questions! Opposing counsel is basically asking how we can change without changing. Your Honor, we have already asserted that the FIST value of Tiny is not part of the current framework, so to expect anyone to integrate it without significant change to the underlying structure is ludicrous." And then we'd cut to commercial, for cliffhanger effect.

But we aren't lawyers and this isn't a TV show, so that's not really an option. Fortunately, in addition to being objectionable, those questions are easily answerable. We could reward smallness the same way we reward any other positive behavior or desirable attribute. Train for it. Use it as the basis for promotion and recognition. Give people awards for doing it. Integrate it into the culture. All it would really require is to stand the current value structure on its head and entirely change the cultural expectations and mindset. (Hey, we said it was a simple question to answer, not an easy solution to implement.)

Widespread acceptance of the FIST values requires an abandonment of the business-as-usual mindset. FIST can't simply be grafted into the status quo establishment; the old ways have to be torn down and replaced. Fortunately, that's not as difficult as it sounds because the FIST values are already firmly established, if you know where to look.

We contend the FIST values are not alien at all. They are the values inherent in our own homes and lives. They are sometimes suppressed and supplanted once we get to work by an environment that rewards **S**low, **U**nwieldy, **C**omplex, and **K**ostly, but they linger in our daily non-work activities. When we are the consumer, the customer, the user, we always prefer something fast, inexpensive, simple, and tiny. Look at cell phones, computers, ATMs, fast food (okay, so we love our super-size fries, but we're loving them a lot less these days). We complain when things are slow, expensive, complicated, or overly large. Look at our response to automated customer "support" systems ("press 1 for this, press 2 for that"). We hate that sort of thing because it goes against our values.

Bringing the FIST values to work simply involves approaching system development and acquisitions the way we approach other things in life: with a preference for rapid availability, inexpensive quality, simple interfaces, and smaller sizes. There's nothing new here.

The Revolution is Within You

So what are we really recommending with this FIST approach? Some of our ideas involve sweeping changes, like coming up with a new definition for MDAPs (major defense acquisition programs). Others are more modest, like not dictating development schedules anymore. Some are subjective, like "smaller is better." Others are measurable and objective, like "decrease development time by 50 percent." But they are all based on values that 99 percent of us already accept in our daily lives. And that is why a FIST revolution is possible.

Generally speaking, the values expressed in the FIST series are those principles that reformers, revolutionaries, and mavericks have fought for—and often been kicked in the teeth for—throughout the past several decades. These values are certainly not new, but as far as we know, they have never been put together in a unified form quite like this. Until now.

We hope that by codifying, quantifying, and connecting these four values, they will be easier to grasp, adopt, and implement. Our aim is to provide a common vocabulary for PMs to use as they discuss and explore these issues.

As long as we've got high-ranking government people looking at $700,000-per-day burn rates as "not a lot of money," we're going to continue having enormous expenditures and low expectations for delivery.

We encourage PMs to seriously examine what sort of values they are expressing in the way they run their programs.

We suspect most programs and environments will find some pieces of FIST easier to adopt than others. Undoubtedly it will take a fair amount of time and effort to bring the whole thing on board, particularly for programs with a history of being slow, expensive, complex and large. Nonetheless, it is important to try.

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

Developing a Competency-Based Organization

Applying the Navy's Uniformed Human Capital Concepts to the Civilian Workforce

Regan H. Campbell

Admiral Mullen, the chief of naval operations, stated in his latest guidance that the Navy should "drive to execution Sea Warrior and other ongoing manpower and personnel transformational efforts" in an endeavor to realize a "properly sized fleet." To accomplish this, the CNO pointed to a desire to examine the value of a competency-based organization for both the uniformed and civilian workforce. Specifically, he stated the need for civilians to build upon the concepts outlined in the Human Capital Strategy (a human resources personnel management plan) to deliver a competency-focused manpower and personnel system. In response to the CNO's guidance, some organizations and leaders are examining ways to optimally align civilian workforces and to measure the civilian contribution to mission execution.

There appears to be growing interest in aligning into competency-based organizations. Interestingly, this desire mirrors a recent push in the uniformed Services, where we have begun to align enlisted personnel based on their knowledge, skills, and abilities (KSAs). In order to achieve this alignment, the Navy instituted a new human capital strategy, which, in part, details a scientific method to determine the optimal number of sailors to execute any given task and ensures those sailors receive the necessary training. This proven method is being used to identify the KSAs of current sailors and the necessary KSAs to execute tasks and man our future ships. These KSAs can then be fed to our training community to ensure operational readiness. Could this process be applied to the civilian workforce, and would that application result in benefits to large organizations?

Optimal or Reduced Manning

Industrial/organizational psychology has long had a scientific technique for determining the KSAs necessary to perform a job. The technique is known as "job analysis." The Navy favors perceptual and motor job design—or

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human factors job design—which enhances reliability, safety, and employee satisfaction, while reducing training and staffing requirements. This process is defined under the human capital initiative, with the following steps:

1. A mission analysis examines what the operating environment is and what the user and system must do; this is also known as a requirements analysis.
2. A user analysis examines who the users are and determines their skills.
3. A function allocation distributes the functions between the system and the user. (For a successful function allocation, one should determine what an individual does well in the mission and assign him or her those tasks. The remaining tasks should be given to the machine.)
4. A task analysis compiles the specific listing of tasks and breaks them down into key components.

From here, a job analysis diverges from a human factors design process because the outcome is different. The job analysis steps continue below:

5. Once the tasks have been determined, the KSAs associated with them can be identified. The KSAs define what someone needs to be able to do in order to execute the job.
6. The KSAs can then be used to define the training program, if necessary. In order to do that, one would execute a trainee analysis, which determines what the trainee already knows.
7. By looking at the delta between what the trainee knows and what he or she needs to know, we can determine the training interventions necessary.
8. Once the new positions are implemented, one can use metrics to determine if the allocations are correct, the workload is too high for any operator, and the training interventions were acceptable.

As used by the Navy, the process results in a list of the KSAs associated with each enlisted job, allowing us to determine what our sailors are capable of doing and what training is necessary for them to work on the various platforms or in various jobs. In addition to this application to current platforms, the job design process has been successfully implemented in the design of new ships, such as the Littoral Combat Ship: The designers began by determining the tasks for each position; from there, they determined the KSAs and assigned a person to the position; the person's skills were then compared to the KSAs, so the training requirements could be determined.

These training requirements will soon be compared to the Navy Training System Plan to ensure the correct training is being executed. The products (e.g., training and workload measures) will be validated using human performance testing. Thus, job design has been successfully applied to both existing platforms and new platforms within the Navy.

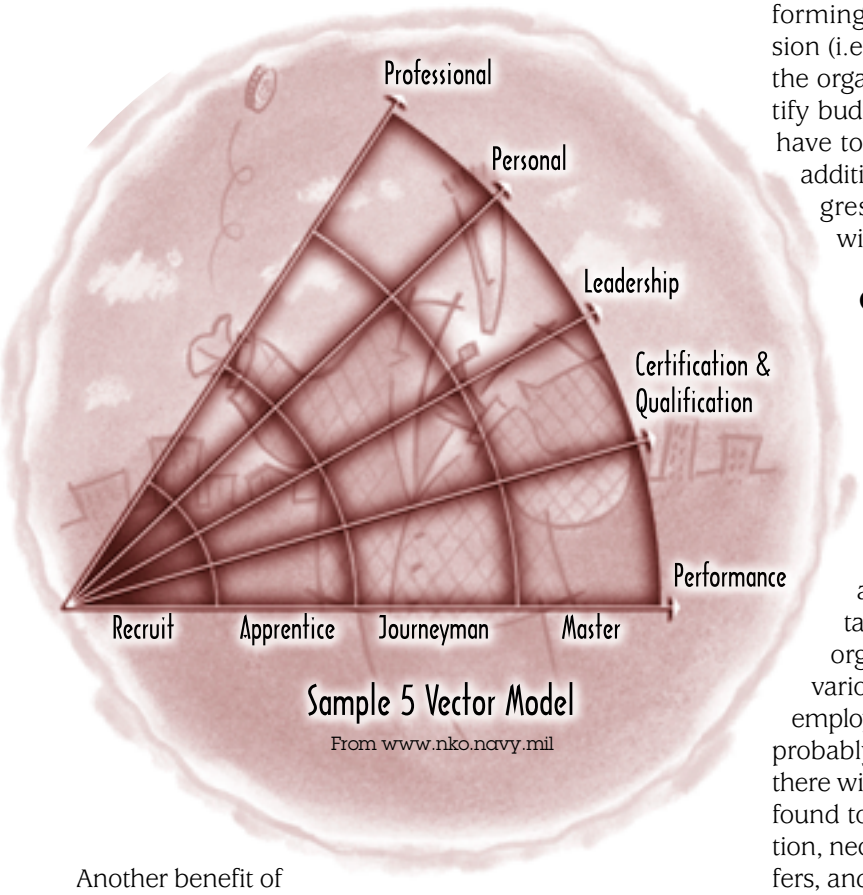
The Process and the Civilian Workforce

Navy senior leadership is clearly concerned to ensure that the workforce is competency-aligned in order to better support the mission. Can the Navy's uniformed human capital process be applied to the civilian workforce of a large organization? Yes, indeed. (In fact, it could be an easier transition than the transition required for the uniformed Services because there are likely to be fewer KSAs—a recent survey categorized civilian jobs into 10 job families.) The steps would be:

1. Determining what missions the civilian workforce is required to execute (for example, systems engineering, logistics, technical authority). This task is completed for the most part, although there would likely be some discussion about whether all business areas are truly "Navy" needs or core business areas.
2. Determining the composition of the civilian workforce. This task has been completed at many commands.
3. Identifying the tools available to reduce the workload—specifically, examining the various commands to see how they complete their missions, then identifying and applying those tools that are of value to the entire enterprise. This effort can make use of the Lean initiative that is already in place to identify and correct areas where there is overlap or redundancy between commands.
4. Breaking down the missions into tasks. Complete a task analysis for all tasks requiring human intervention to determine the key components and KSAs necessary. For many missions in a large organization, the required KSAs will likely be similar. For example, a business financial manager in a program executive office exercises similar KSAs as one in a different PEO or matrix-support office.
5. Grouping the KSAs into competencies or skill set groups. This can be done scientifically using a factor analysis or just by viewing the results and grouping them.
6. Defining the training program for new employees or employees who do not have all of the required skills. This would require examining the delta between what the trainee knows and what he or she needs to know.
7. Measuring results to determine if the allocations are correct, the workload is too high for any employees, and the training interventions were acceptable.

Benefits to the Civilian Workforce

Although the process appears to be quite complex, it would provide a large organization with substantial benefits: It would allow members of the workforce to be more mobile between programs or commands because they have the same skill sets; it would also simplify the promotion, bonus, and training structure because each employee within a core group would be directly comparable with another in that group. This would simplify the National Security Personnel System implementation and allow comparison between headquarters and field activities.



Another benefit of this method would be to allow civilians to use five-vector models, as the Navy military service does. Five-vector models show dynamic occupational, leadership, and personal development continuums. They show career roadmaps and allow employees to make choices about their futures. For civilians, a five-vector model could detail what employees need to know, when they need to know it, and how to acquire that skill, if they are interested in promotion. By building in incentives (for example, bonuses, awards, promotions, additional paid college credits, telecommuting, job sharing, and additional vacations), any large organization could ensure that motivated and talented employees are willing to do the necessary training to move through the career roadmap. A sample five-vector model is shown in the graphic on this page. In an actual model, a civilian would see dots on each vector indicating his or her progression, as well as what remaining milestones must be achieved to qualify for the next level.

From a leadership perspective, perhaps the most important benefit to adopting this method for our civilian workforce is the ability to adequately size the workforce and understand where we are spending our money. In recent years, this has been a major focus of the senior leadership as they try to determine what metrics are appropriate to measure the size and productivity of the workforce. By adopting this type of job design, senior leadership could directly measure what tasks their workforce is performing and how those tasks are supporting the mission (i.e., measure outputs and outcomes). In addition, the organization would be able to more effectively justify budget needs or point to specific tasks that would have to be eliminated if there were budget cuts. This additional oversight would provide the Navy and Congress with more knowledge about fiscal matters within the organization.

Challenges for Implementation

As with any new initiative, there would likely be considerable resistance to moving toward a competency-based alignment, so it's possible that the organization could lose a percentage of the workforce not interested in change. However, because the leadership of the Navy strongly supports a competency-based alignment, it behooves the civilian leadership to examine ways to implement one. To do so would take considerable buy-in from the leaders of the organization, as well as a great deal of work. The various competencies would have to be defined, and employees aligned within these competencies. It would probably take several years to accomplish. In addition, there will be employees within the organization who are found to be not aligned with the goals of the organization, necessitating substantial retraining or lay-offs/transfers, and a defined process would have to be developed to deal with such employees. In the short term, this type of change might also result in additional expenses, both in process development and training, as the organization establishes the process to align employees and trains them to meet the minimum qualifications of the respective competencies. These issues will have to be addressed before tackling this type of reorganization; however, the benefits appear to outweigh the costs.

Recapitalizing the Navy

This type of reorganization could transform commands and allow us to execute the types of "recapitalization" on which the Navy has focused in recent years. Through these changes, commands could solve a number of the issues they face, including aligning in terms of competencies, sizing the organization correctly, identifying the core business areas, reducing costs, and providing metrics for defining the workforce. It would also provide evidence to Navy leadership and Congress that the organization is committed to and actively engaged in supporting the mission of the Navy. And finally, the transformation would allow commands to more accurately reflect the direction of the fleet, while ensuring we are able to take advantage of their lessons learned.

The author welcomes comments and questions. She may be contacted at regan.campbell@navy.mil.

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Issues and Unexplored Opportunities Within the Navy Working Capital Fund

Christopher Fawls

The balancing act between maintaining warfighting capabilities while doing more with less has become an increasingly difficult one. With every effort being made to focus defense funding directly on the war effort, and with the increased need for domestic spending in the wake of Hurricane Katrina, there is no doubt that decision makers face a huge challenge in how to spend taxpayer dollars.

In DoD, we need to ensure, however, that the shorter-term cost cutting does not compromise our longer-term responsibilities. Nowhere is this conflict more apparent than with the Navy Working Capital Fund entities. The recent focus on limiting growth within NWCF entities creates a danger that critical national capabilities will be lost.

Rather than limiting the potential of the entities, why not take fuller advantage of this financial model by leveraging opportunities for creating additional revenue streams without losing focus on the core purpose for these entities (namely, their ability to supply products and services without competing with the commercial sector).

In order to manage the government-run supplier base more efficiently, NAVSEA's Naval Warfare Centers and certain shipyards use a businesslike working capital fund model. The model focuses on controlling product costs, affording the customer the ability to see the true product cost as well as the performance record of the supplier organization. When compared to the mission-funded alternative, the NWCF forces the government supplier base to become much more accountable for the efficient delivery of its products and services. The NWCF provides total cost visibility to both the supplier and the customer. In addition, it allows both the supplier and the customer to understand the "real" total cost of providing the products and services, and it charges that total cost for the work to be accomplished.

Perhaps more important, however, the NWCF is not mission funding. In other words, there is no annual budget line for the supplier to depend upon when the demand

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for the products and services is not there. Where mission-funded organizations have strong incentives for spending all the money allotted to them in order to eliminate the appearance of over funding (and, thus, the risk of future budget cuts), entities within the NWCF must control their costs to ensure that their customers are not lured away by other, lower-cost options elsewhere.

It is generally recognized that the model deviates from normal business models in that it promotes a unique breakeven bottom line, whereas commercial entities strive to maximize profits. In its simplest form the NWCF can be broken into a single equation:

$$\text{REVENUE (SALES)} - \text{COST} = 0 .$$

The NWCF provides some advantages over the mission-funded model by enabling both the suppliers and the customers to better understand their business. Further, it has motivated a continuous cost consciousness, saving the Navy money on an annual basis.

In recent years, the strict emphasis on cost, combined with strict end-strength limitations, has led to a reduction of in-house technical expertise and, some believe, if maintained over the longer term, will lead to the possible elimination of NWCF entities.

Dual-emphasis Approach

I suggest that a dual emphasis be placed on the NWCF model, one that leverages the benefits of the current system and places a greater emphasis on revenue generation for maintaining or even growing existing capabilities (as driven by demand). Failure to understand the underlying long-term value of an in-house technical capability—the result of limitations brought on by a strict focus on the short-term bottom line—can lead to a lack of critical long-term warfighting capabilities. To quote James Colvard, the former deputy director, of the U.S. Office of Personnel Management, and former technical director of the Naval Surface Warfare Centers, "Military preparedness is a continuous function, not intermittent."

Cost Emphasis of the Working Capital Model

Under the NWCF, revenues are created by the need for products and services. These revenues are heavily tied to traditional customers, mostly Navy, Army, and Air Force procurement and acquisition offices (PEOs in the Navy's case). Within the individual warfare center divisions, these customers account for upwards of 80 percent of revenues. Over the past decade, defense budget cuts and outsourcing have had a direct impact on the PEOs and ultimately upon the amount of revenues received by the NWCF entities. In order to maintain what revenues they can, the NWCF entities have placed a strong emphasis upon total cost control. WCF activity cost—the primary metric for cost measurement—has increased only slightly more (2.9 percent) than the annual inflation rate (2.67 percent) since 2000.

Under the current warfare center cost model, cost is broken down into the following subcomponents: 49 percent direct labor; 25 percent direct material/travel/equipment; 25 percent overhead (including general and administrative (G&A) labor, production support labor, and overhead, analysis, business services, facilities ops/maintenance; and 1 percent investment/recoupment factor for nonzero net operating result.

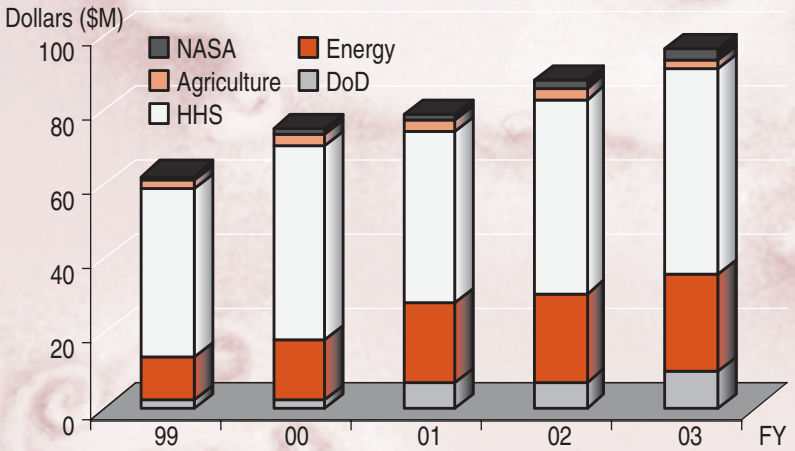
It quickly becomes apparent that the primary component of cost is labor (either direct or G&A). As a result, in order to control costs, the emphasis has been placed on reducing manpower as the traditional revenue base has stagnated or dropped off in some cases. Estimates for fiscal years 2006 and 2007 show an expected continued reduction in manpower throughout the warfare centers.

Downward Spiral

This downward spiraling trend has continued for some time. In 1996, the number of personnel employed across all of the NWC-funded entities totaled 119,500 persons; by 2004 that number had been cut to 80,200, a reduction of 33 percent.

Across the Warfare Center portion, it takes, on average, four to six years for a degreed, entry-level technical person to get to journeyman status within his or her field. The average civilian age across the Warfare Center is currently 44 years old with two-thirds of the workforce over 40 years old. These facts, combined with a mandatory policy that limits the number of new hires produces a net

Annual Income from Invention Licenses by Department

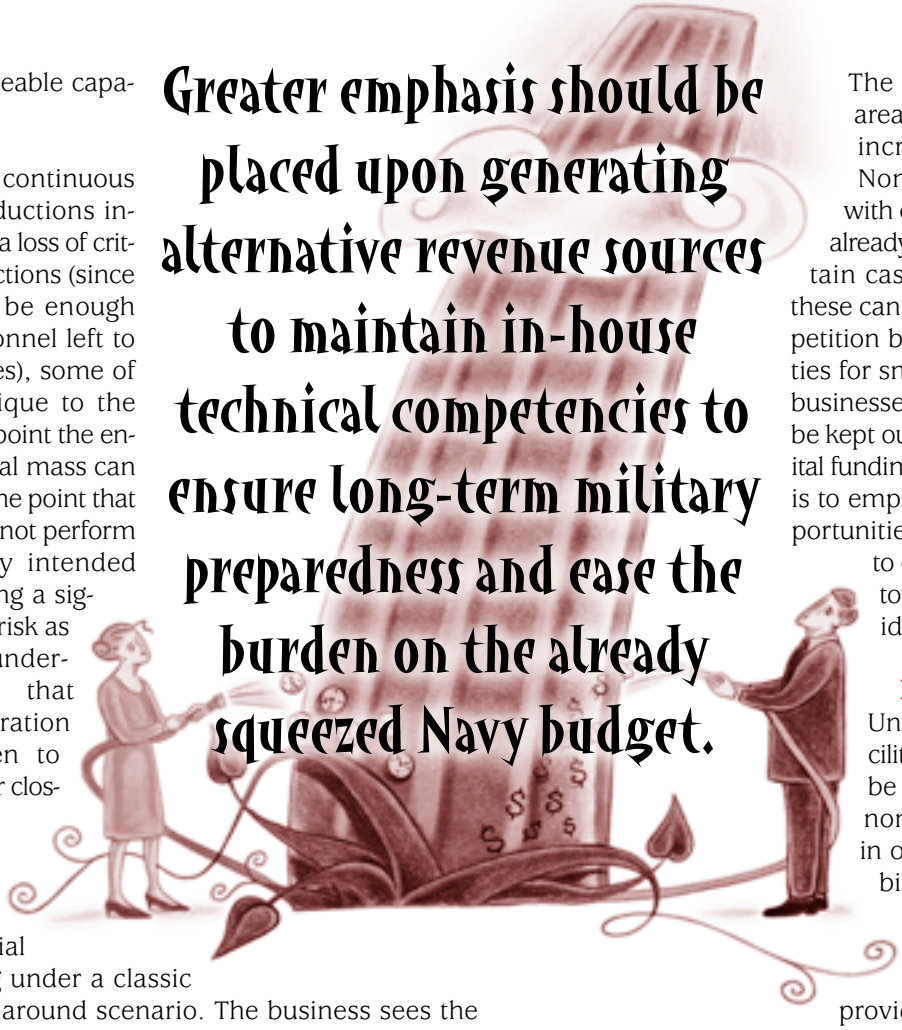


Source: 2004 Summary Report on Federal Laboratory Technology Transfer, Office of the Secretary, U.S. Department of Commerce.

loss of irreplaceable capability.

It is clear that continuous manpower reductions inevitably lead to a loss of critical facility functions (since there will not be enough qualified personnel left to run the facilities), some of which are unique to the DoD. At some point the enterprise's critical mass can be reduced to the point that the entities cannot perform their originally intended missions, posing a significant safety risk as a result of undermanning. At that point, consideration must be given to consolidation or closing down.

Greater emphasis should be placed upon generating alternative revenue sources to maintain in-house technical competencies to ensure long-term military preparedness and ease the burden on the already squeezed Navy budget.



Contrast this effect to that of a commercial entity running under a classic corporate turnaround scenario. The business sees the same loss of revenue and may take the same approach: Cut costs in order to reduce losses or salvage profit. The cost cutting is intended as a short-term strategy until the organization gets to the final step: reclaiming revenues either through a pickup in the business cycle or, when the revenues will not return (for example because of obsolescence), through reorganizing and focusing on alternative revenue streams. Either way, there is recognition that the business cannot remain viable over the long term if it remains in a cost-cutting mode.

In Pursuit of Alternative Revenue Streams

One solution might be for NWCF entities to look at alternative, noncompetitive revenue streams with the intention of reducing operating costs, enhancing commercialization of dual-use technologies, and increasing private-sector access to defense-unique capabilities. These forms of revenue, since they would not be related to mission-funded customers, would serve to preserve the Navy's in-house capabilities without playing into the trade-offs between the costs of a Navy civilian technical workforce and direct warfighter support.

Further, one could advocate for the formal authorization to allow that processes be put in place or that existing processes be reviewed and changed as necessary to allow for the more efficient acquisition of these revenue streams.

The following are some areas offering potential for increased WCF revenues. None competes directly with commercial capabilities already in place; in fact, in certain cases, initiatives such as these can serve to increase competition by providing opportunities for small and medium-sized businesses that would otherwise be kept out of the market by capital funding constraints. My intent is to emphasize a few of the opportunities already existing and to challenge others to add to these revenue creation ideas.

Leasing

Under-capacity or idle facilities and resources could be leased to one or more nongovernmental parties in order to maintain capabilities, reduce infrastructure cost, and possibly increase revenues. Title 10, U.S.C. 2667 provides the ability for outleasing nonexcess property, facilities, and equipment located at WCF activities: *Consideration received for outleased property may be in the form of cash or may be taken as in-kind consideration: i.e., maintenance, protection, alteration, repair, improvement, restoration, new construction, facilities, facilities operation support services, or such other services relating to the activities on the leased property at any facilities under the control of the Secretary of the Navy. The ability to receive in-kind consideration in such a variety of forms provides a most effective way for installation commanders to leverage their property assets, reduce their cost of ownership, lower the price of installation-provided products and services and establish mutually beneficial commercial links with the business community.*

As traditional revenue streams get smaller, the ability to fully utilize facilities and equipment becomes more challenging. Additionally, long periods of idleness tend to create larger maintenance costs to ensure the facilities and equipment perform as expected in their limited-use capacity. Use of Leasing agreements can help reduce downtime or, in facilities that are not used at all, revitalize useable assets fully. Leasing of existing facilities already has interest from some within the business community. Those businesses that would like to compete within the defense sector but are unable to efficiently do so because of lack of capital for expensive fixed assets could now be pro-

vided an opportunity. Taken to its fullest extent this could increase the competitiveness of the commercial defense sector. In areas where only one or a few companies contend for the lion's share of business, the addition of new companies into the mix may serve to drive down unit costs and improve quality.

Public-Private Partnerships Under Revised U.S. Code 10 USC 2474

At present, there are provisions under Title 10, U.S.C. 2474 for the designation of depot-level facilities as Centers of Industrial and Technical Excellence in their recognized core competencies. The intent of the code is to maintain a "warm industrial base" for critical wartime functions while at the same time using best business practices to maintain a leadership role within the depots' core competency areas. Under the code, depots are encouraged to enter into public-private partnership arrangements, allowing employees of non-DoD entities to perform work related to a depot's core competency at the depot. Further, the code allows for the use by non-DoD entities of any facilities or equipment of the depot that are not fully utilized for a military department's own production or maintenance requirements. Finally, the code opens up the possibility of non-DoD entities' using DoD personnel to perform core competency functions at the activity (ref. Section b.1.A). A case can be made that justifies the criticality of the WCF activities' (specifically the Naval Warfare Centers') core capabilities to the wartime functioning of the Navy. When combined with the reduced end-strength scenario I highlight, I think this option could provide an additional critical piece for maintaining current capabilities within the NWCF entities. The benefits of such a revision to the code would be to:

- Allow the WCF Warfare Center activities the ability to more fully utilize under-capacity buildings and equipment
- Reduce the cost of government operations and maintenance of Warfare Center facilities
- Leverage commercial investment in an activity's facilities and equipment
- Retain the full amount of financial considerations obtained under the public-private partnership agreement at the activity involved in the partnering
- Build government-corporate relationships.

Commercial Licensing of NWCF-developed Technologies Under Patent Protection

In 2003 alone, there were over 2,800 new inventions within the patent process covered under invention disclosures, filed patent applications, or as newly issued patents. This annual number remained relatively stable from 1999-2003. Currently there are hundreds of Navy-patented concepts with potential applications for the commercial sectors that are not actively marketed or reviewed for commercial potential. The graphic on page 39 shows an increasing trend in commercial licensing of patents across government departments. In 2000, the DoD was realizing only $2.2 million of distributed annual income from invention licenses. By 2003, however, the DoD's revenue had increased to $9.96 million.

Considering that the total number of patents within the approval cycle is 600 annually, I believe this number is far smaller than it could be if more focus were given to the expansion of this opportunity. One attraction to such an initiative is that it can be a win-win-win situation among the government, the inventor, and the commercial entity. Based upon the financial success of the technology being licensed, all three parties stand to gain. Two other benefits accrue from licensing DoD patents: so doing can result in the creation of new products useful to the DoD and can develop new working relationships that would not otherwise have been forged. At the present time, there is no central patent licensing and marketing approach within the NWCFs to leverage this opportunity.

Alternate Revenue Generation is Key

There is no conclusive evidence to show that the strict emphasis upon cost within the WCF model will inevitably bring about the elimination of the WCF institutions altogether. There is ample evidence of a significant decrease in the institutions' manpower. Since 2002, the Warfare Centers have controlled their unit cost increases to slightly above the annual inflation rate. There has been a 2.5 percent decrease in manpower for the Centers over that same time period. Since approximately 75 percent of costs within the Centers is related to labor, it can be inferred that the cost stability is due, in large part, to a reduction in workforce. This is confirmed by the numbers. Since 1990, the end strength of the combined NWCF activities has decreased by 33 percent.

There are no metrics to chart technical competence, so that is neither proved nor disproved; however, since it takes a few years to get to a technical journeyman status within the NWCF structure, it's safe to assume that as the cost pressures continue to mount and workload continues to decrease, over time there will be a diluted experience base and a less qualified workforce within the NWCF entities as compared to 15 years ago.

If history shows us one thing, it is the importance of maintaining strong in-house warfighting capabilities. It is my belief that a greater emphasis should be placed upon generating alternative revenue sources to maintain in-house technical competencies, which will ensure long-term military preparedness and ease the burden on the already squeezed Navy budget.

The author welcomes comments and questions. Contact him at chris.fawls@navy.mil.

To Speed it Up, Size it Down

Capt. Gabe Mounce, USAF

After reading "It's About Time" (*Defense AT&L*, January–February 2006), I began thinking about how the Air Force—and the DoD in general—could speed up its acquisition process. I started with the many tidbits of information I had read over the years about different groups that accomplished or were accomplishing astonishingly quick feats of delivery. Each of these organizations had developed and produced, or else was in the process of developing and producing, with unprecedented speed, never-before-seen, high-quality products. Here are some examples:

Mounce *is assigned to the RF Technology Branch of the Air Force Research Lab in Rome, NY. He runs pretty fast (although he doesn't really like running), which is why he thinks he's qualified to talk about speed.*

- The famous Skunk Works of Lockheed Martin designed, developed, and produced the U2 in one year and the SR-71—the world's fastest aircraft to date—in two years.
- Gordon MacKenzie, in *Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace*, explained that the small and unruly Contemporary Design section of Hallmark was consistently the highest grossing section of the company. It didn't follow established norms of the company, so the bosses hated it—and all the creative designers wanted to work there.
- After CEO Ricardo Semler reinvented the Brazilian company Semco S.A., as an organization with a culture of trusting the employees, and trimmed it down, it produced many of its products in half the time it had taken under the hierarchical management of Semler's father.
- Burt Rutan and his company Scaled Composites produced the world's first civilian spacecraft in less than five years.
- The early U.S. space program developed and flew the first man into space in less than three years.
- Orange County Choppers produces some of the most fantastic bikes around in less than a year.

Bigger Isn't Faster Isn't Better

These groups were developing and producing first-of-their-kind products in less time than it now takes to field products using technology that already exists. How can this be? The products aren't any more sophisticated than their earlier counterparts were in their own eras. I have pondered this and believe I have identified the common element: These companies and organizations are—or were—very small, composed of (or divided into many divisions composed of) a very small number of people. And that makes all the difference in the world. How so?

Well, everything is much simpler with a small group. There's no need for a huge bureaucratic machine to govern the vast number of employees required to run the huge bureaucracy—an ironic situation, don't you think? Therefore, there are not a lot of processes to follow or procedures to check off. A small team simply decides what to do and then does it. Everyone works closely together because it's easy to do; there are so few people to actually have to coordinate with. So the work gets done faster. Almost every successful, speedy organization is small or started small. Those that ceased to be small usually see sharp decreases in their productivity simply because of the overarching bureaucracy that follows once an organization gets large.

Seth Godin, a well known blogger, has this to say about being small in his e-book *Who's There* (find it at <http://sethgodin.typepad.com/seths_blog/files/whos_there.pdf>): "Enron (big) got audited by Andersen (big) and failed (big). … American Airlines (big) is getting creamed by Jet Blue (think small). *BoingBoing* (staff of four) is the most linked-to blog according to Technorati and has a readership growing a hundred times faster than that of the *New Yorker* (staff of hundreds). … Small means the founder makes a far greater percentage of the customer interactions. Small means the founder is close to the decisions that matter and can make them, quickly. … Small is the new big because small gives you the flexibility to change the business model when your competition changes theirs. … Small is the new big only when the person running the small thinks big."

The Semco Lesson: Responsibility Empowers

To cut down bureaucracy, get small. Learn a lesson from Semco CEO Ricardo Semler.

First, according to his book *Maverick*, Semler instilled in Semco an unprecedented amount of trust. He recognized his employees as adults and ceased requiring the trivial (and excessively bureaucratic) accounting of their actions. With this done, he no longer needed all the ranks of bureaucracy to keep tabs on all the actions of the company. He trusted the folks actually doing the work to do the work. So he was able to cut vast numbers of people who were no longer needed. He discovered that the executives could file, answer phones, and escort customers themselves, so they didn't need secretaries. The company no longer required accounting sections to approve all travel expenses because people were trusted with business expenditures themselves. And shop employees no longer needed foreman to ensure they were doing their jobs. This, as James Surowiecki describes in his seminal book *The Wisdom of Crowds*, is the key to speed: elimination of rigid managerial hierarchies "sharply reducing the layers of management separating the people at the top from the rest of the company."

Second, he divided Semco into much smaller work units. Following the example of employees at one plant, Semler freed the whole company to do the work as they saw fit. As a result, workers formed small work units consisting of factory workers, engineers, office clerks, sales reps, and executives. What may be more surprising is that "[no unit] had a formal head; whoever showed the greatest capacity to lead got the job, calling meetings and moderating discussions." Factory workers reorganized their assembly lines into small manufacturing cells, responsible for fashioning a product from beginning to end, and each member of the cell learned how to operate all the machines in the cluster and do whatever else was needed to get the job done, from driving forklifts to meeting with suppliers. This freedom gave workers pride and ownership in the products they made and completely eliminated the need for quality control. With a direct say in how things were done, workers ensured they were done right. Semler effectively put into practice Surowiecki's concept of "a wider distribution of real decision-making power."

Semler believes small groups work so well because "large, centralized organizations foster alienation like stagnant ponds breed algae. Everyone in them is part of a gigantic, impersonal machine, and it's impossible to feel motivated when you feel you are just another cog. Human nature demands recognition. Without it, people lose their sense of purpose and become dissatisfied, restless, and unproductive."

Surowiecki says the same thing: "In service businesses or companies whose value depends on intellectual labor, treating workers as cogs will not work."

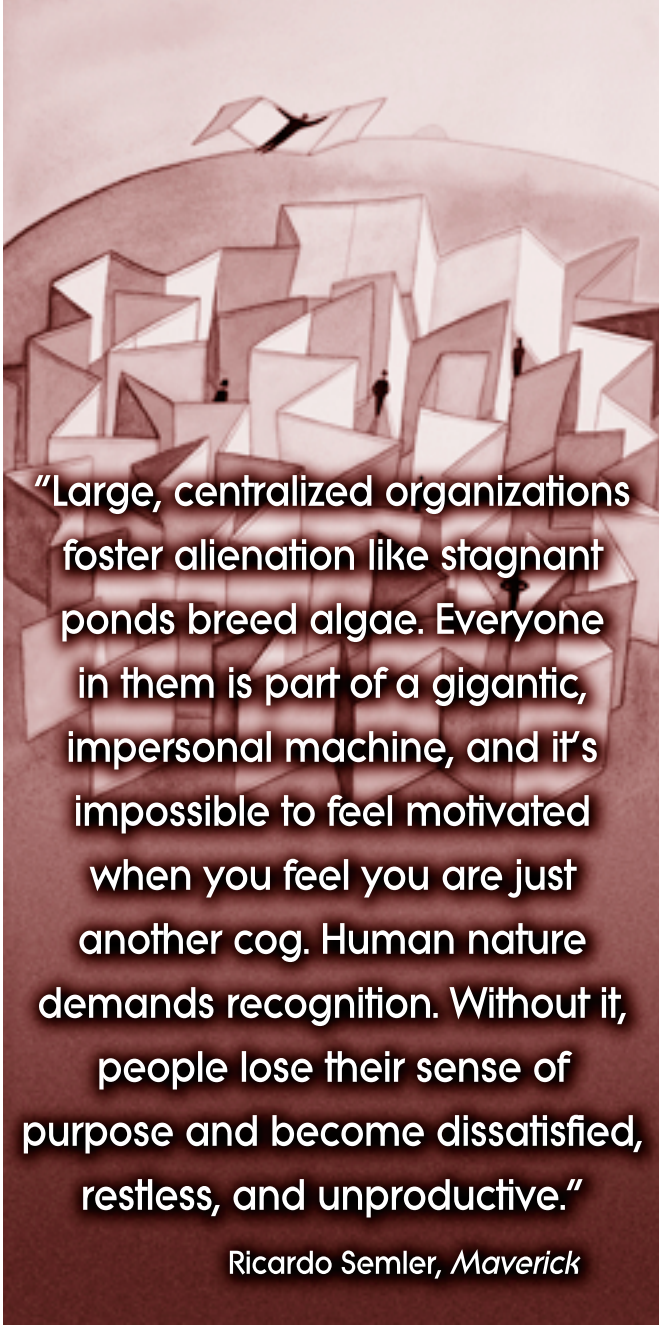
Big as a State of Mind

Semler discovered that people cannot assimilate and have a say in really large groups, a phenomenon he terms "gigantism." His experience at Semco showed that people "will only perform at their potential when they know almost everyone around them … generally no more than a few hundred people." However, gigantism is not intrinsically linked to numbers. Semler points out that a company of 1,000 people can be gigantic, but one of 50,000 can be small, depending on how the work units are divided. He uses one of his plants as an example: "We only had 200 employees before we split up and the interoffice mail would take two days to move … 300 yards." You can't break up everything of course, but you should do so where it makes sense.

The result: "Semco's revenues have jumped from $35 million to $212 million in the last six years, and the firm grew from several hundred employees to 3,000—with employee turnover of about 1 percent," wrote Brad Wieners in "Expert Voices," *CIO Insight: Strategies for IT Business Leaders*, April 2004.

Applying the Semco Experience to DoD

So how does a very large organization like the DoD cut an acquisition organization down to size. Well, start by eliminating the useless tracking of metrics; otherwise, you're defeating the whole purpose of empowering employees to track stuff themselves and make decisions based on what they see. Metrics that supposedly help an organization be more productive but, in fact, slow it way down. Metrics that people spend all day collecting (creating a need for an organization dedicated to tracking metrics) but nobody actually reads because there is too much information collected to process and synthesize.



Second, get rid of useless processes and procedures. In fact, cut out so much of these that you have to leave most of the decisions about what to do and how to do things to the people closest to the work being done. That's where the decisions should be made in the first place, not by faceless processes and procedures enacted out of fear that untrustworthy employees will scam the organization and waste the taxpayers' money (certainly a risk, but one that largely goes away when employees are truly involved). This will alleviate whole sections, whole divisions, whole directorates of people, significantly cutting down the bureaucracy. And things will get done much faster.

But what about quality, you say. Quality isn't a factor when products are being made by employees who care about the products they make. And they *will* care (if the Semco experience is anything to go by) when they have a vested interest in seeing the products they make get to the customer (usually the warfighter). In other words, when employees have a direct say in *what* products are produced and *how* the products are produced, they are much more likely to *really* care about making the product well, and they will take much more pride in their work. Treat employees as mindless automatons who aren't to be trusted, motivate them to meet standards by coercion and fear, and you risk that they won't care about how the product turns out.

As an example, I advocate cutting out the military acquisition career field. (Yes, really!) Those of us in this field are often used as program/project managers to oversee the development and production of warfighter products (weapon systems). What we really are, is an overhead cost (both in time and money), an addition to the already overwhelming bureaucracy of monitoring. The pro argument is this: As military members, we can provide a sense of realism from the point of view of the warfighter. The hole in the argument is that most of us have never "warfought," nor do we have any practical, hands-on experience in our fields of specialty. Therefore we provide no value-added and are simply a ball and chain slowing our organizations down. So get rid of us, and free the organization to move much faster.

If that seems too harsh, the other option is to free up those acquisition workforce members as free agents. Let them plug themselves into projects and teams that spark their interest. Of course this is a two-way street: The receiving team would interview and determine if there was a fit, so that when a match occurred, the organization would get much more bang for its buck.

Finally, let's fluidly form ourselves into much smaller teams with complete independence to make and implement decisions. Have the teams decide what is best for their efforts and then just do it. The leader/director/Grand Poobah simply facilitates team functioning by providing resources for the team to get its job done. When permission is required, the default answer should be "yes," forcing the defenders of the status quo to *prove* why it should be "no."

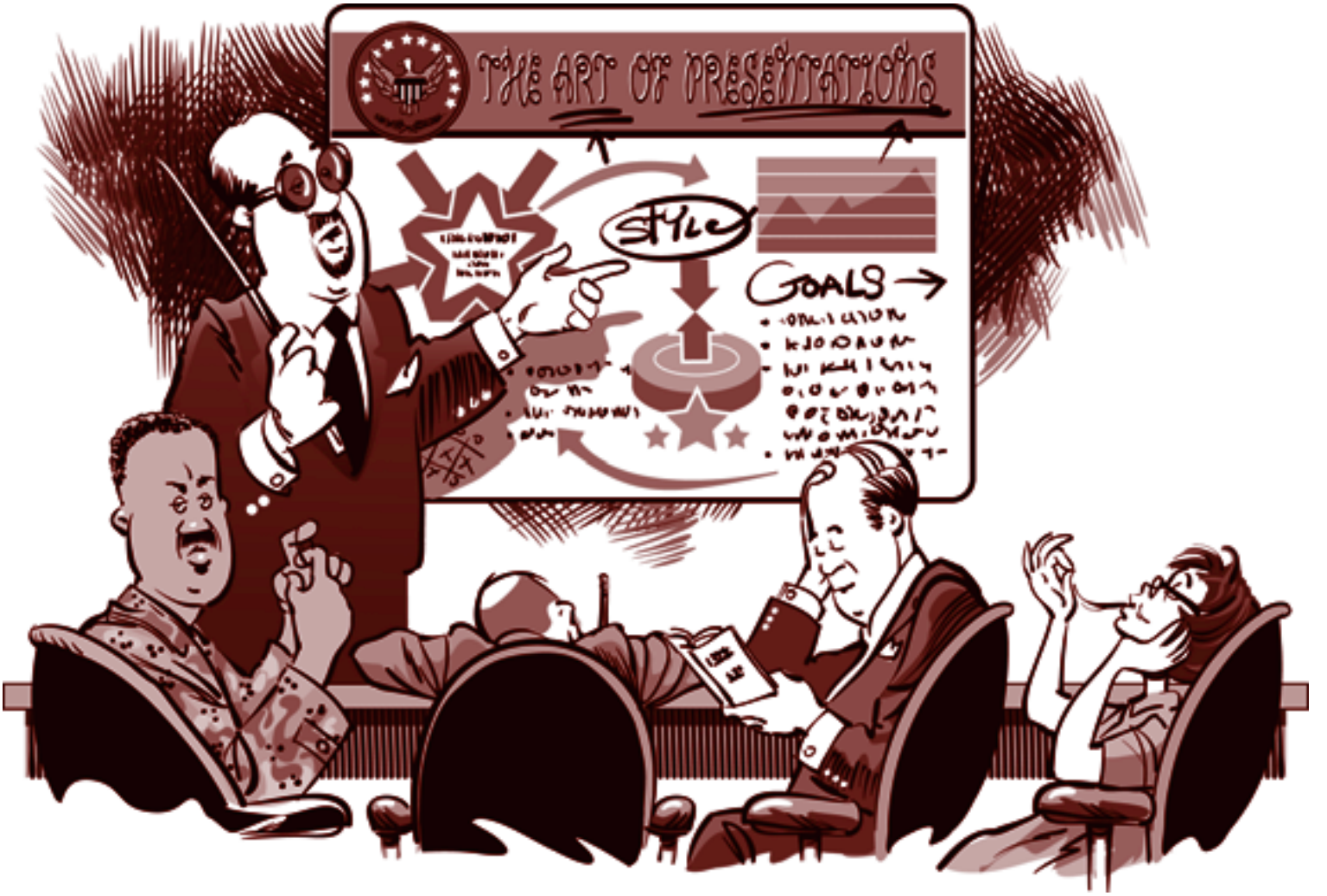
All this will greatly streamline getting things done. Our organizations will become so fast that we'll have to stay in shape just to keep up. Now there's a concept!

In the next issue, the author will address the fact that small doesn't mean homogeneous and examine the need for diversity and independence in a well-functioning small team.

The author welcomes comments and questions. Contact him at gabemounce@earthlink.net.

Aristotle and the Art of Successful Presentations

Matthew Tropiano Jr.



Have you ever listened to a briefing or presentation that was forgettable (or that you wish you could forget)? During a presentation, have you planned your next vacation? Worked through your "To Do" list? Made a shopping list? Faked a yawn or scratched your wrist in order to nonchalantly check your watch? Said to yourself, "Surely he (or she) isn't going to read the presentation? We *do* know how to read." Gone cross-eyed trying to decipher a slide with 14 bullet points in 12 point type from the back of the auditorium? Fallen asleep?

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If you didn't answer "yes" to at least one, you are very lucky—and very unusual.

Ethos, Pathos, Logos

Many who have been through Toastmasters groups or have taken speaking classes remember the simple basic formula for a good presentation: Tell them what you are going to say; say it; then tell them what you said. It's a good exercise to go through as you prepare your speech because it works … to an extent.

However, there is a much more incisive and foundational model, one rooted in history. It is found in Aristotle's *Art of Rhetoric*, written in 350 B.C.E. Quite simply, Aristotle said that the foundations of good rhetoric must include

Illustration by Jim Elmore

attentiveness to the Ethos, Logos, and the Pathos. Let's begin with defining the terms.

- Ethos is your personal credibility, the faith people have in your integrity. Ethos is the appeal to your presentation based on your character. Why should the audience listen to you speaking on this topic?
- Pathos is the speaker's ability to connect to the audience's feeling; it is the empathetic side. Is the audience brought into the presentation at an emotional level? Are you connecting with the audience at the heart level?
- Logos is the substance—the words, the organization, the logic. It is the appeal of your presentation based on reasoning. Is the presentation logical and well-supported?

Ethos: Presenting Yourself

When meeting a person or visiting a place for the first time, you make an assessment in the first few moments. It's usually the initial impression that stays in your mind. How many of us put a book aside if the author hasn't captured our interest in the first 50 pages or so?

It's the same with presentations: The first five minutes are critical because during that time, the audience will decide whether to phase in or phase out.

Ethos is part of helping them to phase in. What is your background related to the subject matter? Is an audience likely to want to hear a presentation about ethics from an Enron executive? Up front, briefly present your background, experience, authority, and credibility as it relates to the subject you are presenting.

Pathos: Conveying the Feeling

Over the course of a couple of years, Raytheon's CEO Bill Swanson wrote principles on loose pieces of paper, which first became a PowerPoint® presentation and then a small book, *The CEO's Secret Handbook*. Eventually Warren Buffet received a copy and liked it so much that he asked for dozens more to give to CEOs he knew, friends, and family. One of the first principles in the small book was this: "You remember a third of what you read, half of what people tell you, but 100 percent of what you feel."

Challenge the audience to *feel* your presentation. When you physically touch someone through a handshake or a hug, there's a measurable transference of electrical energy. In fact even close proximity between two people registers an electrical effect. As a presenter, you have to create the same electricity, touching people mentally since you cannot touch them physically.

Have you ever felt anxious because you were aware of a presenter's nervousness? Embarrassed as you watched someone make a fool of him or herself? Make sure you convey positive emotions to your audience—control of your material and involvement in the issues.

Logos: Getting Beyond PowerPoint

Another principle from *The CEO's Secret Handbook* is "You cannot polish a sneaker." With PowerPoint you can put all kinds of bells and whistles into your presentations and even have bells and whistles for your bells and whistles. But too often, the decorations add up to a presentation that's heavy on style and short on substance or organization. In his April 26, 2002, *Wall Street Journal* article "What's Your Point, Lieutenant? Please, Just Cut to the Pie Charts," Gregg Jaffe quoted a DoD order from the chairman of the Joint Chiefs of Staff: "Enough with the bells and whistles—just get to the point. … We don't need Venetian blind effects or fancy backdrops. All we need is the information."

A New Yorker cartoon says it another way: It shows the devil saying to one of his workers, "I need someone well versed in the art of torture. Do you know PowerPoint?"

As you are creating your presentation, ask yourself these questions:

- Does this slide enhance my message—elucidate or elaborate upon it? Is PowerPoint helping me to illustrate parts hard to visualize?
- Does this slide present my message clearly and simply, or am I falling for whiz-bang effects that will simply distract my audience?
- Have I crowded so much onto this slide that it can't be read even from the front row?
- Does my presentation as a whole focus my audience's attention?
- Are my slides consistent? (Presentations shouldn't be a hodge-podge of random slides drawn from other presentations.)
- Does my presentation, as a whole, reinforce my verbal message? Does it incite, encourage, and stimulate interest?

Presence: Be Yourself

Ralph Waldo Emerson said, "Your actions speak so loud, I cannot hear what you are saying." Part of presence is presenting your message through your personality with both verbal and non-verbal language. The verbal consists of the words and phraseology, the pace of your delivery, the audibility and clarity of your speech. The non-verbal encompasses just about everything else: your body language, your eyes, your facial expression, your gestures, your emotions, your dress. Together these factors clarify and support your presentation, emphasize and help dramatize your message, make your points more meaningful, and help form and solidify your relationship with the audience.

Part of presence is being yourself. Churchill was not Lincoln who was not Martin Luther King Jr. You don't want folks saying, "He/she sounds just like so-and-so."

You're the Judge: The Verdict

(from page 16)

Not only does Ms. Johnson have an ethics problem, but she also violated the law. Instead of finding a supplier with the lowest price or best quality, which would have benefited the government, she selected the supplier that gave her a kickback.

Johnson pleaded guilty to one misdemeanor count of violating 18 U.S.C. 209, unlawfully accepting supplementation of her government salary. She was sentenced to two years of supervised probation, 100 hours of community service, and a $25.00 special assessment.

What the law says:
18 U.S.C. 209 (Supplementation of Salary) prohibits federal officers or employees from receiving any salary, or contribution to or supplementation of their salary, from private sources as compensation for their services to the executive branch or to an independent agency. It also prohibits the payment of any salary, or contribution to or supplementation of salary, to a federal officer or employee under circumstances where its receipt would be a violation.

This ban on outside compensation for government work is designed to keep outside interests from intruding on the federal government's ability to create and manage its programs independently; and to avoid conflicts between the receipt of such compensation and the employee's duty to make decisions in the public interest, in order to ensure that the employee's sole loyalty is to the government. In other words, it prohibits an executive branch employee from serving two masters by receiving compensation from an outside source to perform official duties.

Nerves ...

If you get nervous, you are not alone. But nervousness isn't all bad.

Nervousness releases adrenaline, increases your heartbeat, and directs your blood flow to your vital organs. The increased body temperature, the increased flow of adrenalin, the increased heart rate, the shallower and faster breathing, the tense muscles are all things that happen to the professional athlete—and they create a force of energy. This force can either empower and infuse you with dynamic energy, or debilitate and devastate you. Think of nervousness as being primed, energized, and mobilized. It's been said that the trick is to get the butterflies to fly in one direction.

And Practice

A man approaches a New York City taxi driver and asks, "How do I get to Carnegie Hall?"
"Practice, practice, practice," replies the taxi driver.

Practice probably doesn't make perfect, but it certainly helps. Don't memorize or you'll sound as if you're giving a canned presentation, but be very familiar with the points you're going to make and the flow of the presentation. Then try it out. And again.

But it's not just a matter of the one presentation. A study conducted at the Weatherhead School of Management of Case Western Reserve University by Professor Jan Wheeler found that the people who wanted to change and develop skills were best served when they practiced their new skills in many venues of their lives. Hence, you need to apply your public speaking skills on all fronts of your life and look for opportunities to speak in front of others.

Toastmasters Inc., an international organization that, in addition to other goals, helps people develop their speaking skills, is an option. It is "the leading movement devoted to making effective oral communication a worldwide reality." The Web site at <www.toastmasters.org> lists clubs based on zip code.

Never Underestimate the Power of Words

According to the ancient Greek adage, "When Demosthenes speaks, the people say, 'My, what a wonderful speaker he is,' but when Pericles speaks, the people say, 'Let us march!'"

When Churchill was granted U.S. citizenship, John Kennedy said, "Winston Churchill mobilized the English language and sent it into battle." And the historian Arnold Toynbee in 1948 concluded that Churchill's wartime speeches spelled the difference between survival and defeat for Britain.

If you apply Aristotle's rules of rhetoric—verifying and testing the Ethos, Pathos, and Logos of your presentation—and if you hone your delivery with practice, you may not make people march, mobilize a language, or save a nation, but you'll make a presentation that states your position with clarity and strength and keeps your audience's attention.

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

Strategic Sourcing

Insights from Early Marine Corps Commodity Teams

Lee E. Simon

> **"Commodity teams need to look at the market from the market's perspective and learn to see the market as it sees itself."**

A quick review of literature on strategic sourcing (as the Office of Management and Budget (OMB) dubbed the information-based enterprise-wide procurement approach) will yield a collection of truisms, the predictable responses to which are "We're already doing that where it's cost effective," or "We need more resources to do more of it."

(In this article, strategic sourcing refers to the May 2005 enterprise-wide strategic approach to procurement explained below. The Navy has also used the term strategic sourcing to refer to OMB Circular A-76 competitions where government labor formally competes for ongoing work against private contractors as championed in the Navy by Code N124.)

In March 2005, the U.S. Marine Corps (USMC) elected to use what was to become OMB's strategic sourcing as the commodity team (CT) leg of a broader strategic purchasing initiative. While stealing good ideas (with appropriate attribution) from others, we consciously developed our Marine Corps commodity team effort to be lean and fast. In the process, we uncovered some hidden lessons learned that seem worth sharing.

OMB Mandates Strategic Sourcing Plan

In a May 20, 2005, OMB memorandum, all federal agencies were directed to develop an agency-wide strategic sourcing plan no later than Oct. 1 of that year, and to provide annual strategic sourcing reports to the Office of Federal Procurement Policy. The strategic sourcing plans needed to address governance, goals (including socioeconomic goals), performance measures, and communication and training strategies.

Fortunately, the Department of Defense was already well under way on the strategic sourcing voyage when the OMB memorandum was released. A Defense-Wide Strategic Sourcing Concept of Operations (DWSS CONOPS) had been released in January 2005, following DWSS prototype efforts in 2004. DoD already had a well-linked informal strategic sourcing community of practice. A joint-Service meeting to identify unique strategic sourcing skills had been held in early May 2005, before the OMB requirement memorandum.

The Marine Corps exploration of OMB-style strategic sourcing began in Spring 2004, following attendance by Dave Clifton (director, Marine Corps Business Enterprise Office (HQMC/LR)) at a RAND Corporation briefing on the topic. Clifton promptly directed his business engineering team (BET), a small group of industrial engineers from the Naval Facilities Engineering Command, to explore the applicability of strategic sourcing and its CT approach to the Marine Corps. Initial BET review of current literature and an extensive RAND literature review caused the BET to con-

Simon *has been a member of the Business Engineering Team since returning to the Naval Facilities Engineering Command in October 2002, from a 3½-year recall as a Navy captain in the G-3 of I Marine Expeditionary Force. He holds a doctorate in business administration from the United States International University and a bachelor's degree and master's degree in engineering from the University of California, Berkeley.*

cur with HQMC/LR that the CT approach was well worth exploring.

In September 2004, HQMC/LR retained RAND to perform a high-level spend analysis of fiscal years 2003 and 2004 Marine Corps contract data. In the same month, representatives of Headquarters Marine Corps Contracting, the Department of the Navy, DoD Defense Procurement and Acquisition Policy, and HQ Marine Corps Business Enterprise Office worked together to acquire an advanced copy of the DWSS CONOPS. The BET began condensing the 50-page DWSS CONOPS into a lean 6½-page crib sheet incorporating the DWSS CONOPS by reference and specifying applicable Marine Corps inputs, outputs, and deliverables.

While waiting for a planned end-of-December-2004 arrival of the initial RAND analysis, HQMC/LR sent one of the BET engineers through the October 2004 Air Force Materiel Command commodity council training. This 4½-day class provided an applied approach to CTs within the purchasing and supply chain management transformation of AFMC. The class provided the Marine Corps excellent content, as well as numerous contacts within the AFMC CT community of practice.

Communication within the community of practice was further fostered by a series of public-sector strategic sourcing roundtable sessions that were hosted by Censeo Consulting Group, a Small Business Administration 8(a)-certified firm. These sessions provided a forum for DoD and non-DoD representatives to discuss successes, lessons learned, and practical issues related to strategic sourcing.

In early 2005, a strategic purchasing initiative (SPI) IPT had evaluated the spend analysis from RAND and concluded that two CTs should be chartered. The first CT would address professional service and the second would address information technology (IT). The IPT settled on a two-tiered approach for the Marine Corps. Tier I would cover Marine Corps CTs while Tier II would cover Marine Corps participation in CTs led by others. The SPI IPT recommended a cyclic seven-step USMC process that was tailored to Marine Corps culture and our need to capture savings for reprogramming in Program Objective Memorandum (POM) 08. By design, the seven-step process was compatible with the linear five-step DWSS CONOPS CT process as well as the cyclic Air Force eight-step CT process.

Initial Marine Corps Approach to Commodity Teams

The need to support our deployed Marines is felt at a visceral level within the Marine Corps community. We tailor our approach to Marine Corps culture and draw from operational warfighting habits. Marines thrive on fast tempo and rapid decisions with adequate information (the proverbial 70 percent solution). Marine Corps Doctrinal Publication 6 notes, "We focus on the value and timeliness of information rather than the amount, and on getting that information to the right people in the right form."

> **"Marines thrive on fast tempo and rapid decisions with adequate information (the proverbial 70 percent solution)."**

We made our approach consciously compatible with the DWSS CONOPS for ease of transition if a Marine Corps CT needed to transition into a joint CT. Fortunately, achieving compatibility was straightforward. The DWSS five-step process, the USAF eight-step process, and the seven-step Marine Corps process simply sort the same basic process into pieces that are convenient for their primary audiences.

Each process had a step that clearly recognized the need to acquire a profound understanding of the "requirement" and a step that recognized an absolute critical need to develop an equally profound understanding of the market that supplies the requirement. This understanding of the market and what drives cost must be from the perspective of the supplier rather than from the perspective of the buyer. Comparing the processes, one sees that the strategy development, execution, and ongoing management steps simply vary to match the structure of the organization practicing strategic sourcing.

The Marine Corps is smaller than the Air Force, so our approach to our data was different. For the Air Force, RAND performed a spend analysis and sorted the data by four-character PSC (Product Service Code) or four-digit FSC (Federal Stock Code). The Marine Corps had RAND roll up the data that were originally sorted by four-character PSC/FSC into summaries based on the first two characters of the PSC/FSC. This two-character roll up produced over 100 groupings of products and services that we were buying. We sorted through the data and developed a straw man of about a dozen consolidated groups. Then we created a pareto chart of the groups based on contract dollar volume and another based on contract action volume. This led to a few large groups that stood out on both pareto charts.

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<https://acc.dau.mil/pbltoolkit>.

In late March 2005, the SPI IPT proposed launching two CTs: a Professional Services CT and an IT CT. The SPI IPT also recommended retaining Censeo Consulting Group, who had recently facilitated a successful Medical Services Commodity Council for DoD. The SPI IPT expected to learn the tricks of running a CT from the firm and had a long-range goal of eventually developing CT facilitation self-sufficiency. The Executive Steering Group approved both CTs and the retaining of Censeo. The ESG also added a Maintenance of Equipment CT.

Turning Point

In the process of retaining Censeo, HQMC/LR and the SPI IPT faced a crucial decision: Did we want to use Censeo primarily as a technician to help the CTs drive through our seven-step process as originally envisioned, or did we want to use them as the heavy lifter charged with assuring the CTs achieved results? The question was critical, as the CTs being launched absolutely had to produce results that would be useable for POM 08 input in November 2005. We were faced with a decision on whether to be really performance-based and bet the farm, or be cautious and prescriptive.

As the decision deadline approached, we allowed Censeo to re-evaluate fiscal years 2003 and 2004 data. Censeo then took it a step further and added their own criteria related to the probability of rapid success, used their own protocols to group PSC/FSC data, and presented their results. This produced a similar result to those produced in-house and by RAND. Next, Censeo added Marine Corps-specific criteria. Support to the operating forces was a very strong criterion for Marines. This was subsequently factored into an "opportunity assessment" and yielded a different picture.

Before the opportunity assessment, we expected to launch three concurrent CTs (listed in order of anticipated success: Professional Service, Maintenance of Equipment, and IT). The opportunity assessment recommended postponing the first two and moving IT to the top as the first priority. And it recommended adding two additional Quick Hit (QH) CTs for two apparently "relatively easy" commodities: Clothing and Metals.

It was now decision time and the stakes were high. There was really not enough time to reconvene the ESG if we were to deliver results by November. Should we stay prescriptive and execute as briefed? Should we bet the farm on Censeo and go performance-based with two QH CTs that had not been seriously mentioned to the ESG? We opted to go performance based.

Text Book Lessons Learned

The biggest textbook lesson for CTs is to look at ourselves as the market sees us. Too often we fail to look into the

> **An end-to-end view is important. Understanding not only the requirement but also what drives it is essential, as is understanding the total cost of ownership.**

market or if we do, we look into it from our own buyer's perspective. CTs need to look at the market from the market's perspective and learn to see the market as it sees itself. Once a CT understands what drives the costs from the market perspective, then it can look to see if an unimportant requirement is driving up costs.

Developing a profound understanding of the requirement is the knowledge that complements a profound understanding of the market. Too often a CT will settle for an improved forecast or enterprise-wide forecast as the key to a more effective strategy. It is easy to overlook the end-to-end aspect of understanding the requirement. Did a non-industry-standard requirement slip into our requirement a few levels up stream? Do we really have an odd constraint downstream or upstream? If the requirements generator knew how costly buying eggs in boxes of 10 was, would they gladly convert to eggs by the dozen?

Marine Corps Insights

Critical mass is essential to a successful CT. Critical mass is demonstrated by speed, persistence, and overcoming skeptical resistance that seems inherent at first exposure to strategic sourcing. Critical mass was provided by Censeo for the QH CTs. The larger IT CT achieved critical mass via two primary-duty government employees plus a few collateral-duty CT members, and Censeo. The Marine Corps achieved critical mass built around an 8(a) contractor nucleus, while the Air Force achieved CT critical mass by setting up a CT core of a dozen full-time billets. For both the Air Force and the Marine Corps, critical mass was achieved with a lean team compared to volumes of data and culture of the stakeholders.

While we were launching our CTs, we were also observing a non-Air Force agency's CT that launched about three months before we did. The other agency tried to faithfully follow the DWSS CONOPS and had good participation and schedule discipline. Unfortunately, however, it lacked critical mass and missed the importance of understanding the market with the result that it devolved into a simple consolidation and data collection solution.

Skepticism is to be expected and must be overcome. Obviously, any program team must understand the requirement and the market. CTs work by helping good program people working a good process address the friction points, previously tabled improvements, and superstitions. Program teams often don't have time to address these tabled opportunities unless they have an outsider tenaciously raising important "naïve" questions.

An end-to-end view is important. Understanding not only the requirement but also what drives it is essential, as is understanding the total cost of ownership. The costs may be in terms of downtime rather than financial cost. This end-to-end view of the requirement helps the CT identify mismatches in the value stream that drive up supplier costs or drive end users crazy.

Tempo is an advantage that Marine Corps warfighters cultivate. Our 70 percent solution often manifests itself as a bias in Marines to act on less-than-perfect data. CTs use enterprise-wide data, so they are always tempted to slow down to get more. Tempo is important in strategic sourcing and helps to avoid having CTs that perpetually generate elegant but obsolete improvements.

The Wrap-up

The Marine Corps chose to go with the Censeo recommendation. The IT CT and Clothing QH CT reported back with the desired savings for POM 08. The Metals QH CT was aborted when it became obvious that future metal requirements were expected to taper off well before fiscal year 2008, hence there was no savings stream.

An Office Equipment QH CT replaced the Metals QH CT. The Office Equipment QH CT was a natural spin-off of the IT CT and reported back with the desired savings for POM 08.

The Clothing QH CT identified the limits on how lean we can go in our Marine Corps culture. In the process of gathering information from stakeholders, the Clothing QH CT inadvertently generated demand in the stakeholders for a follow-on project in a closely related area using the same techniques.

The membership of the Professional Services CT and the Maintenance of Equipment CT was updated in December 2005, in order to activate the CTs during the second quarter of fiscal year 2006.

The author welcomes comments and questions. Contact him at lee.simon@navy.mil.

From Our Readers

FIST.Packs a Punch

The graphic article "FIST" in the March-April issue brought in a record number of e-mails to the editor (and they're still arriving). So far, we've received one e-mail that lauded the idea of trying new things but felt the cartoon was "forced," and one phone call asking, "What's the point?" but otherwise all comments have been positive. Below we print a selection. Thanks to everyone who wrote in.

I just wanted to write and say "BRAVO!" That is good stuff there … please keep 'em coming!
Jay Breuer, *Test & Evaluation Engineer*
Aegis Ballistic Missile Defense

Congrats on intelligently, resourcefully, and, yes, humorously delivering the message on the stifling effects of bureaucracy—and the real merits of slicing through red tape. … As I've said previously ["From Our Readers, *DAT&L*, January-February 2006], this is the consciousness-raising phase of the revolution.
Dick Field
TMA/OSD

Can't say enough great things about the latest journal. The "Cartoon Classic" says more in its short 16 panels than many print articles say in as many pages. Thanks for supporting out-of-the-box contributors.
Maj. Phil Garrant, USAF, *Chief*
Advanced Airborne Sensors Branch

On target and long overdue. We have been trying to do the same in the space business with SmallSats, single mission vehicles with limited lifetimes and objectives and very limited costs in comparison.
John D. Griffiths, Col., USAF (Ret.)

Exactly the type of short-and-to-the-point piece I need to get my engineering staff to understand how big-picture considerations translate into things they have an effect on during their daily work. I may not be able to motivate them to read long articles, but this "entertainment as education" goes a long way toward bringing them onto the same page with senior management.

The occasional (or regular!) addition of "attractive" material like this helps broaden the audience, and might even entice some of my younger project and mid-level program managers (who might not otherwise be inclined to read them) to take a second look at the surrounding articles.
Ray Harwood, *Director of Engineering*
Tucson Embedded Systems

I posted some copies of the FIST cartoon, and the process Nazis are enraged—they're rioting in the VTC room! Someone just threw a burning copy of Hammer's *Beyond Reengineering: How the Process-Centered Organization Is Changing Our Work and Our Lives* through my window. I'm falling back to the vault, pulling the pins on the claymores, and burning all the crypto!
Lt. Col. Harry J. Hewson, USMC, *Program Manager*
NAVAIRSYSCOM

Another great article (cartoon-style this time ... FIST) in the latest issue of *Defense AT&L*. ... very refreshing for what could be a dry topic. Thanks to [the authors] for the innovation.
Jim Keen, Capt., USN (Ret), *Ops Officer*
NAVAIR

It made me chuckle, and laughter is the catalyst of creativity. Keep up the good work.
Gary Markovits, *President*
Innovation Business Partners

On target, and actually subtle—compared to how bad it really is in the AQ world these days.
Glenn M. Scott, *Principal*
Technology, Strategies & Alliances

I like the idea of innovative and different things, but this one didn't really do much for me. It got the idea across and the artwork was great; I just felt that it was forced. ... I am just too much of a comic book purist, I guess. It was certainly worth a try and I salute you for the effort.
Wayne Turk, *Consultant*

Learning from George

I enjoyed Andrew Crowley's article "Washingtonian Leadership in Project Management" in the January-February 2006 issue. George Washington was indeed a great leader, and thanks for pointing out three of his leadership qualities that project managers today should seek to emulate.

Perhaps another one of George's excellent leadership traits was "stick-to-it-iveness." The Revolutionary War, if I am not mistaken, dragged on for eight years (1775-1883), which, interestingly, is about the average development cycle time for a DoD project (see Figure 1 on page 16 of the same issue). George stuck it out as leader the whole eight years. I wonder how many project managers today stay for the entire project? Maybe if more did, our projects would have a better chance of success.

Thanks again for a great article.
Al Kaniss
Naval Air Systems Command

Meaningful Metrics for Total Life Cycle Costs

In recent issues of *Defense AT&L*, much has been written about the importance of metrics. I would like to comment on the importance of tracking metrics associated with two aspects of total life cycle costs of an acquisition system: (1) MCTR (Mean Cost to Repair)—total cost to implement all corrective and routine maintenance actions over a specified number of missions/total number of corrective and routine maintenance actions during specified number of missions; and (2) MCTO (Mean Cost to Operate)—total cost to operate system during a specified number of missions/total number of missions

Currently, 70 to 80 percent of the total life cycle costs of an acquisition system are the operations and support costs of the system. Given the importance of having cost-effective systems, it would appear reasonable and good business sense to start specifying operations and support-cost goal targets. MCTR and MCTO thresholds and objectives could be specified in the capability needs documentation, such as the Initial Capabilities Document, Capability Development Document, and Capability Production Document. These targets could be refined when more data become available as the documents progress from ICD to CPD.

Data to support MCTR and MCTO targets could be obtained as part of the Joint Capabilities Integration & Development System (JCIDS) process. This could be accomplished during the functional area analysis, functional needs analysis, and/or functional solutions analysis.

MCTR and MCTO could be added as source selection technical and cost criteria, requiring the contractor to develop and propose methods to predict these values and demonstrate methods to ensure systems are designed with the MCTR and MCTO targets in mind. The proposed values for MCTR and MCTO could be tied to contract line-item numbers for initial and follow-on spares. Eventually, the realization or failure of systems to meet their MCTR and MCTO targets could be used as a past performance criteria for weapon system source selections.

MCTR and MCTO could play a vital role early in a system's science and technology development, as well as in its concept development. Advanced technology developments could have MCTR and MCTO requirements added. Analysis of alternatives and formal risk assessment models and matrices could also be adjusted to include MCTR and MCTO considerations.

MCTR and MCTO could play a vital role early in the systems integration and demonstration phase. Most important, the systems engineering plan and the systems engineering trade-off studies and decision matrices could include MCTR and MCTO considerations. MCTR and MCTO considerations could be added as factors for award fee incentives.

MCTR and MCTO incentives could be added in procurement contracts.

Important to note is that MCTO and MCTR cannot replace reliability, availability, and mean time to repair requirements. These considerations include operational readiness capabilities that are independent of cost. However, given the growing importance of life cycle cost for DoD weapon systems, MCTR and MCTO could be added as a quantitative independent cost metric for systems acquisition to specifically ensure that life cycle cost metrics are measured and evaluated early in the development and procurement of the weapon system.

It will not be easy at first, but given the push to achieve acquisition transformation, DoD should work with its partners in industry to make MCTR and MCTO effective metrics to help reduce total system cost and continue to ensure America's armed forces remain the best-supported and -equipped in the world.
Cosmo Calobrisi
Air Force Materiel Command
Air Armament Center, Eglin AFB

In the News

AMERICAN FORCES PRESS SERVICE (JAN. 10, 2006)

ARMY CONTINUES CHANGING, IMPROVING BODY ARMOR

Jim Garamone

WASHINGTON—The Army will continue to improve body armor issued to soldiers, and will begin manufacturing side-panel inserts to the interceptor ballistic armor, officials said.

The side panels, which weigh 3 pounds, will be made of the same material as the small-arms protective inserts. Army Col. Thomas Spoehr is in charge of fielding body armor. He said the Interceptor body armor now issued to servicemembers protects against most of the threats they face in Iraq and Afghanistan today.

"It's the best body armor in the world," Spoehr said.

And the proof is in the number of people who are alive today because of the armor. One documented account from June 2003 showed an Iraqi shooting a soldier at point-blank range in the chest with a shotgun. The young soldier picked himself off the ground and arrested the Iraqi.

The Army is making changes to the protection system, Spoehr said, but has to be careful to balance changes with mission. "You could outfit a soldier from head to toe in armor, and he would be completely useless," he said. "We have to be sensitive to the weight burden we put on soldiers in that arduous environment over there. Every ounce that we put on the back of a soldier could mean the difference between their ability to accomplish the mission or not."

Weight is a huge factor. The average infantryman carries 85 pounds of gear into battle, according to officials at the Infantry School at Fort Benning, Ga. This includes weapons, ammunition, water, protective gear, and so on. The Interceptor armor—the vest and SAPI plates, along with neck and groin protection—weigh in at about 16 pounds.

But the improvements planned for the Interceptor armor will increase the weight. Enhanced SAPI plates will add 3 pounds to the weight, and side-panel plates another 3 pounds. Other shoulder and side protection adds 5 pounds. Wearing all pieces of the Interceptor armor could add about 27 pounds to the soldier's burden.

Interceptor Body Armor with Deltoid and Axillary Protector
Image courtesy PEO Soldier.

By comparison, the "flak vest" of Vietnam came in at about 25 pounds, and the original flak vest worn by airmen during World War II weighed around 40 pounds, Air Force Museum officials said.

But in addition to weight, commanders have to look at constriction and how much ability soldiers have to move their arms and legs and get in and out of vehicles quickly, Spoehr said. "It's not as simple as going to a catalog and ordering it," he said.

He said the commander has to control this factor. The body armor is modular, and commanders can assess the threat and how much armor soldiers should wear.

"We're going to be producing a new side-armor plate," Spoehr said. "If the mission doesn't accommodate wearing that new side armor plate, then the commander can direct, 'Don't wear that today.'" For example, while the side armor adds 3 pounds, it does provide more protection. "We want to give that type of an option to commanders," Spoehr said.

Army officials said they continue to monitor all aspects of fielding the armor. A check of the books revealed that 8,000 of the vests did not go through inspection, Spoehr said. The Army recalled those vests on Nov. 12, 2005, and would not issue them. No piece of armor will be issued to soldiers without undergoing a painstaking inspection process, he emphasized.

Garamone is with the staff of American Forces Press Service.

AIR FORCE PRINT NEWS (JAN. 10, 2006)
WYNNE: AF NEEDS TO RECAPITALIZE

Master Sgt. Mitch Gettle, USAF

WASHINGTON (AFPN)—With the combination of aging and heavily used equipment, the Air Force needs recapitalization across the board, Secretary of the Air Force Michael W. Wynne said.

In past discussions about Air Force recapitalization, aircraft usually took center stage. Although aircraft still need to be recapitalized, there has been a shift.

"The Air Force recapitalization program is not focused simply on aircraft," Wynne said. "Where we know we have advanced technologies, we want to introduce them; where we know we have emerging missions, we want to satisfy them."

One emerging mission will be an increase in intelligence gathering using unmanned aerial vehicles and space assets.

"We need more UAVs and we need [intelligence, surveillance, and reconnaissance] platforms in space because this is really where the decision making starts," he said.

All Air Force recapitalization efforts must be data-driven. The secretary wants airmen and acquisition entities enabled to take aggressive action and be accountable for those actions.

"We need to have data to make our investment decisions," he said. "I need to provide them the kind of information upon which they can make credible decisions."

The F-22A Raptor, C-17 Globemaster III, and C-130J Hercules have brought more reliability to the fight and probably a future decline in maintenance activities, Wynne said.

"I'm finding out that the C-17 requires far fewer maintenance hours, and the F-22A is probably 40 percent more reliable," he said. "So [these better reliability rates)]are leading us to a re-evaluation of how we do operations throughout the process.

"All this is about continuing to introduce innovation," Wynne said. "It will change the Air Force character without a doubt. But that's what we do. We as airmen like to push technology and change our mission over time."

AMERICAN FORCES PRESS SERVICE (JAN. 11, 2006)
MISSILE DEFENSE PROGRAM MOVES FORWARD

Steven Donald Smith

WASHINGTON—The Missile Defense Agency continues to move forward in its efforts to protect the nation against a ballistic missile attack.

In December, the Missile Defense Agency placed its eighth interceptor missile into an underground silo at Fort Greely, Alaska. Two more interceptors have already been emplaced at Vandenberg Air Force Base, Calif. These anti-ballistic missiles are designed to destroy attacking long-range enemy ballistic missiles.

"The interceptors are part of an integrated system of ground-, sea-, and space-based sensors, ground- and sea-based radars, and an advanced command and control, battle management and communication system designed to detect and track a hostile ballistic missile, then launch and guide an interceptor to destroy the target warhead before it can reach its intended target in any of our 50 states," MDA spokesman Rick Lehner said.

The interceptors "can be brought to alert status in an emergency but they are not yet on 24/7 alert," Lehner added. "'Shakedown' training sessions are still ongoing by U.S. Strategic Command and U.S. Northern Command."

An airborne laser is also being developed and tested. The ABL weapons system is a chemical oxygen iodine laser fitted to a heavily modified Boeing 747. The laser will destroy a missile by heating its metal skin until it cracks, causing the boosting missile to fail, according to the missile agency's Web site.

The anti-ballistic missiles in Alaska and California use "hit-to-kill" technology: They destroy incoming enemy missiles by physically colliding with them. This task often has been described as hitting a bullet with a bullet.

"It's difficult hitting something that is traveling at 15,000 miles per hour, especially when trying to avoid decoys and other interference," Lehner said. "Many people think that we have always had the capability to shoot down a missile that was aimed at a city or town in the U.S., but it is only very recently that we have developed the technology."

The Missile Defense Agency has tested its hit-to-kill interceptor technology many times over the past several years. "A total of nine planned ground-based intercept tests have taken place since 1999; five have resulted in successful intercepts," Lehner said.

Eight sea-based tests since 2002 have resulted in seven successful intercepts, he added.

The road to building a missile defense shield has been long and arduous. The history of missile defense can generally be divided into two eras. The first spanned three decades from the end of World War II to 1976, when the United States briefly instituted the Safeguard missile defense system. Nuclear-tipped interceptor missiles defined this era, MDA chief historian Lawrence Kaplan said.

The eighth ground-based interceptor missile is lowered into its underground silo at Fort Greely, Alaska, Dec. 18, 2005. The interceptor is part of a missile defense system designed to intercept and destroy long-range ballistic missiles.
Photograph courtesy Missile Defense Agency.

According to the agency's Web site, "The origins of the U.S. missile defense program may be traced to the Nazi missile program of World War II, which included plans for the world's first intercontinental ballistic missile. Learning of these German plans after the war, the U.S. Army Air Forces, predecessor of today's U.S. Air Force, began long range studies of interceptors that could destroy attacking ballistic missiles."

The Safeguard complex in North Dakota was an operational anti-ballistic missile system that defended American intercontinental ballistic missile silos. It did not defend American cities. The complex was deactivated in 1976 after being operational for less than four months. Congress shut it down due to technical limitations and the restrictions on missile defenses contained in the Anti-Ballistic Missile Treaty.

The ABM Treaty was a bilateral treaty that sprung out of the Strategic Arms Limitation Talks between the United States and the Soviet Union begun in the 1960s. The treaty was signed in 1972, and it limited certain types of technological advances and testing, among other things.

The second era of missile defense began on March 23, 1983, when President Reagan gave a landmark speech in which he proposed the Strategic Defense Initiative with the intent of making nuclear missiles "impotent and obsolete."

The media famously dubbed Reagan's initiative "Star Wars."

The SDI goal was to develop non-nuclear missile defenses to neutralize Soviet missiles. The U.S. was concerned that the Soviets had developed a first-strike capability, which would allow them to launch a knockout blow against U.S. interceptor missiles and then destroy the United States with a second volley of ICBMs.

On a personal level, Reagan hated the concept of mutually assured destruction, which was a cornerstone of U.S.-Soviet relations at the time. "It is better to save lives than avenge them," he said.

A paradigm shift has taken place since the end of the Cold War and the terrorist attacks of Sept. 11, 2001. With this shift in mind, President Bush withdrew the United States from the ABM Treaty, freeing the U.S. from its restraints.

"The circumstances affecting U.S. national security have changed fundamentally since the signing of the ABM Treaty in 1972," according to a White House fact sheet. "The attacks against the U.S. homeland on Sept. 11 vividly demonstrate that the threats we face today are far different from those of the Cold War."

In some government and scientific quarters, there are misgivings about the need for missile defense. Simply put, some people don't believe the technology is yet ripe and they don't see the threat; therefore, they can't justify the monetary allocation. To missile defense advocates, however, the threat is all too real.

"Iran and North Korea are two countries that have been spending a great deal of time and money to develop several different types of advanced ballistic missiles, including a type that could possibly reach the U.S. homeland with a weapon of mass destruction in the near future," Lehner said.

Iran has successfully flight-tested its medium-range Shahab-3 missile, and is believed to be developing nuclear capabilities.

In August 1998, North Korea caused a stir when it fired its Taepo Dong-1 missile over Japan. This was especially troubling because "the North Koreans demonstrated important capabilities associated with ICBMs, including staging and the use of a third stage on the missile," according to MDA's Web site.

"There are more than 30 countries now with ballistic missiles," Lehner said, "with ranges varying from short to long-range. Many are hostile to the U.S., or our friends and allies."

AIR COMBAT COMMAND NEWS SERVICE (JAN. 13, 2006)

LANGLEY CELEBRATES RAPTOR'S INITIAL OPERATIONAL CAPABILITY

2nd Lt. Rachel Sherburne, USAF

LANGLEY AIR FORCE BASE, Va. (AFPN)—The 1st Fighter Wing held a ceremony here today to celebrate the F-22A Raptor's initial operational capability. The event comes after the 27th Fighter Squadron was officially declared IOC on Dec. 15 by Gen. Ronald E. Keys, commander of Air Combat Command.

LANGLEY AIR FORCE BASE, Va. (AFPN)—"We did it!" Ralph D. Heath tells the crowd gathered at the F-22A Raptor's initial operating capability ceremony held on Jan. 13, 2006. Heath is the executive vice president of Lockheed Martin's aeronautical division. The IOC declaration means the Air Force's fifth generation fighter is ready for war.
Photograph by Senior Airman Austin Knox, USAF.

The IOC declaration proves the F-22A is mission-ready. The base now has 19 Raptors.

The 27th FS—the Air Force's oldest fighter squadron—is now the first operational unit to fly the Service's newest fighter aircraft.

"This next generation fighter can now be employed by combatant commanders and the national command authority for various missions both at home and in other areas of responsibility," wing commander Brig. Gen. Burton Field said.

Guest speaker at the event was Gen. John Corley, Air Force vice chief of staff. Dr. James Roche, former Air Force secretary, and retired Gen. John Jumper, former Air Force chief of staff, also attended he event.

"I can't thank each of you enough. You all played a critical role," Corley said. "Your children and children's children will reap the benefits of the technology [of this aircraft]."

Field praised the cooperative efforts of the many people it took to see the F-22A reach the milestone.

"This aircraft, and more importantly, the people who have brought it to the realm of operational flying, deserve to celebrate and be celebrated," Field said.

Sherburne is with 1st Fighter Wing Public Affairs at Langley.

ARMY NEWS SERVICE (JAN. 17, 2006)

ARMY SELECTS UNIT TO TEST FCS

Alyce T. Burton

WASHINGTON—The Army has selected Fort Bliss, Texas, as the location for its Evaluation Brigade Combat Team, or EBCT, which will evaluate and test leading-edge technology for the Future Combat Systems program.

Fort Bliss was selected because of its access to White Sands Missile Range, N.M., which provides the requisite land, airspace, and facilities for EBCT soldiers to fully train, evaluate, and test FCS capabilities, said Lt. Col. Michael Johnson of the Army Transformation Office, G3, at the Pentagon.

Fort Bliss is the Army's second-largest post with almost 1.2 million acres of land in both Texas and New Mexico. Its garrison headquarters is in El Paso, Texas.

The EBCT will be made up of about 3,500 soldiers, Army officials said.

"The Evaluation Brigade Combat Team is a key milestone in the FCS program and will enable the Army to evaluate technologies and develop tactics, techniques, and procedures that will maximize the program's value to the force," said Secretary of the Army Francis J. Harvey.

The EBCT's mission will be to evaluate operational concepts and conduct testing and training of FCS equipment in realistic environments while providing continuous feedback, Johnson said. He said this feedback will allow the Army to determine what, if any, adjustments and/or

Its optical sensor package in the raised position, a Packbot climbs a debris mound during a Future Combat Systems demonstration last fall. The robotic vehicle is one of the FCS technologies that has been leveraged for the current force.
U.S. Army photograph by Steve Harding.

improvements will be needed to continue to develop the best equipment for soldiers.

The FCS program is the core of the Army's modernization program, officials said. It consists of 18 manned and unmanned systems connected by a secure network designed to enhance soldiers' capabilities.

The EBCT will be created from a heavy brigade combat team coming from the 1st Armored Division. It will be ready to support FCS evaluation and training in June 2007, Army officials said. They said the first fully equipped FCS unit is expected in 2014.

AMERICAN FORCES PRESS SERVICE (JAN. 24, 2006)
DOD TAPS INDUSTRY KNOW-HOW IN ONGOING COUNTER-IED EFFORTS

Donna Miles

WASHINGTON—Deputy Defense Secretary Gordon England called on what he called some of the best minds in the country to help come up with new solutions to the threat improvised explosive devices pose to U.S. troops.

Speaking to some 600 leaders from industry, academia, the national laboratories, and all branches of the military at a two-day industry conference focused on the IED threat, England challenged participants to find better ways to counter what has become terrorists' weapon of choice in Iraq and, more recently, Afghanistan.

"We owe it to the troops," he told the group.

IEDs are the leading cause of U.S. combat deaths and injuries in Iraq, the deputy said. Every IED attack represents an attack, not just against the troops, but also against the will of the American people, he said.

The Joint Improvised Explosive Device Defeat Organization and the National Defense Industrial Association are cosponsoring the two-day IED conference at the Ronald Reagan Building and International Trade Center to exchange information and explore solutions. In addition to briefing industry leaders about current and evolving challenges, defense and military leaders at the forum are encouraging participants to help come up with new ways to confront IEDs.

But technical solutions alone won't resolve the IED problem, England told the group. Defeating IEDs requires new technology, new tactics, new techniques, and new training methods, he said. Because the enemy is so adaptable in using these devices, the technologies, tactics, techniques, and training designed to counter them have to be adaptable, too, England said.

The IED industry forum comes days after DoD gave permanent status to the Joint Improvised Explosive Device Defeat Task Force and represents another step in the ongoing counter-IED effort. England signed a memo Jan. 18 that elevates the task force former Deputy Defense Secretary Paul Wolfowitz established in mid-2004, to the Joint Improvised Explosive Device Defeat Organization.

The status change is designed to help the group operate more effectively as it carries out what defense officials acknowledge has come to be viewed as a long-term mission that continues to expand to better meet the threat.

Defense Secretary Donald Rumsfeld appointed a retired four-star general to lead the organization and bring what he called "a senior commander's operational perspective to the overall IED effort." Retired Army Gen. Montgomery Meigs, former commander of U.S. Army forces in Europe and NATO's peacekeeping force in Bosnia, took control of the IED task force in early December.

Under Meigs' leadership, the newly named Joint IED Defeat Organization will continue to expand the scope of its efforts. That includes the establishment of a new IED center of excellence at Fort Irwin, Calif., to take lessons learned in Iraq and develop strategies to defeat IEDs, England said in his Jan. 18 memo. The center will also provide a venue for integrating, training, experimenting, and testing new IED defeat equipment and concepts, he wrote.

Satellite centers will be housed at each of the Services' major training installations, officials said. The center will be crucial in linking U.S. training centers with troops in theater, to share lessons learned, strategies and concepts, a senior military official told reporters on background in early December.

"This is meant to be a defeat of the entire IED system," the official said. "We want to make sure that we continue and do even a better job of sharing the best practices amongst all of our troops, our forces that are deployed, and also on the training end of this."

These latest developments are part of DoD's ongoing efforts to address the challenges IEDs pose, officials said. Since October 2003, the department's IED initiative has

evolved from an Army organization of about 12 people to a joint task force to a permanent joint organization with $3 billion committed to the effort. The Joint IED Defeat Organization is made up of representatives from all Services as well as retirees, all dedicated full-time to defeating the IED threat. "We are reaching out to get the very, very best people that we can, get them involved in this, and then keep them involved ... so that we ... preserve continuity of the effort," the senior official said.

IEDs are not the new threat that many perceive them to be and actually have been used all over the world for decades. One of the first coordinated, large-scale uses of the devices was during World War II, when Belarusian guerillas used them against the Nazis to derail thousands of Nazi trains.

AMERICAN FORCES PRESS SERVICE (JAN. 26, 2006)

THREAT REDUCTION AGENCY OPENS NEW HEADQUARTERS

Maj. Susan Idziak, USAF

FORT BELVOIR, Va.—The agency charged with reducing threats against American forces celebrated the opening of its new headquarters building, the Defense Threat Reduction Center here today. The new center consolidates five separate locations and more than 1,400 people assigned to the Defense Threat Reduction Agency in the Washington metropolitan area into a single, secure facility.

James A. Tegnelia, agency director and host of the ceremony, introduced Marine Gen. James E. Cartwright, chief of U.S. Strategic Command, as "part-owner" of the facility in his position as the operational commander responsible for combating weapons of mass destruction.

DTRA provides capabilities to reduce, eliminate, and counter the WMD threat, and mitigate its effects. DTRA's "new triad" mission consists of offensive and defensive strategies and infrastructure. These are underpinned by intelligence and command and control. Cartwright said all these missions continue to be critical.

Buildings are only tools, Kenneth J. Krieg, under secretary of defense for acquisition, technology and logistics, said during the ceremony. The new facility brings together in one place the intellectual property to safeguard America and its allies from weapons of mass destruction, he said.

Sen. Richard G. Lugar, who co-authored cooperative threat-reduction legislation with then-Georgia Sen. Samuel A. Nunn starting back in 1991, thanked DTRA personnel for making the world safer by being on the frontlines of fighting WMDs, the "number one security threat of the United States."

Strategic Command is the Defense Threat Reduction Agency's lead customer, Krieg said. But in the acquisition world, it's also vital to pay attention to investors. Krieg called Lugar DTRA's lead investor and said the senator "expects us to return on his investment."

Dale E. Klein, assistant to the secretary of defense for nuclear, chemical and biological defense programs, called DTRA the "go-to agency."

"If you have a problem with weapons of mass destruction, just dial 1-800-DTRA," he said.

Five areas will continue to be important to the mission of combating WMD as DTRA develops and grows, Klein said: situational awareness, WMD threat reduction, force protection, the leverage of global assets, and adaptability.

The DTRC's new operations center, with its increased communications capabilities and 24/7 operations, will allow the agency to more effectively support its customers, said Robert Wood, chief of DTRA's Combating WMD Operations Center. A new collaborations center, which provides the capability for real-time science and technology collaboration with DoD and non-DoD organizations, will also help the agency leverage round-the-clock situational awareness and provide decision support of worldwide WMD and related activities.

Construction on the six-story, $107 million, 317,000-square-foot DTRC building began April 1, 2003, and was completed Sept. 23, 2005. About 200 DTRA personnel and guests attended the hour-long ribbon-cutting ceremony, held in the foyer of the new building. DTRA personnel throughout the new center, and in Russia, Japan, Germany, Albuquerque, N.M., and other locations viewed the ceremony via streaming video.

Idziak is assigned to the Defense Press Office.

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 26, 2006)

DOD RELEASES FISCAL 2005 TOP CONTRACTORS REPORT

The Department of Defense announced today that the fiscal 2005 report of "100 Companies Receiving the Largest Dollar Volume of Prime Contract Awards (Top 100)" is now available on the World Wide Web. The Web site address for locating this publication and other DoD contract statistics is: < http://siadapp.dior.whs.mil/procurement/historical_reports/statistics/p01/fy2005/top100.htm > .

According to the new report, the top 10 Defense contractors for fiscal 2005 were:

	(In Billions)
1. Lockheed Martin Corp.	$19.4
2. The Boeing Co.	18.3
3. Northrop Grumman Corp.	13.5
4. General Dynamics Corp.	10.6
5. Raytheon Co.	9.1
6. Halliburton Co.	5.8
7. BAE Systems PLC	5.6
8. United Technologies Corp.	5.0
9. L-3 Communications Holdings, Inc.	4.7
10. Computer Sciences Corp.	2.8

In fiscal 2005, DoD prime contract awards totaled $269.2 billion, $38.5 billion more than in fiscal 2004.

AIR FORCE MATERIEL COMMAND NEWS SERVICE (JAN. 27, 2006)

HIGH-SPEED AIR VEHICLES DESIGNED FOR RAPID GLOBAL REACH

Michael P. Kleiman

KIRTLAND AIR FORCE BASE, N.M. (AFPN)—For an aircraft to achieve hypersonic speeds, ranging from 6,000 to 15,000 mph (Mach 9 to Mach 22), and reach altitudes between 100,000 to 150,000 feet, it needs an airframe structure designed to survive intense heat and pressure.

Such technology is in development by scientists and engineers with the Falcon hypersonic technology vehicle, or HTV, program.

Started in 2003, the joint Air Force and Defense Advanced Research Projects Agency endeavor consists of two objectives: to develop hypersonic technology for a glided or powered system and advance small, low-cost, and responsive launch vehicles.

Other partners participating in the program include NASA, the Space and Missile Systems Center, Sandia National Laboratories, and the Air Force Research Laboratory's air vehicles and space vehicles directorates.

Both AFRL organizations have been working on the project's hypersonic technology vehicle portion at Kirtland, specifically focusing on technologies for the glided system.

"We have made great progress and are on track for the first glided hypersonic test vehicle flight in 2007," said Russ Partch, the Falcon HTV-1 manager. "It will enable a revolutionary capability to quickly respond to events anywhere around the world."

Planned for a less-than-one-hour flight in September 2007, the Falcon HTV-1 is set to complete its inaugural voyage over the Pacific Ocean. Attaining Mach 19, the vehicle will briefly exit the Earth's atmosphere and re-enter flying between 19 and 28 miles above the planet's surface. Demonstrating hypersonic glide technology and setting the stage for HTV-2 represent the primary focus of the lower risk, lower performance initial flight.

"This is a very unique vehicle. During the early part of the flight, it acts like a spacecraft. In the middle phase, it re-enters the atmosphere like the space shuttle, and in the latter stage, it flies like an aircraft," Partch said. "It is an interesting mix of challenges and technologies."

For the second demonstration, scheduled for 2008 or 2009, the Falcon HTV-2 will feature a different structural design, enhanced controllability, and higher risk performance factors during its high-speed journey. Like its predecessor, the system will reach Mach 22 and then finish its one-hour-plus mission over the Pacific Ocean.

On the other hand, the third and final Falcon HTV, slated for 2009, will be a departure from the previous demonstrations. The reusable hypersonic glider will lift off from NASA's Wallops Flight Facility at Wallops Island, Va., and then more than an hour later, be recovered in the Atlantic Ocean.

In addition, the HTV-3, flying at Mach 10, will be designed to achieve high aerodynamic efficiency and to validate external heat barrier panels that will be reusable.

"The HTVs will prove technologies for global reach vehicles that can get a payload to the area of interest quickly in support of the joint warfighter," Partch said.

Currently, program staff at the space vehicles directorate are helping develop a thermal protection system for the HTV structure to withstand 3,000-degree temperatures and incredible exterior pressures, 25 times more than those experienced by the space shuttle. An important component of this critical technology, the all-carbon aeroshell, must keep from being crushed or burned up in this environment. To keep the vehicle interior cool, an advanced multilayer insulation is being created for long flights. Researchers are also designing tools to enhance HTV navigation and maneuverability for robust aerodynamic performance.

Artist's drawing of the Falcon Hypersonic Technology Vehicle, or HTV-1.
Image courtesy Russ Partch.

"We are now starting to build the HTV-1's critical flight hardware components," Mr. Partch said. "The entire test vehicle will be integrated at the Lockheed Martin Corporation's facility in Valley Forge, Pa."

With its initial flight vehicle project progressing rapidly, the Falcon HTV program is poised to meet the challenges of achieving unprecedented hypersonic technology validation in flight and demonstrating operationally responsive space lift. The results of these three experimental flights will have a significant impact in the development of future military delivery platforms and launch systems.

Kleiman is with Air Force Research Laboratory Space Vehicles Directorate Public Affairs at Kirtland AFB.

U.S. MARINE CORPS PRESS RELEASE (JAN. 9, 2006)

NEW HEAVY LIFT HELICOPTER STARTS DEVELOPMENT

NAVAIR PATUXENT RIVER, Md.—A new heavy lift helicopter is now officially in the pipeline for the Marine Corps following a Dec. 22, 2005, decision by Kenneth R. Krieg, under secretary of defense for acquisition, technology and logistics to authorize the heavy lift replacement program here to begin a $4.4 billion development program for the aircraft.

A "Cost Plus Award Fee" contract for the system development and demonstration phase, estimated to be approximately $2.9 billion, is expected to be signed with Sikorsky in March 2006. An initial system development and demonstration contract worth $8.8 million to Sikorsky was signed January 3. A follow-on ISDD contract is expected in several weeks. An exact figure for that contract is not yet known. The ISDD contracts cover continuing risk-reduction efforts and sub-system selection (including cockpit, engines, fuselage, etc), while the SDD contract covers most aspects of research, design, test and evaluation efforts performed by Sikorsky for the new helicopter.

Fleet Marines should start receiving the first of 156 new marinized heavy lifters, to be called the CH-53K, in 2015—which is none too soon for the program manager, Marine Col. Paul Croisetiere, or the Marine Corps, which has been relying heavily on the aging CH-53E Super Stallion in the increasingly relevant heavy lift mission.

"Since the first Gulf War, Marine Corps vertical heavy lift has been getting further and further away from the original requirement it was developed to meet, a behind the lines logistics support aircraft," Croisetiere explained. "From the Scott O'Grady rescue mission in the Balkans to delivering critically needed combat support in Afghanistan, Iraq, and the Horn of Africa, we're wearing out the aircraft because it has been in incredibly high demand since the mid '90s. The CH-53E has proven to be extraordinarily relevant to the execution of our national security strategy, Navy and Marine Corps warfighting concepts, and the associated need for capable heavy lift," he said.

Because the current aircraft has performed such yeoman service outside the spotlight, it hasn't been given the attention squeakier wheels in the Defense Department arsenal have over the years.

"We currently have an under-resourced fleet," Croisetiere said. "In the 25 years it has been in service, we have not had the investment necessary to effectively address obsolescence, reliability, and maintainability issues. We also have a significant fatigue life issue looming. A Service Life Assessment Program conducted on the CH-53E determined that the service life is 6,120 flight hours based on the aircraft's transition bulkhead section (location of the tailboom's fold point). Based on our current and predicted usage rates, we anticipate the current fleet will start reaching this fatigue life limit in FY11 at a rate of up to 15 aircraft per year. Not only is this an expensive fix, but it will require significantly increased management attention to ensure we have sufficient numbers of aircraft available to meet our operational commitments. We have to start now if we're going to have new CH-53Ks on the flight line ready for tasking when we start parking the Echoes," Croisetiere stated.

"Marinized rotary wing heavy lift is a very necessary capability that demands a very capable platform to accomplish," explained Marine Lt.Col. Stewart Gold, the heavy lift program's deputy for logistics support. "The ability to deliver very heavy loads in extreme/austere conditions in support of Marine infantry, including combat, anywhere in the world comes at a price. On average, it costs approximately $15,000 and requires 44.1 maintenance manhours for each flight hour," Gold said.

Technologies under consideration in the CH-53K, which is being developed as a new-build derivative of the CH-53E, will include a Joint Interoperable "glass" cockpit; high-efficiency rotor blades with anhedral tips; low-maintenance elastomeric rotorhead; upgraded engine system; cargo rail locking system; external cargo improvements; and survivability enhancements.

Marine Corps acquisition officials also weighed the option of participating with the Army's Joint Heavy Lift program. "The Army's proposed heavy lift requirement to transport the Future Combat System greatly exceeds our requirement," Croisetiere said. "The actual aircraft hasn't been designed yet, but initial analysis suggests the joint heavy lifter will be too large to operate from current and programmed amphibious shipping. We may have a use for it, but in more of a logistical role as a possible KC-130J replacement—we still need the CH-53K for tactical heavy lift."

Joint Heavy Lifters may not be available any sooner than 2025, according to Croisetiere—more than 10 years after the Marine Corps will start parking its current fleet. "We can't wait for the Joint Heavy Lifter," he added. "And even if we could, we still couldn't use it because as currently envisioned, it's too big to operate from our amphibious ships. It will be an incredible platform, but it won't be a sea-based vertical lifter.

"With more than twice the combat radius of the CH-53E, the CH-53K uses mature technology to deliver a fully shipboard compatible platform to meet current and future Marine Corps requirements," Croisetiere explains. "The CH-53E doesn't even meet the heavy lift requirements that are considered necessary to meet the anticipated threats in 2015. The CH-53K is being designed to carry a cargo load of 27,000 pounds out to a distance of 110 nautical miles, to an altitude of 3,000 feet at an ambient temperature of 91.5° F. One of the more appealing capabilities of the CH-53K will be its performance in mountainous areas in hot-day conditions. If we had it today it would be the perfect aircraft for combat operations in Afghanistan and relief operations in Pakistan."

Heavy lift program Marines expect to sign a Cost Plus Award Fee contract, worth an estimated $2.9 billion, with Sikorsky for the system development and demonstration phase of the CH-53K's development within the next few months, according to Croisetiere.

The first CH-53K, a flight test aircraft, is scheduled to make its first flight in FY11. Initial operating capability, or IOC, is scheduled in FY15 and is defined as a detachment of four aircraft, with combat ready crews, logistically prepared to deploy.

MEDICAL SITUATIONAL AWARENESS ADVANCED CONCEPT TECHNOLOGY DEMONSTRATION
LEADING THE ACQUISITION CULTURE CHANGE

Nicole Kratzer

There is a recognized need to make the defense acquisition process more effective and efficient and to deliver quality products to warfighters at lower costs in the shortest amount of time. The Department of Defense is undertaking several initiatives to improve the acquisition process, including a top-to-bottom review of acquisition programs through the Defense Acquisition Performance Assessment; however, more is needed. Deputy Defense Secretary Gordon England recently told the Senate Armed Services Committee, "This is just hard work."

In a speech to the International Test and Evaluation Association Symposium in October 1995, Paul G. Kaminski, then under secretary of defense for acquisition and technology, spoke to attendees about the need for an acquisition culture change. He used the example of Team New Zealand (the America's Cup sailing team that defeated Team Dennis Connor, five races to zero in 1995): The New Zealand team, from a smaller country with a smaller budget and limited resources, used repeated testing and evaluation throughout the development life cycle of the boat Black Magic, integrating the designers, testers, and sailing crew into a cohesive team. According to Kaminski, that example could easily translate to the defense acquisition process.

"We must shift our outlook and approach from one of oversight and report, to early insight," said Kaminski. "We need to make sure test and evaluation expertise is made available to the program manager early on so that we prevent problems, rather than try to identify them in a 'gotcha' fashion when we write a test report or at the Defense Acquisition Board review itself. We should be building in quality and excellence from the start, not trying to inspect it two weeks before the test program begins or the DAB meeting occurs."

Medical Situational Awareness in the Theater Advanced Concept Technology Demonstration is one of the programs within the Department of Defense striving to make this cultural change a reality. Building on lessons learned from previous acquisition programs, the MSAT ACTD program office has been integrating, from the beginning, both the Operational Test Agent and the Transition Manager into the development process to help make the program a success.

"We are doing it the best I have ever seen," says Dr. Dan Gower, interim president of the U.S. Army Medical Department Board and the Operational Test Agent for the MSAT ACTD. "First, we have the Operational Test Agent working for the Operational Manager. Second, we have demonstrated trust in the operational tester, and he is an accepted part of the team. He is not just the guy in the black hat that walks in to give you a report card."

Bob Foster, the program executive officer for the Joint Medical Information System and the MSAT ACTD Transition Manager agrees: "We are already working with [the technical manager] and the rest of the executive team as an integral part. Most ACTDs do not consider transition until late in the program and that is why they fail. Success means incorporating transition from the beginning."

> **"We need to make sure test and evaluation expertise is made available to the program manager early on so that we prevent problems, rather than try to identify them in a 'gotcha' fashion when we write a test report or at the Defense Acquisition Board review itself."**
>
> —Paul G. Kaminsi
> Under Secretary of Defense (Acquisition & Technology)
> October 1995

Test to Learn

For any project, success and utility must be defined as precisely and early as possible. For the MSAT ACTD, success means a Military Utility Assessment that will result in a recommendation to transition to a program of record. To ensure a successful Military Utility Assessment, the MSAT ACTD Joint Program Office held a requirements conference just two months after the MSAT Implementation Directive was signed.

"The Military Utility Assessment requires a clear definition of what utility is as seen through the eyes of the ultimate users of the proposed system," says Gower. "That

is why I pushed so hard for the requirements conference early. This started the process of defining success and utility from the users' perspective. The requirements conference ensured that we can build the product to what the users value." According to Gower, some ACTDs failed because they did not involve the users early enough in the process.

"Further, you need to test early and test often during development of complex systems. Our mantra is that we test to learn and we evaluate to understand," Gower says. This means integrating the operational test agent into all planning processes, not just in the execution of test events.

"The value of bringing me into the process early is that the development team needs to understand the basis of the report card that will be written," says Gower.
The first real test of the MSAT Medical Support Enhanced (MSE) tool—the first spiral in the MSAT ACTD development—will be at Exercise Cobra Gold 06 in May 2006. In preparation, Gower and his team have been actively engaged in writing an event design plan and working with the MSAT ACTD Operational Manager in developing the Major Scenario Events List (MSEL).

"We are working with the Operational Manager to figure out how we are going to exercise the MSAT MSE in the context of Cobra Gold," says Gower. "We are working with the White Cells in both Thailand and at the Pacific Command's Simulation Center in Hawaii to ensure the MSELs happen and to ensure the MSELs take on the right parameters. We will also put data collectors with the users to get immediate feedback on the MSAT MSE tool as each problem occurs."

Transition for Success

The MSAT ACTD will be successful only if it transitions to a program of record, which can be a very difficult task because of all the standards that information technology systems must meet (for example, Technology Readiness Level standards and the Defense Information Technology Security Certification and Accreditation Process).

"One of the great things about MSAT," says Foster, "is that we are looking at mature technologies that have already gone through a lot of the transition documentation, so it is already done."

The targeted program of record for the MSAT ACTD is the Theater Medical Information Program, commonly called TMIP, which is part of the Joint Medical Information Systems Program Executive Office. Members of the program of record office have already begun working closely with the MSAT ACTD transition manager to develop a measured transition plan. According to Foster the program of record is already requesting funding through the budgeting process for full operational capability and further development.

The next steps toward transition are further refinement of the transition plan to address user evaluations and preplanned product improvement.

"Medical planners are salivating to get actionable information," says Foster. "If MSAT is successful, it will give us a multi-generational leap over what the program of record can do. This equates to a three, maybe four, generation leap ahead in a medical area program that we have never been able to see before."

Kratzer is a member of the MSAT ACTD Joint Program Office and works as a contractor for the deputy assistant secretary of defense for force health protection & readiness. She can be contacted at nicole.kratzer@deploy menthealth.osd.mil. For more information on the MSAT ACTD, visit <http://fhp.osd.mil/msat/index.jsp>.

COBRA GOLD (CG) is an annual multilateral exercise that demonstrates USPACOM's capability to project force strategically by rapidly deploying a Combined Task Force to conduct Joint/Combined operations. The exercise scenario content is designed toward peace operations and consequence management emphasizing the challenges on the war on terrorism. Training is multilateral, multi-Service, interagency, realistic, and geared toward the most likely contingency operations in theater. Due to Southeast Asia Tsunami Disaster Relief efforts, Headquarters, U.S. Pacific Command (USPACOM) has re-scoped CG 06's Command Post Exercise to a Multinational Workshop and Staff Exercise. HQ USPACOM is considering additional Engineering/Medical Civic Action Project sites within the Tsunami affected areas. CG 06 will be the 25th iteration in the CG series.

Spotlight on DAU Learning Resources

NEW INTERNATIONAL PROGRAM MANAGEMENT SPECIAL INTEREST AREA WEB SITE IN THE ACC

The Acquisition Community Connection (ACC) announces the launching of the International Program Management (IPM) Special Interest Area (SIA). The ACC is the collaborative arm of the AT&L Knowledge System that complements the existing information resources located on the AT&L Knowledge Sharing System. The ACC consists of knowledge communities whose goal is connecting people with know-how.

The International PM Web site at <https://acc.dau.mil/ipm> provides a variety of content focused on armaments cooperation, security assistance, NATO, policy and guidance, and training. It is open to ACC members and the general public.

Mike Mears (mike.mears@dau.mil) and Duane Tripp (duane.tripp@dau.mil), professors of international program management at the Defense Acquisition University, serve as editors of the site. If you have any comments, would like to contribute content to be considered for the site, or you would like to become a subject matter expert for one of the topics on the site, please contact one of the editors.

By joining the ACC (which is free), members can participate in on-line discussions, view other members' business cards, submit content for the site, and attend future IPM SIA meetings.

A-76, COMPETITIVE SOURCING PROCESS COMMUNITY OF PRACTICE

The Defense Acquisition University has established a Competitive Sourcing Community of Practice (CoP) at <https://acc.dau.mil/simplify/ev.php?ID=75893_201&ID2=DO_TOPIC> to serve as a repository for Competitive Sourcing, A-76 information. It incorporates the elements of the DAU Performance Learning Module (PLM) and provides career-long training and resources for applicable personnel within the federal workforce.

CHANGES IN CONTRACTING LEVEL II TRAINING REQUIREMENTS

In a Dec. 23, 2005, memorandum to proponents throughout the DoD contracting community, acting director of Defense Procurement and Acquisition Policy Domenic C. Cipicchio requested widest dissemination of the following information.

> The Defense Acquisition University (DAU) is transforming the contracting curriculum to incorporate new competencies necessary to develop a motivated and agile workforce of contract business strategists. The new Level I and Level III certification curricula are deployed, and the new Level II certification curriculum is in the final development stages.
>
> The current core contracting curriculum for Level II certification—CON 202, Intermediate Contracting; CON 204, Intermediate Contract Pricing; and CON 210, Government Contract Law—will be replaced with a new core curriculum in Fiscal Year (FY) 2007. DAU is advising students registering for Level II courses in FY 2006 of the planned changes and of the possibility that the current core courses may not be offered by DAU after FY 2006. The students are being advised to make every effort to complete all three of the current Level II core courses by the end of FY 2006.
>
> The Contracting Functional Integrated Product Team, which includes representatives from the military departments and defense agencies, is working with DAU to develop a transition strategy and conversion matrix for the transition.

Cipicchio urged contract managers to get the word out to the contracting workforce and "ensure priority for the current core contracting courses is given to individuals in the contracting career field who are most in need of the current core courses for Level II contracting certification."

View Cipicchio's memorandum with attachment at <http://www.acq.osd.mil/dpap/policy/policyvault/policy_dept.jsp>.

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 1–5, 2006, Pacific Palms Conference Resort, Industry Hills, Calif.
- July 10–14, 2006, Colorado Springs DoubleTree Hotel and World Arena, Colorado Springs, Colo.
- Sept. 18-22, 2006, The Iberville Suites Hotel, New Orleans, La.

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

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

For further information see "Courses Offered" under "Meetings and Events" at <http://www.ndia.org>. Industry students contact Phyllis Edmonson at (703) 247-2577 or e-mail pedmonson@ndia.org. 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.

BUSINESS WIRE (JAN. 17, 2006)

ESI CONTRACTING COURSES EARN EQUIVALENCY AUTHORIZATION FROM DEFENSE ACQUISITION UNIVERSITY

ARLINGTON, Va.—ESI International, the leading provider of contract management, project management, and business analysis training, today announced that three of its contract management courses have earned equivalency authorization from the Defense Acquisition University (DAU).

The courses are designed for federal and commercial contracting personnel who want to master the core principles, regulations, and procedures that govern federal procurement.

ESI classroom courses are conducted by professional instructors who use a combination of dynamic lectures, case studies, and interactive exercises. The following ESI courses have been approved by DAU for equivalency:

- **Federal Contracting Basics**, which is equivalent to DAU's CON 110: Mission Performance Planning, is an intensive, five-day introduction to government contracting. The course teaches students how federal contracting really works, how to find solutions to common problems, how to understand the content of key contract documents, and how the Federal Acquisition Regulation (FAR) operates.

- **Source Selection**: The Best Value Process, which is equivalent to DAU's CON 111: Mission Planning Execution, uses lectures and comprehensive case studies to provide a solid understanding of acquisition procedures and the principles and processes of business decision analysis and decision making. In addition to being of enormous value to government personnel, this course offers industry professionals a wealth of insights into the source selection process and the tools to use those insights to develop effective, winning proposals.

- **Operating Practices in Contract Administration**, which is equivalent to DAU's CON 112: Mission Performance Assessment, addresses all aspects of effective contract administration, from initial award to final closeout. Special emphasis is given to the successful administration of contracts: problem avoidance, day-to-day operating practices, performance-monitoring systems, early detection and correction of non-performance, payment, contract modifications, and working relationships.

These courses comprise three of ESI's five core government contracting courses. Students can earn a master's certificate in government contracting from ESI and its academic partner, The George Washington University in Washington, D.C., by completing the five core government contracting courses and two additional electives.

"Increasingly, civilian agencies are adopting DAU courses for their requirements," said John Elsey, president of ESI. "As such, ESI is excited to earn equivalency authorization for these important courses. In these days of performance-based management reviews, contracting personnel in both the public and private sector can develop skills and earn certifications that not only help them perform better, but also give them a competitive edge."

The courses are open for enrollment now and can be delivered in ESI classrooms or on-site at government and commercial locations. For more information on ESI's training programs, visit the company's Web site at <http://www.esi-intl.com >.

DAU PROVIDES CONTRACTING EXPERTISE FOR KATRINA AND RITA RELIEF EFFORTS

In August and September of 2005, Hurricanes Katrina and Rita battered the Gulf Coast States of Texas, Louisiana, Mississippi, Alabama, and Florida with a fury and vengeance that has left parts of these states devastated quite possibly for many years to come. The two hurricanes, along with the flood that was caused by the levees failing in New Orleans, affected an area the size of Great Britain. It is the largest natural disaster, both in area affected and dollar cost, in the history of the United States. Shortly after the passing of these ravaging events, help and support poured in with nearly the force and determination of the storms themselves.

Five professors from DAU South saw the opportunity to assist in contracting for the disaster relief and volunteered their services. Contracting professors Timothy Hoff, Valerie Hunter, Craig Kaufman, Phyllis Roberts, and Tony White received word just before Thanksgiving that the Federal Emergency Management Agency had a pressing need in Baton Rouge, La., to replace several outgoing contracting specialists who were there from various other agencies but would soon finish their temporary tours of duty with FEMA. Working around existing commitments, a staggered deployment schedule was created that placed the DAU volunteers on the ground between Nov. 16, 2005, through Jan. 20, 2006.

Over 3,000 people have been brought in to staff the Joint Field Office, which is the hub of FEMA's recovery operations for all of Louisiana and parts of Texas and Mississippi. They are drawn from the Coast Guard, all the military departments, state representatives, customer call center specialists, planning, financial, and contracting personnel, and others. The DAU professors offered their expertise to assist with the tremendous contracting burden FEMA faced in the wake of thinly staffed personnel positions.

With a collective 137 years of combined teaching and contracting experience, the professors brought immediate operational and teaching value to the contracting team. They were involved with many facets of contracting including a high volume of purchase card transactions, carrying out formal and informal source selections, executing modifications to existing contracts, and writing contracts for new requirements. They were also able to act as contracting mentors to some of the recently hired contract specialists who were just getting their feet wet in their new professions by providing tools and advice on handling what would, in short order, become routine contracting issues.

Disasters are a fact of life, but no matter how vivid it all seems on television through the lens of the nightly news camera, absolutely nothing can compare to seeing it first hand. The five DAU professors made a very positive impact in the area and gained lasting real-world experience that can be brought back into the classrooms at DAU South.

For example, the concept of "Urgent and Compelling"—one we present in our entry-level contracting courses—definitely took on a new meaning in the disaster aftermath scenario, and not just for the obvious reasons. Because of the haste to place contracts at the onset of the disaster, statements of work in those instruments were at times loosely written and periods of performance not adequate. In one instance, a specialized communications network contract that had been put in place to enable voice and data transmission for the relief workers living aboard the cruise ships was about to abruptly end in early December. Quick reaction on the part of one of the DAU professors to better define the scope of work and lengthen the performance period prevented a disruption of this critically needed service.

Another issue was that "Urgent and Compelling" was at times being inappropriately applied to very routine work requests (like ordering office supplies) by customers who had simply failed to plan, making it difficult to set real priorities for truly urgently needed supplies and services. Being able to cite real-world situations in fundamental training courses like CON 120 will highlight to our newest members of the contracting workforce the importance of using prudent business judgment.

Contributed by Craig Kaufman and Tony White in collaboration with Timothy Hoff, Valerie Hunter, and Phyllis Roberts.

Career Development

AIR FORCE PERSONNEL CENTER NEWS RELEASE (FEB. 3, 2006)
AIR FORCE BEGINS TESTING CIVILIAN SELF-SERVICE SYSTEM

RANDOLPH AIR FORCE BASE, Texas—The Air Force will begin testing a new My Biz self-service system for Air Force civilians to view their personnel information, today.

The Web-based self-service application will allow employees round-the-clock access to their personnel information from .mil domains.

In My Biz, civilians can maintain their own personal information, such as benefits and training and profiles and periodically provide input to their supervisors on employee performance plans.

"My Biz falls perfectly in step with the Air Force's vision to transform the way personnel information is provided to and accessible by its military personnel and civilian employees," said Chuck Zedek, personnel systems program manager at the Air Force Personnel Center here. "Customer-oriented access such as this will enable civilians to get the personnel information they need when they need it."

The initial testing of the application, which concludes Feb. 15, will be conducted at Dobbins Air Force Base, Ga.; Ellsworth Air Force Base, S.D.; Shaw Air Force Base S.C.; Fairchild Air Force Base, Wash.; Laughlin AFB, Texas; Malmstrom Air Force Base, Mont.; Schriever Air Force Base Colo.; Spangdahlem Air Base, Germany; and Tinker Air Force Base, Okla.

However, once the initial test is completed, employees may continue to access My Biz to view their personal information.

Employees at the test bases will be able to view data related to their civilian employment and will have limited capability to update their e-mail address, work phone, handicap code, race and national origin, and language.

Employees may also view appointments, current and historical position information, salary, awards, bonus and performance information, and benefits.

Although this is a test to monitor My Biz system performance, employees will view current data and their changes will be reflected in their Defense Civilian Personnel Data System records.

Along with the system performance test, the Air Force will also conduct a special stress test Feb. 9 to ensure the system can sustain performance during periods of high customer demand.

It is to be fully implemented by June 2006 and will be accessible at <http://www.afpc.randolph.af.mil/cfa/MyBiz/MyBiz.htm>.

AIR FORCE PERSONNEL CENTER NEWS SERVICE (FEB. 6, 2006)
TEAM TRAINS FOR PERSONNEL TRANSFORMATION

RANDOLPH AIR FORCE BASE, Texas (AFPN)—Personnel experts will begin visiting major commands today to train specialists on the changes that will affect the way Air Force does personnel business.

This new initiative called Personnel Services Delivery Transformation will use technology so all airmen can conduct personnel transactions through Web-based services and contact centers.

"We have historically provided personnel services primarily through face-to-face contact, and we do it well," said Lt. Gen. Roger Brady, deputy chief of staff, personnel. "In the future, PSD will provide a new way of doing business ... one that will become more efficient by moving transactional work to the Web or contact centers."

While the technology transforms personnel services, the visiting teams will train specialists on changes scheduled to take effect March 31 that affect active-duty airmen.

Several processes like retraining and retirements, currently worked through base-level military personnel flights, will be self-initiated via the Web, and centrally managed at the Air Force Contact Center, San Antonio.

"This training is the first step in changing the way we all think, even as personnelists, about the way we accomplish personnel transactions," said Col. Michael Maloney, director of personnel services at the Air Force Personnel

Center. "We're training our personnel specialists first and giving them the opportunity to inform their customers."

The training will cover how airmen will use Web-based applications via the virtual MPF to apply for retraining and retirement and how the contact center will process these and other transactions.

"PSD will provide our airmen the same convenient 24/7 on-demand access to information much like they have come to expect from online banking and Internet commerce," Maloney said.

DOD PUBLISHES AT&L WORKFORCE POSITION MANAGEMENT AND CAREER DEVELOPMENT GUIDANCE

DoD Instruction 5000.66, "Operation of the Defense Acquisition, Technology, and Logistics Workforce Education, Training, and Career Development Program," was published effective Dec. 21, 2005. This Instruction implements DoD Directive 5000.52 and provides uniform guidance for managing positions and career development of the acquisition, technology, and logistics workforce. This includes the designation and identification of AT&L positions; specification of position requirements; attainment and maintenance of AT&L competencies through education, training, and experience; AT&L Performance Learning Model; management of the Defense Acquisition Corps; selection and placement of personnel in AT&L positions; and workforce metrics.

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This Instruction also supersedes DoD 5000.52-M and cancels the Principal Deputy Under Secretary of Defense for Acquisition, Technology, and Logistics Memorandum dated May 28, 2002; as well as Under Secretary of Defense for Acquisition, Technology, and Logistics Memoranda dated Oct. 25, 2002; April 10, 2003; Sept. 13, 2003; March 9, 2004; and Nov. 23, 2004.

Download the new Instruction from the Defense Technical Information Center Web site at <http://www.dtic.mil/whs/directives/corres/html/500066.htm>.

ISSUANCE OF THE AT&L WORKFORCE DESK GUIDE (JAN. 10, 2006)

Defense Acquisition University President Frank Anderson Jr., has issued the first edition of the *AT&L Workforce Desk Guide* <http://www.dau.mil/workforce/ATL_Workforce_Desk_Guide_01-10-6.pdf>. A team of component and functional representatives from the AT&L Workforce Management Group prepared the guide to provide the DoD-wide acquisition, technology, and logistics workforce a practical, user-friendly tool for understanding and executing the DoD AT&L Acquisition Education, Training, and Career Development Program. The intended audience is organization AT&L workforce training managers and AT&L workforce members. The guide will help answer questions about the new key leadership positions, designating acquisition positions, as well as providing information about certification, qualification, and tenure requirements.

The guide complements the DoD Directive 5000.52 (Jan 12, 2005) and DoD Instruction 5000.55 (Dec 21, 2005). The guide is not policy and if there is a conflict, the directive and instruction take precedence.

If you have any questions or suggestions for improving the guide, please contact your component AT&L workforce (DACM) training office or the AT&L Workforce & Career Management office at (703) 805-3343. Links to your component AT&L workforce training Web site, the DoD directive, the instruction, and the guide can be found online at <http://www.dau.mil/workforce>. For questions or suggestions regarding the guide, e-mail atlworkforce@dau.mil.

COURSES EQUIVALENT TO MANDATORY DOD ACQUISITION COURSES

Ever wonder if your previous private-sector training and education, or training and education you may be contemplating for the future, would meet

the statutory requirements for DoD acquisition certification?

Find out today by checking the matrix compiled by the Defense Acquisition University at <http://www.dau.mil/learning/appg.aspx> for a summary of equivalent credit authorization for DAU courses. (Course equivalencies are renewed annually, and are effective only as indicated.) The matrix is an extensive list of academic courses—classroom only—offered by various training providers that have been certified as equivalent to mandatory acquisition courses provided by DAU.

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

AMERICAN FORCES PRESS SERVICE (FEB. 9, 2006)

NEW PERSONNEL SYSTEM PRESENTS OPPORTUNITY, PROGRAM OFFICER SAYS

Samantha L. Quigley

WASHINGTON, D.C.—The Defense Department's new National Security Personnel System is on track for initial implementation, the system's program executive officer told the human resources specialists attending a symposium here yesterday. "We're still on track to deploy folks into Spiral 1.1 in April," Mary Lacey told attendees. "We've got over 11,000 (non-union) employees that are going in."

The NSPS Program Executive Office designed the system for a staggered implementation based on a spiral model, she said. The approach has led to delays, she noted, but this has given the office a chance to tweak the program as it builds it. The purpose of the spiral model to introduce NSPS was to build a little, test a little, and learn a lot, Lacey said. "I'm actually confident that we're doing this the right way," she added.

The most recent implementation delay was caused by a need to take another look at the system's evaluation system. Lacey said it was robust but hard to understand and to put into operation. The NSPS has spent the last six weeks reworking that portion of the system, she said. Some whom NSPS will affect have expressed hesitation over changes it will bring, even if the changes are good for them, Lacey said. She added that communication and training will help ease these fears.

"Conversations need to happen very, very frequently. Employees will be demanding more of supervisors' time. They'll be demanding more thoughtful conversations," she said. "If you find the time, while it's painful the first year, you will get paybacks forever."

One thing supervisors should be communicating to their employees is results.

"We're not just going to measure transactions," she said. "Transactions are interesting, but they're not necessarily something that compel us to action or the only thing that helps us achieve our [objective]."

Supervisors should also set and level expectations for employees, Lacey said. Employees need to realize not everyone is a star performer every year.

"When supervisors are giving their people feedback throughout the year, you need to talk in NSPS terms," she said. "A '3' is not a bad evaluation. That's a great, solid evaluation."

NSPS evaluation ratings are based on a scale of 1 to 5, with the former number being an unsuccessful evaluation and the latter a "role model" assessment.

Under NSPS, evaluations will determine an employee's compensation. The system's three pay bands allow flexibility to adjust salaries and compensation to be competitive with the civilian sector, Lacey said.

"It's an important flexibility that we think we need to have in the department," Lacey said. "But we need to watch it. It needs to be fair [and] we need to make sure that in the process of being fair we don't ... price ourselves out of business."

Also important is that employees feel the system is being applied fairly, she said, adding that feeling will come from continuous conversations with supervisors so that employees know what's expected. These conversations, and the formal evaluations, need to be conducted with a measure of sensitivity, she said.

"People's feelings are important in this," Lacey said. "The people are the appreciating assets in the Department of Defense."

Policy & Legislation

DEFENSE FAR SUPPLEMENT (DFARS) CHANGE NOTICE 20060123

DoD published the following final and proposed DFARS rules on Jan. 23, 2006. Link to the *Federal Register* notices for these changes through the following Web site: <http://www.acq.osd.mil/dpap/dars/dfars/changenotice/index.htm >.

Final Rules

Simplified Acquisition Procedures (DFARS Case 2003-D075)

Updates and consolidates text on the use of imprest funds and third-party drafts; deletes unnecessary cross-references; and relocates to the PGI (Procedures, Guidance, and Information) Web site at <http://www.acq.osd.mil/dpap/dars/pgi/index.htm > guidance on the use of unilateral contract modifications and procedures for use of forms for purchases made using simplified acquisition procedures.

Contracting by Negotiation (DFARS Case 2003-D077)

Deletes unnecessary text on structuring of contracts and unnecessary cross-references; updates policy on source selection evaluation factors; and relocates to PGI, procedures for preparation of source selection plans and examples of source selection evaluation factors.

Specialized Service Contracting (DFARS Case 2003-D041)

Relocates to PGI, procedures for defining the geographical area to be covered by mortuary services contracts and procedures for distribution of those contracts; deletes a contract clause containing facility requirements for mortuary services, as these requirements are adequately addressed in state law; and deletes unnecessary requirements relating to contracting for laundry and dry cleaning services.

Acquisition of Utility Services (DFARS Case 2003-D069)

Deletes text on the use of competitive procedures and delegated authority to acquire utility services, as these issues are adequately addressed in the FAR; deletes obsolete text on preaward contract reviews; and relocates to PGI, procedures and corresponding definitions related to connection charges and award of separate contracts for utility services.

Utility Rates Established by Regulatory Bodies (DFARS Case 2003-D096)

Clarifies that utility rates established by independent regulatory bodies may be relied upon as fair and reasonable; and clarifies requirements for use of contract clauses addressing changes in rates for regulated and unregulated utility services.

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

Finalizes, without change, the interim rule published in DFARS Change Notice 20050524 regarding the DoD Pilot Mentor-Protégé Program. The rule extends, through Sept. 30, 2010, the period during which companies may enter into agreements under the program. In addition, the rule expands the program to permit Service-disabled-veteran-owned small business concerns and HUBZone small business concerns to participate in the program as protégé firms. The rule implements Sections 841 and 842 of the National Defense Authorization Act for Fiscal Year 2005.

Proposed Rules

Earned Value Management Systems (DFARS Case 2005-D006)

Updates policy on contractor earned value management systems (EVMS) to revise the contract dollar thresholds at which EVMS requirements are applied and to eliminate requirements for contractors to submit cost/schedule status reports. Requires compliance with American National Standards Institute/Electronic Industries Alliance Standard 748, Earned Value Management Systems, for cost or incentive contracts and subcontracts valued at $20,000,000 or more; and requires a formally validated and accepted EVMS for cost or incentive contracts and subcontracts valued at $50,000,000 or more. The objective is to streamline, improve, and increase consistency in earned value management requirements.

Inflation Adjustment of Acquisition-Related Thresholds (DFARS Case 2004-D022)

Adjusts acquisition-related dollar thresholds for inflation. Section 807 of the National Defense Authorization Act for Fiscal Year 2005 requires periodic adjustment of the statutory acquisition-related dollar thresholds in the Federal Acquisition Regulation (FAR) for inflation, except for those established by the Davis-Bacon Act, the Service Contract Act, or trade agreements. The proposed FAR changes were published in the *Federal Register* on Dec.

12, 2005. This proposed DFARS rule makes comparable changes to acquisition-related thresholds in the DFARS.

Foreign Acquisition Procedures (DFARS Case 2005-D012)

Relocates to PGI, procedures for requesting waivers of foreign source restrictions; for requesting waivers under North Atlantic Treaty Organization cooperative projects; for determining that it is necessary to award a contract for ballistic missile defense research, development, test, and evaluation to a foreign source; and for applying the Balance of Payments Program to an acquisition.

DEFENSE ACQUISITION PERFORMANCE ASSESSMENT PROJECT FINDINGS

The Defense Acquisition Performance Assessment (DAPA) project, headed by retired Air Force Lt. Gen. Ronald Kadish and including representatives from the military, industry, and academia, has submitted eight major findings and associated recommended actions across the spectrum of the defense acquisition process. The panel presented their findings in a 155-page report, dated January 2006, to the deputy secretary of defense.

Strategic technology exploitation as a key U.S. advantage. Militarily critical technologies need to be identified and documented early in the acquisition process to ensure that cutting-edge technologies have appropriate export controls.

U.S. economic and security environments have changed. The fundamental nature of defense acquisition and the defense industry has changed substantially and irreversibly over the past 20 years. New and emerging global markets have substantially affected the dynamics of acquisition reforms envisaged in the Goldwater-Nichols Act. In 1985, defense programs were conducted in a robust market environment where more than 20 fully competent prime contractors competed for multiple new programs each year. The industrial base was supported by huge annual production runs of aircraft (585), combat vehicles (2,031), ships (24), and missiles (32,714). In 1985, threats were well-known and well-defined. This allowed the department to conduct stable strategic planning. Today, the department relies on six prime contractors who compete for fewer and fewer programs each year. Reductions in plant capacity have failed to keep pace with the reduction in demand for defense systems (188 aircraft, 190 combat vehicles, eight ships, 5,072 missiles). The security environment has become unpredictable, threats are often difficult to define, and situations often require asymmetric responses. The world dynamic has changed.

Acquisition system must deal with external instability. The acquisition system must deal with external instability, a changing security environment, and challenging national security issues. The Department must be agile—to an unprecedented degree—to respond quickly to urgent operational needs from across the entire spectrum of potential conflicts.

DoD management model based on lack of trust. The Department compounds the chaotic nature of its financial model with a program oversight philosophy based on lack of trust.

Oversight is preferred to accountability. Effective oversight has been diluted in a system where the quantity of reviews has replaced quality, and the tortuous review processes have obliterated clean lines of responsibility, authority, and accountability. The oversight process allows staffs to assume de-facto program authority, stop progress, and increase program scope.

Oversight is complex—not process- or program-focused. The current system is focused on programs, not on improving and standardizing the processes of acquisition; it inhibits rather than promotes steady improvement in achieving program success.

Complex acquisition processes do not promote success. Complex acquisition processes do not promote program success—they increase costs, add to schedule, and obfuscate accountability. Although the Department functions with a single serial acquisition process with extended planning horizons, the Department's budgeting process is based on short-term decision making in which long-term cost increases are accepted to achieve short-term budget "savings" or "budget year flexibility."

Incremental improvement applied solely to "little a" acquisition process requires all processes to be stable—they are not. The acquisition system is believed to be a simple construct that efficiently integrates the three interdependent processes of budget, acquisition, and requirements termed "Big A." "Little a" is the acquisition process that tells us how to buy but does not include requirements and budget, creating competing values and objectives.

The Defense Department is reviewing the team's recommendations. Review the entire report at <http://www.acq.osd.mil/dapaproject/documents/DAPA-Report-web.pdf>.

DOD GUIDE FOR ACHIEVING RELIABILITY, AVAILABILITY, AND MAINTAINABILITY AVAILABLE

Col. Warren Anderson, USAF • Mark Schaeffer •Michael Zsak

The challenges facing today's program manager have increased dramatically. DoDD 5000.1, *The Defense Acquisition System*, May 12, 2003, designates the PM as the life cycle manager for Total Life Cycle Systems Management (TLCSM), responsible not only for effective and timely acquisition of the system, but also for sustainment of a system throughout its life cycle. TLCSM has re-emphasized that the PM must consider systems development decisions in the context of the effect they will have on long-term operational effectiveness and suitability.

So what does this have to do with the 2005 *DoD Guide for Achieving Reliability, Availability, and Maintainability* (RAM)? Very simply, a systems reliability and maintainability and its resultant availability influence many of the key factors that encompass a total systems management approach.

The Importance of RAM

Achieving required levels of RAM is important for many reasons.

- Improved readiness: Poor reliability or maintainability causes readiness to fall below needed levels or increases the cost of achieving them.
- Improved safety: The ability to safely complete a mission is directly related to the reliability of the critical safety items.
- Improved mission success: The ability to undertake and successfully complete a mission is directly affected by the extent to which equipment needed to perform a given mission is available and operates reliably.
- Reduced total ownership costs: TOC captures the true cost of design, development, ownership, and support of DoD weapons systems. To the extent that new systems can be designed to be more reliable (fewer failures) and more maintainable (fewer resources needed) TOC for these systems will be lower.
- Reduced logistics footprint: Improved RAM reduces the size of the logistics footprint related to the number of required spares, maintenance personnel, and support equipment.

Achieving RAM Through Disciplined Systems Engineering Process

The key to developing and fielding military systems with satisfactory levels of RAM is to recognize them as integral to technical planning and execution (a.k.a. systems engineering) and to systematically manage the elimination of failures and failure modes through identification, classification, analysis, and removal or mitigation. Chapter 4, "Systems Engineering," of the *Defense Acquisition Guidebook* describes the systems engineering processes and the fundamentals of their application to DoD acquisition, addressing the many design considerations, including reliability and maintainability, that should be taken into account throughout the systems engineering process.

Additional information on systems engineering and related topics can be found on the Defense Acquisition University (Acquisition Community Connection (ACC) Web site in the Reliability and Maintainability Special Interest Area <https://acc.dau.mil/simplify/ev_en.php>.

How the New DoD Guide Can Help

The new guide reflects RAM best practices throughout the department, industry, and academia. It emphasizes that RAM capabilities are achieved through a collaboration of skilled people and organizations with a clear mission and goal, armed with the right supporting information, adequately resourced, using effective technical tools and systems engineering management activities, and developing the necessary documentation at each product stage, throughout the life cycle.

The Guide is structured around a four-step model:

- Step 1: Before a system can be designed, the needs and constraints of the user must be understood and documented. This first step is the foundation required to define and achieve appropriate levels of RAM performance for a system.
- Step 2: After the user needs and constraints are accounted for, the process shifts to ensuring RAM requirements are designed in the system.
- Step 3: During the production phase the system must be manufactured such that the designed-in RAM performance remains intact.
- Step 4: The final step of the process, which is monitoring field experience, is often overlooked. Field experience can be used to improve maintenance, identify necessary improvements to the system, and provide much-needed lessons learned for future systems.

Each step has five elements that are necessary for success: a clear goal for the step; the right organizations and people; adequate supporting information; available tools, funds, and time to support the appropriate activities for that step; and a good record of the results.

Audience and Structure

The guide was written for two audiences: Chapters 1 and 2 are at a level of detail appropriate for senior managers (milestone decision authority, program executive officers, program managers, requirements officers, testers). RAM practitioners are the intended users of the remainder of the guide. The appendices provide information on some key topic areas related to RAM including how RAM fits into the contracting process, reliability techniques, reliability growth management, and field assessment and system trending.

The 2005 *DoD Guide for Achieving Reliability, Availability, and Maintainability,* is available on the OUSD(AT&L) Systems Engineering Web site at <http://www.acq.osd.mil/ds/se/ed/publications/RAM%20Guide%20(080305).pdf>. The OSD office of primary responsibility for the guide is OUSD(AT&L) Defense Systems/Systems Engineering/Enterprise Development. To provide feedback on the guide, e-mail atl-ed@osd.mil.

Anderson *is the deputy for systems engineering plans and policy, in the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics.* ***Schaeffer*** *serves in a dual capacity as the acting director, defense systems, and as the director, systems engineering in the Office of the USD(AT&L).* ***Zsak*** *joined Decisive Analytics Corporation following retirement from the Department of Defense after 34 years of service in support of Army, Air Force, Office of the Secretary of Defense, Defense Logistics Agency, and Navy acquisition efforts.*

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 20, 2006)

DOD RETURNS OVERSIGHT OF SELECTED AIR FORCE PROGRAMS

The Department of Defense announced today the return of milestone decision authority to the Department of the Air Force for 10 major programs. These programs had been temporarily redesignated under the authority of under secretary of defense for acquisition, technology and logistics in March 2005 at a time when Air Force leadership was in transition.

These 10 programs are once again ACAT 1C, which means they are approved at the Service acquisition executive level. Their temporary designation of ACAT 1D programs meant that program decisions were approved at the USD(AT&L) level. Milestone Decision Authority for these 10 major defense acquisition programs now falls to Secretary of the Air Force Michael Wynne.

Air Force Non-Space Major Defense Acquisition Programs Redesignated as Air Force ACAT IC Programs
1. Advanced Medium Range Air-to-Air Missile (AMRAAM)
2. B-2 Radar Modernization Program (B-2 RMP)
3. C-5 Aircraft Reliability Enhancement and Reengining Program (C-5 RERP)
4. Globemaster III Advanced Cargo Aircraft (C-17A)
5. C-130 Aircraft Avionics Modernization Program (C-130 AMP)
6. Hercules Cargo Aircraft (C-130J)
7. Joint Air-to-Surface Standoff Missiles (JASSM)
8. Joint Direct Attack Munition (JDAM)
9. Joint Primary Aircraft Training System (JPATS)
10. National Airspace System (NAS)

The department's review and approval process for large weapons systems is documented in DoD Directive 5000.1 and DoD Instruction 5000.2.

AIR FORCE PRINT NEWS (JAN. 30, 2006)

HEADQUARTERS AIR FORCE REALIGNS SIMILAR TO 'J-STAFF' MODEL

Staff Sgt. C. Todd Lopez, USAF

WASHINGTON (AFPN)—The staff functions at Headquarters Air Force, major commands, and warfighting headquarters will soon all share the same "A-staff" structure.

By Feb. 1, the Air Staff at Headquarters Air Force will adopt an organizational structure that closely mirrors the Army's "G-staff," the Navy's "N-staff," and the joint "J-staff." The effort will help the Air Force optimize internal communications and communicate more efficiently with other Services, said Brig. Gen. Marshall K. Sabol, the Air Force director for manpower, organization, and resources.

"This change will enhance our warfighting capability and help our communications both horizontally and vertically in the Air Force, as well as with those on the joint staff and the office of the secretary of defense," Sabol said. "As we operate in deployed and joint environments, our communication will also be more effective and efficient."

The affected Air Force functions will be renamed and realigned so similar functions at all levels are referred to by the same name. Those same functional groupings will closely match other Services and the Joint Staff.

At Headquarters Air Force, the deputy chief of staff for manpower and personnel is now called "AF/DP." Under the reorganization, he will be referred to as "the A1." The A1 in the Air Force is responsible for plans and policies covering all military life cycles and civilian personnel management.

Changes at major commands and warfighter headquarters' levels that have not yet adopted the A-staff structure will follow suit by May 1. Similar functions at all levels will be "re-mapped" to nine standardized A-staff areas of responsibility shown in the chart on the right.

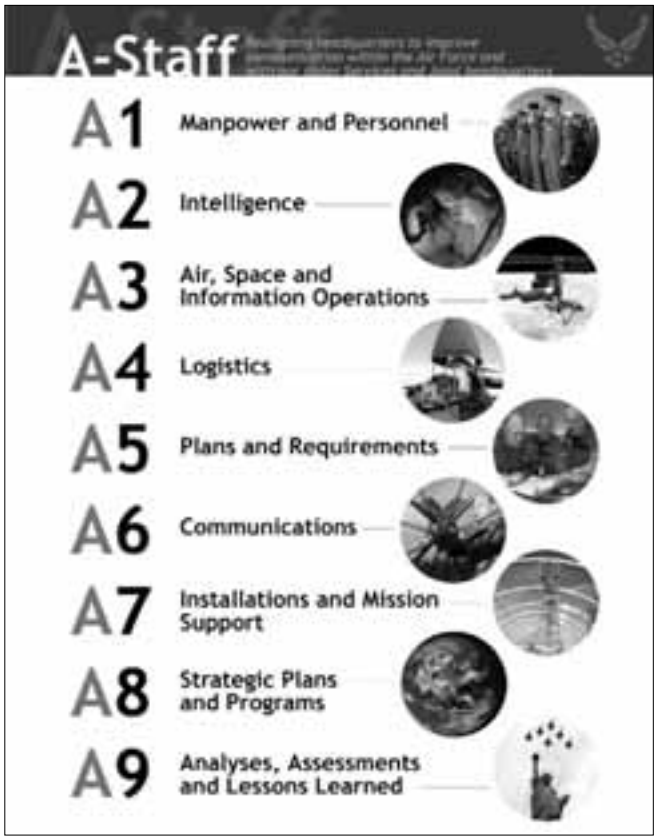
By adopting this staff structure, the Air Force will eliminate the difficulty sometimes encountered when leadership at one headquarters attempts to contact functional counterparts at another headquarters.

"Back in November, if I were to try to get a hold of a person [who] dealt with manpower issues, one command might call that the A5M, another the XPM, and still another the DPM," Sabol said. "That is very confusing. And even if you were to compare phonebooks, not one of them looks the same. This reorganization will change that."

Sabol said there have been concerns in the field the reorganization would equate to job loss. The reorganization will neither create nor eliminate jobs, he said. What the reorganization will do is make it easier for airmen to do their jobs, both within the Air Force and the joint environment.

"Whether you are at work, deployed, or even working from home, this will make it easier for you to do your work," he said. "Wherever you are, you are going to know who to talk to and how to communicate."

As part of the A-Staff structure, the Air Force assistant vice chief of staff will also serve as the director of staff. This title allows for better association with the joint staff and other Services. Retaining the assistant vice chief of staff nomenclature is required to fulfill the representational role the person plays in dealing with attaches and communication to foreign contingents while representing the chief of staff.



Mini Poster courtesy Air Force News Agency.

Not all functions of the Air Staff will be affected by the reorganization. The reorganization will not change special staff offices assigned to the secretary of the Air Force and will not filter down to the wing level.

ARMY PUBLISHES NEW PAMPHLET ON LOGISTICS SUPPORTABILITY PLANNING

The Army has published a new DA Pamphlet 700-56, *Logistics Supportability Planning and Procedures in Army Acquisition*, which consolidates the content of two previous pamphlets—DA Pamphlet 700-55 and DA Pamphlet 700-29.

The new pamphlet, dated Dec. 5, 2005:

- Provides supportability planning and procedures in support of total life cycle systems management and the acquisition process
- Provides information on integrated logistics support, identifying tools for integrated logistics support tasks and supportability planning in all phases of the life cycle
- Emphasizes cost as an independent variable and addresses commercial and nondevelopmental items as well as procedures used to acquire training systems.

- Consolidates the procedures used to plan, conduct, and report on the Army's integrated test and evaluation process and provides details on software supportability planning
- Details the environmental, safety, and occupational health considerations in acquisition and addresses contractor support, post-production support planning, and reprocurement.

Download a copy of DA Pamphlet 700-56 from the Army Publishing Directorate Web site at <http://www.usapa.army.mil/usapa_officialsite.htm >.

ARMY CORROSION PREVENTION AND CONTROL PROGRAM

The Army has revised AR 750-59, *Army Corrosion Prevention and Control Program*, effective Jan. 9, 2006. AR 750-59 establishes Army policy and procedures for implementing and managing an effective corrosion prevention and control program for all Army systems, equipment, and components.

A major change in the Jan. 9 revision is the transfer of management of the Army Corrosion Prevention and Control Program to the U.S. Army Materiel Command.

Download a copy of DA Pamphlet 750-59 from the Army Publishing Directorate Web site at <http://www.usapa.army.mil/usapa_officialsite.htm >.

ARMY REVISES INTEGRATED LOGISTICS SUPPORT REGULATION

The Army has published a major revision to AR 700-127, *Integrated Logistics Support*, effective Jan. 19, 2006. This major revision:

- Eliminates the Acquisition Management Milestone System
- Eliminates integrated logistics support lessons learned
- Adds concept of total life cycle systems management
- Adds Army policy on performance-based logistics
- Adds responsibilities where the deputy assistant secretary of the Army (Integrated Logistics Support) is the Army acquisition logistician
- Changes integrated logistics support plan to supportability strategy
- Adds policy on integrated logistics support after fielding.
- Revises policy for contractor support.

Download a copy of AR 700-127 from the Army Publishing Directorate Web site at <http://www.usapa.army.mil/usapa_officialsite.htm >.

AMERICAN FORCES PRESS SERVICE (FEB. 3, 2006)

DOD RELEASES QDR TO CHART WAY AHEAD TO CONFRONT FUTURE

Donna Miles

WASHINGTON—The Defense Department unveiled the Quadrennial Defense Review today, charting the way ahead for the next 20 years as it confronts current and future challenges and continues its transformation for the 21st century.

The 92-page report, sent to Congress beginning today, represents "a common vision of where we need to go and what we need to do," Ryan Henry, principal deputy under secretary for policy, told Pentagon reporters today.

The report was driven, managed, and authored by senior leaders throughout the department, from Secretary Donald Rumsfeld to Marine Gen. Peter Pace, chairman of the Joint Chiefs of Staff, to the Service chiefs and secretaries, to the combatant commanders, he said.

Its release corresponds with that of the fiscal 2007 DoD budget request, which President Bush will send to Congress Feb. 6.

The QDR aims to shift military capabilities to fight terrorism and meet other nontraditional, asymmetric threats, while shaping a defense structure better able to support and speed up this reorientation, Henry said.

At the same time, it recognizes the continued need to defend against conventional threats, conduct humanitarian missions at home and abroad, and help U.S. allies and partners develop their own defense capabilities.

The first of three QDRs conducted during wartime, this year's report focuses on the need for the U.S. military to continue adjusting to an era of uncertainty with asymmetric challenges, he said.

It incorporates lessons learned from operational experiences from Iraq and Afghanistan, Ryan said. Similarly, it incorporates experience gained in other operations associated with the so-called "long war" against terrorism in places like the Philippines, Horn of Africa, Georgia, and Northern Africa.

As a blueprint for shaping the force to carry out these far-reaching responsibilities, the QDR shifts from traditional thinking in pointing the direction forward, Henry said. "It's not about numbers. Numbers don't tell you if

you can get the job done," he said. "It's about capabilities."

The report focuses on a lighter, more agile, more deployable force that operates more jointly with a streamlined, more efficient defense operation supporting it, Vice Admiral Evan Chanik, the Joint Staff's director of force structure, resources and assessment, told reporters.

It promotes more special operations, intelligence gathering, language and cultural capabilities, improved communications, and enhanced security-cooperation activities.

Chanik called the QDR evolutionary rather than revolutionary and said it reflects an ongoing DoD transformation that began in 2001. The terrorist attacks on the U.S. on Sept. 11 of that year and the war on terror that resulted accelerated this transformation, he said.

Navy Vice Adm. Evan Chanik (left), Joint Staff director of force structure, resources and assessment, and Ryan Henry, principal deputy undersecretary of defense for policy, speak with reporters at the Pentagon about the Quadrennial Defense Review during a Pentagon press briefing on Feb. 3. Read the QDR in its entirety at <http://www.defenselink.mil/qdr/>. Photo by Tech. Sgt. Sean P. Houlihan, USAF.

"We're making sure we have a range of capabilities into the future," Chanik said.

Servicemembers won't be surprised by what's ahead for them in the QDR, Chanik predicted. "The average military guy out there understands we live in a changing world and that as this world changes, we need to change with it," he said.

With its emphasis on education and training, the military ensures that its members have the skill sets they need to meet evolving requirements, he said.

DOD PUBLISHES DMSMS GUIDEBOOK VERSION 1.1

The *Department of Defense (DoD) Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook* is a compilation of the best proactive practices from across DoD Services and agencies for managing the risk of obsolescence. With material extracted from various DoD DMSMS management documents, the new *DoD DMSMS Guidebook* provides the DMSMS program manager with a central repository of best practices. Additionally, it identifies assorted measurement tools that may be useful in analyzing and tracking the effectiveness of DMSMS programs.

The DMSMS PM will find this guidebook a preferred desktop reference to quickly pinpoint key actions required in managing DMSMS issues and concerns. (The original Version 1.0, dated May 25, 2005, is superseded by the updated Version 1.1, which was effective Dec. 31, 2005.) Download Version 1.1 from the AT&L Knowledge Sharing System Web site at <https://acc.dau.mil/simplify/ev_en.php>.

OSD SYSTEMS ENGINEERING PLAN (SEP) PREPARATION GUIDE AVAILABLE

The latest release of the *OSD Systems Engineering Plan (SEP) Preparation Guide,* Version 1.01, dated Jan. 20, 2006, is available at <http://www.acq.osd.mil/ds/se/publications.htm>. Also available at this same Web site is a Frequently Asked Questions link on preparing SEPs.

DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

JAN -5 2006

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

SUBJECT: 2005 Quadrennial Defense Review Execution Roadmaps

As the Quadrennial Defense Review (QDR) nears its completion, several important initiatives have been identified that warrant a greater degree of attention in execution. To this end, the Department of Defense will institute the follow-on QDR execution roadmaps listed at Tab A. The roadmaps will clearly define important objectives, timelines, performance metrics, and an oversight process to ensure the objectives identified during the QDR are achieved. The roadmaps will complement the Strategic Planning Guidance (SPG) and provide senior leadership with a mechanism to advance high-priority issues for decision through the FY 2008-2013 defense program.

Roadmap Development and Approval. To ensure that a successful transition is made from the QDR process to roadmap execution, the QDR IPTs will develop and coordinate the roadmaps for the Roadmap Co-Chairs identified at Tab A. The roadmaps should be coordinated with other DoD stakeholder organizations to identify programmatic, budgetary, operational or other considerations. Each roadmap should, at a minimum, address the points provided at Tab B.

Approving the roadmaps, adjudicating major implementation issues, and providing further guidance as necessary will be the responsibility of this office. Upon approval, the overall responsibility for the roadmaps will transition from the QDR IPTs to the Roadmap Co-Chairs, who are then responsible for implementing their assigned roadmaps. Execution Roadmaps will be released concurrent with the SPG, and will be prescriptive documents.

Roadmaps and the Enhanced Planning Process (EPP). The roadmaps will be addressed during the EPP. The roadmaps will identify programmatic objectives and corresponding areas in which to accept risk to inform the Joint Programming Guidance. The Principal Deputy Under Secretary of Defense, Policy (PDUSD(P)); the Director, Program Analysis & Evaluation (PA&E); the Director, Joint Staff, J-8; and the Director, Joint Staff, J-5, will provide oversight and will coordinate issues with the Group of 12.

Your assistance in providing the necessary manpower and analytical support to these efforts is appreciated and necessary to ensure that key objectives of the QDR in these important areas are achieved. Thanks.

TAB A: Execution Roadmaps and Chairs (Responsible IPT)

- ***DoD Institutional Reform and Governance***, to be led by Kenneth Krieg, under secretary of defense for Acquisition, Technology and Logistics, and Army Lt. Gen. Walter "Skip" Sharp, director of the Joint Chiefs of Staff.
- ***Strategic Communications***, led by Lawrence DiRita, principal deputy assistant secretary of defense for Public Affairs, and Air Force Lt. Gen. Victor Renuart, Joint Staff director for Strategic Plans and Policy.
- ***Building Partnership Capacity***, led by Eric Edelman, under secretary of defense for Policy, and Navy Rear Adm. William Sullivan, vice director for Strategic Plans and Policy on the Joint Staff.
- ***Sensor-based Management of the ISR*** [Intelligence, Surveillance, and Reconnaissance] ***Enterprise***, led by Stephen Cambone, under secretary of defense for Intelligence, and Air Force Lt. Gen. Robert Kehler, deputy commander of U.S. Strategic Command.
- ***Authorities***, led by Pete Geren, special assistant to the defense secretary, and Army Lt. Gen. Raymond Odierno, assistant to the chairman of the Joint Chiefs of Staff.
- ***Irregular Warfare***, led by Ryan Henry, principal deputy under secretary of defense for Policy, and Marine Lt. Gen. James Conway, the Joint Staff director of Operations.
- ***Joint Command and Control***, led by John Grimes, assistant secretary of defense for Network and Information Integration, and Army Lt. Gen. John Wood, deputy commander of U.S. Joint Forces Command.
- ***Locate, Tag, Track***, led by Linton Wells, deputy assistant secretary for Networks and Information Integration, and Navy Vice Adm. Evan Chanik, Joint Staff director for Force Structure, Resources and Assessment.

TAB B: Execution Roadmap Structure/Template

- Statement of Problem with Definition and Scope
- Strategic Direction from QDR with Objectives
- Annotated Plan of Action and Milestones
  - —Milestones, Dates, Success Metrics
  - —Projected FY08, FY09 and later year budgetary implications
  - —Legislative or regulatory changes required for roadmap execution
  - —Office of Primary Responsibility (OPR) for specific events
- Organization and Oversight
  - —Specify organizational structure (including Executive Committee membership)
- Reporting Requirements
- Appendices (as necessary)

Conferences, Workshops & Symposia

AIR FORCE MATERIEL COMMAND NEWS RELEASE (FEB. 1, 2006)
LEADERS MEET TO PLAN FUTURE

John Scaggs

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—An acquisition, corporate, logistics, and sustainment "meeting of the minds" took place Jan. 26-27 to discuss Air Force Materiel Command's path ahead and how the application of Air Force Smart Operations for the 21st Century can help.

Headquarters Air Force Materiel Command hosted 73 people from Air Force Materiel Command agencies, IBM, Deloitte Consulting, and Rand Corp., as part of the command's fifth Sustainment Transformation Senior Leadership Conference.

The sessions provided attendees with a clear understanding of the sustainment transformation vision, concept of operations, and roadmap.

Air Force Smart Operations 21 is one of the tools Air Force Materiel Command will use to improve support to customers while simultaneously reducing required resources.

Secretary of the Air Force Michael Wynne launched this initiative to make the Air Force more efficient and effective. Gen. Bruce Carlson, Air Force Materiel Command commander, provided opening remarks and stated that we are going to change behaviors in the Air Force Materiel Command, and as a result of those behavior changes, Air Force Smart Operations 21 will become part of the command's culture.

"The Air Force's recapitalization challenge will drive what Air Force Materiel Command does for the next decade," the general said. "The average age of our aircraft is more than 23 years. That increases operational and maintenance costs while decreasing readiness. The Air Force must modernize its fleet of aging aircraft if we are going to continue to fly, fight, and win America's wars."

The response to this challenge is Air Force Smart Operations 21, Carlson emphasized .

"We have pockets of continuous process improvement using tools like Lean at our air logistics centers," he said. "But we must now take our efforts to an enterprise-wide level ... across not only our air logistics centers, but also the Air Force Research Lab and our product, test, and specialized centers.

"By examining our processes, which affect our strategic outcomes, and applying an analytic approach, which focuses on continuous process improvement, we'll produce dynamic Air Force-wide results through improved efficiencies," Carlson said.

"The Air Force's recapitalization challenge will drive what Air Force Materiel Command does for the next decade. The average age of our aircraft is more than 23 years. That increases operational and maintenance costs while decreasing readiness. The Air Force must modernize its fleet of aging aircraft if we are going to continue to fly, fight, and win America's wars."

—Gen. Bruce Carlson, USAF
Commander, Air Force Materiel Command

As the conference drew to a close, Carlson asked his commanders and directors to recommend two processes for improvement by Feb. 9. Commanders and directors will provide a progress update during Air Force Materiel Command's spring commanders' conference March 27.

The general stressed that he is committed to creating an environment that inspires trust, innovation, and a passion for achieving improved performance.

"My goal is unprecedented cross-functional integration that will yield previously unimagined success," Carlson said. "I am counting on everyone within this command to take us there."

Air Force Materiel Command hosts senior leadership sessions to gain active participation, leadership, and commitment from the command's senior leaders. Cross-flow of information helps facilitate the increased understanding of sustainment transformation.

Scaggs is with Air Force Materiel Command Public Affairs.

AIR FORCE MATERIEL COMMAND NEWS SERVICE (FEB. 3, 2006)
SUCCESSFUL ACQUISITION TRANSFORMATION TIED TO RISK-BASED MANAGEMENT

John Scaggs

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFMCNS)—Many acquisition stakeholders say acquisition programs take too long, cost too much, and lack credibility. The consequences, however, are unmistakable: they result in the cannibalization of programs to cover other priorities, and they delay modernization. Ultimately what this means is reduced capability to the warfighter.

These issues were the foundation of an acquisition transformation briefing by Barbara Westgate, executive director of Air Force Materiel Command, during the command's fifth Sustainment Transformation Senior Leadership Conference. Headquarters AFMC hosted the event Jan. 26-27.

The Air Force is becoming unaffordable, according to Westgate. Fiscal realities of the Global War on Terror and domestic needs such as Hurricane Katrina relief are resulting in fewer dollars for modernization within the Department of Defense and Air Force. This environment is driving changes in the way the Air Force does business.

"As the Air Force addresses emerging priorities, acquisition has become part of the shrinking 'discretionary' budget," said Westgate.

In 2005, a Department of Defense-sanctioned acquisition assessment led to common findings, previously identified by the Air Force acquisition community, and to subsequent proposals. With the findings and proposals in hand, AFMC, partnering with the Office of the Assistant Secretary for Acquisition in the form of the Acquisition Transformation Action Council (ATAC), has created goals and objectives to transform acquisition processes.

"Our foundational initiative is risk-based management—we must change to a culture that meets commitments by managing risk and reducing inefficiencies," said Westgate.

She explained that risk-based management is assessing and making decisions about programs based on a calculated level of acceptable risk.

"We plan to develop multi-dimensional risk measures," said Westgate. "This includes risk associated with cost estimates, technology maturity, dependencies within and among programs and components, the workforce, and contractor skills or capability."

The ATAC has created six acquisition-transformation teams, each with a separate focus, to organize the work ahead. The teams' focus areas are acquisition-risk oversight, test and evaluation, program stability, program planning, and leadership buy-in.

AFMC is heavily involved at all levels on these teams, including providing leadership and functional expertise.

"Over the next six to 12 months we also plan to establish policy and training that will help stabilize our programs," Westgate said. "We will also focus upon two areas of oversight we feel will have much benefit in reducing workload in the program offices: collapsing executive level reviews, and streamlining the acquisition strategy process."

She added that risk-based management will require tough decisions to likely reduce the number of acquisition programs.

"Additionally, we are looking to reduce the development cycle to six years, which means we may have to trade off some requirements and hold them to subsequent spirals where the technology will have matured," Westgate said.

"But risk-based management will serve as the center of gravity for our acquisition reform," she continued. "We believe that risk-based management will move our culture from a 'conspiracy of hope' to one that is success-based and meets commitments."

AFMC hosts senior leadership sessions to gain active participation, leadership, and commitment from the command's senior leaders, conference planners said.

Scaggs is with Air Force Materiel Command Public Affairs.

DOD MODELING & SIMULATION CONFERENCE

This year's Department of Defense Modeling and Simulation Conference for will be held at the Wyndham Baltimore–Inner Harbor, May 1-5, 2006. The DoD M&S Conference is the premier conference bringing together government and military executives, strategic planners, and senior technical managers to enable the DoD M&S community to develop a common view of the state of M&S practice, expose members to the broader M&S community needs (shortfalls, issues, and challenges), and examine M&S gaps associated with policies, procedures, and practices within DoD. The conference also serves as an important forum for discussing and coordinating future plans, goals, and programs within the DoD M&S community.

For more information, visit the National Training Systems Association Web site at <http://www.trainingsystems.org/events> or contact Barbara McDaniel at (703) 247-2569.

NATIONAL SMALL BUSINESS CONFERENCE

The National Small Business Conference will be held May 8-10, 2006, at the Hyatt Regency Newport Hotel & Spa, in Newport, R.I. Small business plays a vital role in our nation's defense industrial base, and the mission of this conference will be to increase small business access to government contracts. Targeted primarily at an audience of small businesses already established in the federal marketplace, the conference will feature plenary session speakers focusing on the important role of small business in the defense industrial base, concurrent breakouts on a variety of specific related topics, and one-on-one "matchmaking" sessions.

Register for the conference at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site = ndia&Webcode = EventList>.

FULFILLING THE WARFIGHTER'S VISION 2006: CLOSING THE INFORMATION GAP

Fulfilling the Warfighter's Vision 2006: Closing the Information Gap will be held May 9-10, 2006, at the Renaissance Vinoy Resort and Golf Club, in St. Petersburg, Fla. Army Gen. John P. Abizaid, commander of Central Command, will speak on the real and immediate needs of warfighters for *information*.

This is a unique conference, because the point isn't how to do enterprise services, acquisition strategies, or business models. This conference is about reality: the immediate need for information, real interoperability, and the crucial role of industry. This is an opportunity for warfighters to speak to the capability providers to tell them what's wrong and what is needed.

The target audience for this conference includes government agency employees, military services, and combatant commands who want to accelerate the process of moving technology into the field in a controlled, rational manner and who have budgets and programs impacted by net-centric operations.

Register for the conference at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site = ndia&Webcode = EventList>.

DEFENSE INDUSTRIAL BASE CRITICAL INFRASTRUCTURE PROTECTION CONFERENCE AND EXHIBITION

The Defense Industrial Base critical Infrastructure Protection Conference and Exhibition will be held May 9-11, 2006, at the Hyatt Regency Miami, in Miami, Fla. The intent of this symposium and exhibition is for DoD, other federal agencies, state and local governments, and industry to address the challenges of building a resilient defense industrial base for the global war on terror and beyond. These efforts must include information sharing, interoperability, and the development and integration of high-quality decision support capabilities. Moreover, specific information-sharing protocols, procedures, and policy guidance that will enhance communication flow at all levels of government, industry, and commercial infrastructure providers are paramount to preparing and protecting providers of essential goods and services from a multitude of potential threats.

For more information, contact meeting planner Christy Goehner at cgoehner@ndia.org or call 703-247-2586.

OUSD(AT&L)'S BUSINESS MANAGERS' CONFERENCE—KEN KRIEG KEYNOTE SPEAKER

This year's Business Managers' Conference is scheduled for May 9 and 10, 2006, at the Defense Acquisition University, Fort Belvoir, Va. The theme of the conference is "Enabling Smart Business Decisions." The keynote speaker is Ken Krieg, under secretary of defense (acquisition, technology and logistics).

Sponsored by the Office of the Under Secretary of Defense (Acquisition, Technology and Logistics) in cooperation with the Business, Cost Estimating, and Financial Management Functional Advisor, the annual conference is targeted toward senior DoD acquisition and comp-

troller executives as well as PEO/PM/SYSCOM business managers and service headquarters program and business staff. It offers two full days of high-level speakers, training opportunities, and exhibits, with valuable information and demonstrations of a variety of tools for managing organizational challenges. The yearly conference is an excellent way to stay abreast of current acquisition and business initiatives and provides opportunities for wide-ranging discussions with key leaders. For more information, e-mail bmc@dau.mil or call (703) 805-5308. To register, go to <http://www.businessmanagersconference.com>. Information on previous Business Managers' Conferences may be found at < http://www.dau.mil/conferences/Past_Conferences.asp > and <http://bmc.ida.org/>.

INTERNATIONAL TRAINING AND EDUCATION CONFERENCE-ITEC 2006

The International Training and Education Conference, ITEC 2006—now in its 17th year—will be held May 16-18, 2006, at ExCel London, the international exhibition and conference centre. ITEC is Europe's only conference and exhibition dedicated to defense training, education, and simulation exhibition of equipment and services. Participants will find that ITEC 2006 is the meeting place to network with international military and defense training experts. Register online at <https://www.itec.co.uk/page.cfm/Action = PreReg/PreRegID = 9/t = m>.

DOD PROCUREMENT CONFERENCE

Plan ahead to attend the 2006 DoD Procurement Conference May 23-26, 2006, at the Marriott Grande Lakes in Orlando, Fla. Watch for details of the conference at <http://www.acq.osd.mil/dpap/about/conferences.htm>.

2006 ARMY IT CONFERENCE (AITC)

The Army Small Computer Program will be hosting the 2006 AITC June 5–8, 2006, at the Caribe Royale, Orlando, Fla . The Army's most powerful information technology conference attracts more than 500 Army, DoD, federal/ government employees, support contractors, industry representatives, and exhibitors-for whom attendance is free of charge. The conference brings together the most important and knowledgeable people driving the Army's present and future IT requirements. This year's event is packed with exciting guest speakers from DoD and industry and includes an exhibition hall consisting of over 40 exhibitors showcasing the latest IT products and services available on ASCP contracts. DAWIA members of the defense acquisition workforce can earn required continuous learning points by attending the 2006 Army IT Conference. For detailed information and online registration visit the ASCP Web site at <https://ascp.monmouth.army.mil> or contact Elisa Pallitto, (732) 427-6787, DSN 987-6787, or elisa.pallitto@us.army.mil.

INCOSE 2006 INTERNATIONAL SYMPOSIUM

Mark your calendars and allocate your budgets so you can be sure to join systems engineers from around the world at the Sixteenth Annual International Council On Systems Engineering (INCOSE) International Symposium, July 9-13, 2006, in Orlando, Fla. This year's theme is *Systems Engineering: Shining Light on the Tough Issues*. Register now at <http://www.incose.org/symp2006/>.

DOD DIMINISHING MANUFACTURING SOURCES AND MATERIAL SHORTAGES CONFERENCE

The DoD Diminishing Manufacturing Sources and Material Shortages (DMSMS) Conference July 10-13, 2006, at the Charlotte Convention Center in Charlotte, N.C. The conference will emphasize DMSMS and will be a follow on to the DMSMS meetings. Registration information will be posted as soon as it becomes available at <http://register.ndia.org/interview/register.ndia?#May2006>.

ANNUAL SYSTEMS ENGINEERING CONFERENCE

The 9th Annual Systems Engineering Conference will be held Oct. 23-27, 2006, at the Hyatt Islandia in San Diego, Calif. Registration information will be posted as soon as it becomes available at <http://register.ndia.org/interview/register.ndia?#May2006>.

25TH ARMY SCIENCE CONFERENCE

The 25th Army Science Conference will be held Nov. 27-30, 2006, at the JW Marriott Orlando, Grande Lakes, in Orlando, Fla. This year's theme will be *Transformational Army Science and Technology – Charting the Next 50 Years of Science and Technology for the Soldier*. This yearly event is sponsored by the assistant secretary of the Army (acquisition, logistics and technology). Watch for details of the conference and registration information at <http://www.asc2006.com/>.

Acquisition & Logistics Excellence

NAVY NEWSSTAND (JAN. 10, 1006)

FISCAL YEAR 2005 CNO ENVIRONMENTAL AWARD WINNERS NAMED

Easter R. Thompson

WASHINGTON—Thirty winners have been selected in the Fiscal Year 2005 Chief of Naval Operations (CNO) Environmental Awards competition, sponsored by the CNO Environmental Readiness Division.

The awards will be presented May 3 at the U.S. Navy Memorial and Naval Heritage Center in Washington.

The annual CNO Environmental Awards program recognizes Navy people, ships, and installations for their exceptional environmental stewardship. The Fiscal Year 2005 competition categories included natural resources conservation, cultural resources management, environmental quality, pollution prevention, environmental restoration, and environmental excellence in weapon system acquisition. The winners, in alphabetical order, are:

Natural Resources Conservation Small Installation Award

- Naval Air Station Whiting Field
- Navy Information Operations Command Sugar Grove
- U.S. Navy Support Facility Diego Garcia

Natural Resources Conservation Individual or Team award

- Naval Air Station Jacksonville Natural Resources Team (Christine M. Bauer, Angela Glass, Will Henry)
- Richard R. Riddle/Commander Navy Region South
- Jim Swift/Naval Air Station Patuxent River

Cultural Resources Management Installation Award

- Naval Air Station Patuxent River
- Naval Air Weapons Station China Lake
- U.S. Fleet Activities Sasebo, Japan

Environmental Quality Non-industrial Installation Award

- Commander Navy Region Hawaii
- Naval Station Great Lakes
- Naval Station Norfolk

Environmental Quality Individual or Team Award

- Naval Air Depot Cherry Point Environmental Management System Team (Edward Childs, Wesley Lamb, James Byrd, Billy Weeks, Andrew Krelie, Michelle Burroughs, Debbie King, Steve Adinolfi)
- Lamberto R. Torres/Southwest Regional Maintenance Center (SWRMC)
- United States Naval Station Guantanamo Bay, Cuba Environmental Quality Team (Frederick W. Burns, Paul H. Schoenfeld, Christopher K. Creighton, Kenneth E. Hendl, John H. Brummett, Jr., Robert W. Bunch)

Environmental Quality Large Ship Award

- *USS George Washington* (CVN 73)
- *USS Harry S. Truman* (CVN 75)
- *USS John C. Stennis* (CVN 74)

Pollution Prevention Industrial Installation Award

- Commander Fleet Activities Yokosuka, Japan
- Naval Air Depot North Island
- Norfolk Naval Shipyard

Environmental Restoration Installation Award

- Naval Air Station Lemoore
- Naval Air Station Whiting Field
- Norfolk Naval Shipyard

Environmental Restoration Individual or Team Award

- Naval Air Station Pensacola Environmental Restoration Team (Betsy Voss, Allison Harris, Bill Hill, Tracie Vaught, Greg Wilfley, Joe Foran, Greg Campbell, Greg Fraley, Brian Caldwell, Gerry Walker)
- Naval Base Ventura County Environmental Restoration Team (Steve Granade, Michael Gonzales, Reza Ghanei, Eric Green, Monica Ryan)
- Naval Station Mayport Environmental Tier I Partnering Team (Diane Racine, Adrienne Wilson, James Cason, Terry Hansen, Michael Halil, Craig A. Benedikt, Beverly Washington, Michael Albert, Mark Peterson)

Environmental Excellence in Weapon System Acquisition Award

- F/A-18E/F & EA-18G Acquisition Programs Team (Mike Rudy, Erin Beck, John Bogner, M. Duarte, Lori Hales, S. Sofian, R. Viktora, Tom Zucal)
- MH-60R Multi-Mission Helicopter Program Environmental, Safety, and Occupational Health (ESOH) Team (Mary Hammerer, Jennifer Paulk)

- P-8A Multi-mission Maritime Aircraft (MMA) Environment, Safety, and Occupational Health (ESOH) Team (Michele Pok, Greg Berry, Thomas Doughty, Flint Webb, Michael Krier, Joseph Krezelak, Tanya Tonnu)

Rear Adm. James A. Symonds, director of the CNO Environmental Readiness Division that administers the environmental awards program, congratulated the winners in a naval message saying, "I am proud that you are working hard to achieve superior environmental stewardship while executing our primary mission of national defense. Your work has added to Navy's ever-growing record of accomplishments, proving yet again that Navy's environmental programs are among the finest in the world."

The winners advanced to the Secretary of the Navy Environmental Awards competition.

For more information about the CNO Environmental Awards program, contact Easter R. Thompson in the Chief of Naval Operations Environmental Readiness Division (N45) Public Affairs at Easter.R.Thompson@navy.mil.

AIR FORCE PRINT NEWS (JAN. 12, 2006)
AIR FORCE LOOKS TO BE BEST IN ACQUISITION

Staff Sgt. C. Todd Lopez, USAF

WASHINGTON (AFPN)—The Air Force hopes to be the model within the Department of Defense for how best to procure goods and acquire weapons systems.

"Five years from now, [we want] people to consider the Air Force the premier acquisition Service in the DoD ... that we are heads and shoulders above everybody else in how we buy products and deliver products to the warfighter," said Kenneth Miller, special assistant to the secretary of the Air Force for acquisition governance and transparency.

Much of the responsibility of getting the Air Force to that point will fall on the shoulders of Miller, who was hired in September. Though he doesn't work in Air Force acquisition, he has nearly 30 years of experience in Navy acquisition.

Miller says achieving premier acquisition status will require the Air Force to make a commitment to acquisition governance and transparency.

"A lot of people ask me, 'What do you really mean by governance on the acquisition side?'" he said. "What we are looking at is trying to make sure, from a process standpoint, that we have a way of learning how we do our business across the entire Air Force."

If the acquisition community at one installation is doing something well, that needs to be shared across the Air Force so all those in acquisition can benefit, he said.

"We have a lot of different pieces across the Air Force that do acquisition today," he said. "But we don't have a very good process to glean the goodness that may be going on in one activity, and share that across the board. So we are going to be looking at some integrating processes for the future."

While acquisition governance is about spreading good ideas within the Air Force, transparency is about letting those on the outside know how the Service is purchasing goods, services, and weapons systems.

"We want to be real clear on what we are doing, and to be very honest and open with the way we are looking at our acquisition business," Miller said. "But one of the challenges we have in the Air Force right now is that our overall credibility with sharing information and being forthright in where we are in procurement has really suffered greatly."

In the past several years, the Air Force has experienced credibility problems on Capitol Hill that involve such things as the replacement for the KC-135 Stratotanker and the C-130 Hercules modification project, he said.

While Miller said it might not be possible to completely eliminate the circumstances that created some of those problems, it is the Service's responsibility to recognize those problems earlier and take actions to correct them.

"One of the big challenges for DoD and Congress is the right degree of oversight and review you have in the future, especially on ethics, people, and standards and how they approach disclosure," Miller said. "I don't think you will ever get away from where your people make mistakes ... [but] what is important is that you have an adequate set of processes in place to recognize them."

Miller's role within the Air Force would be to help develop those processes.

"In order to improve our overall credibility, we are going the extra mile in trying to be more open and engaging, more proactive, and preemptive in how we do acquisition business," he said.

Part of that effort is making sure the Air Force is the first to spread news about itself, whether that news is good or bad. If the Air Force were in the process of developing a weapons system, for example, and the system experienced failures during testing and evaluation, Miller said it would be best to pass that information on as soon as possible to Capitol Hill and the Office of the Secretary of Defense.

"In the past, we would try to be very deliberate about getting as much information as possible before we start to share with people what had happened," he said. "The problem with that is we have found that our competitors, or people who are not supportive of a certain program, find out about bad news as fast as anybody."

Those people then pass bad news to Congress, OSD, or the media, before the Air Force has gathered all its information.

"Almost immediately our credibility is at zero, because [Congress] heard about our problem two or three weeks before we gave them all the information," Miller said.

One solution to that problem is to understand that it is okay for the Air Force to begin sharing information even before it has all the facts, or even has a completely right answer, Miller said.

"In this business, [with] the complexity of the things we are dealing with, the first answer is not always the total answer," Miller said. "It is about 80 percent right. The big challenge I have had is telling people that it is okay to share information that is 80 percent right—but understand it is not the last time I will talk to you about a particular issue."

Being able to share information as soon as it happens, rather than waiting to gather facts that can come later, allows the Air Force to establish greater credibility with Congress and the American people, he said.

"So instead of waiting, we will be the first to tell you, and we will tell you the facts, the way we see it today," he said. "What we are trying to establish with our stakeholders is a credible dialogue back and forth. I will communicate with you on a routine basis on the progress we are having on a program, so people know what we are doing."

AIR FORCE MATERIEL COMMAND PUBLIC AFFAIRS (JAN. 31, 2006)

AIR FORCE RESEARCH LABORATORY ENGINEER RECEIVES AWARD

Rene Boston

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFMCNS)—Doug Carter, an engineer from the Air Force Research Laboratory's Materials and Manufacturing Directorate recently received the Air Force Science and Engineering Award in the category of Manufacturing for 2005.

Carter, who currently works with the directorate's Manufacturing Technology Division, earned this prestigious award for his contributions to solving a critical material scale-up problem that directly affects the operational maintainability and combat availability of the Air Force's B-2 bomber fleet.

To improve the B-2 fleet mission capability rate, a major effort was initiated by the B-2 System Group to remove tape covering access panel gaps and fasteners and replace it with a material called Alternate High Frequency Material. AHFM exposes the gaps and fasteners for easy removal and replacement of access panels without any material restoration required. Successful flight tests demonstrated the effectiveness of the AHFM design, but upon material scale-up for fleet-wide implementation, consistent batch-to-batch performance could not be obtained.

Carter initiated a $2.8 million AHFM Rapid Response Process Improvement Program to solve the consistency problem. The successful program gave the B-2 Systems Group and Air Combat Command the confidence to implement AHFM fleet-wide, both increasing mission capability rate and decreasing maintenance manhours-per-flight-hour by 50 percent. This program resulted in a significant increase in aircraft availability and cost savings.

The AHFM RRPI enhanced the fleet's high-priority maintainability program and improved material delivery schedule and production cost. The program reduced the material production schedule from 26 weeks to 12 weeks and implemented an improved test method, which saves eight calendar days per batch. Maintenance actions previously requiring a week of aircraft downtime for repair now require as little as 30 minutes.

Finalists of the 2004 Army Performance Excellence Awards (APEA) hosted by Secretary of the Army Dr. Francis J. Harvey (left). The APEA Program was established in 2004 to recognize organizational performance excellence. The ceremony held on Jan. 27, 2006, at the Pentagon recognized commands that have transformed their business processes since then.
Photograph by Leroy Council.

Additionally, the results of this program have caught the attention of other weapon system program offices.

Boston is with Air Force Research Laboratory Public Affairs.

ARMY NEWS SERVICE (FEB. 1, 2006)
COMMAND GETS GOLD FOR LEADING IN LEAN SIX SIGMA

Sgt. Kenneth Hall, USA

WASHINGTON—Secretary of the Army Francis J. Harvey recognized three commands Jan. 27 for leading the way in improving business processes.

The Army Performance Excellence Award winners were:

- U.S. Army Armament Research, Development and Engineering Center, Picatinny Arsenal, N.J., Gold Award;
- Fort Stewart and Hunter Army Airfield, Ga., Silver Award;
- Minnesota National Guard, Bronze Award.

"The winners have led the way in the business transformation, improving the processes, sharing lessons learned, and provided continuous support to their customers," Harvey said.

"For example, today's Gold Award recipient, the U.S. Army Research, Development and Engineering Center, is one of the Army leaders in Lean Six Sigma and serves as a benchmark for other Army organizations to emulate."

The APEA Program was established in 2004 to recognize organizational performance excellence. The ceremony Friday at the Pentagon recognized commands that have transformed their business processes since then.

Army Tempo on New Ground

"The last year has been a very challenging period for the Army and the nation, but our Army has met every challenge," Harvey said, "from highly successful operations in Iraq and Afghanistan to disaster relief for Hurricane sKatrina and Rita, to continuing transformation of the operational and institutional parts of the Army.

"It would not be a surprise to anyone that the United States Army is very busy right now, fighting a war against those who have declared their purpose—taking from us what is most precious—our freedom," said Lt. Gen. Jim Campbell, director, Army Staff, "and transforming this Army, doing this at the same time—it's what I call 'graduate-level' work."

Campbell stressed the transformation period as a means to improve the business processes within the Army, how organizations operate, how they measure themselves, and how they improve to ultimately better serve soldiers.

Harvey also emphasized the importance of the process improvement strategy throughout the Army and that assessing performance is essential.

"We need to effectively measure how well we are doing relative to our objectives," Harvey said. "If we are going to make changes of such magnitude, we need to know our performance posture.

"The Army is creating a culture of continuous measurable improvement that eliminates non-value-added activity and improves quality and responsiveness for soldiers and missions of Army families in the nation," said Harvey. "The three organizations we are recognizing here today can be extremely proud of their contributions towards business transformation."

Harvey said the key during the transformation is continuing assessment of the processes and the execution of incremental improvements and initiatives.

"ARDEC took decisive steps in achieving business transformation and developing a culture of continuous improvement," he said.

ARDEC Gets Gold Award

ARDEC, a subordinate organization of the Army's Research, Development and Engineering Command, or RDECOM, reports to Army Materiel Command. With more than 2,500 employees, ARDEC was recognized for its leadership, strategic planning, customer and market focus, measurement analysis, and knowledge management accomplishments during 2004.

"Our objective is to be the best organization possible," said Dr. Joseph A. Lannon, ARDEC director. "Through our dedication to an integrated approach to continuous improvement, we ensure that the real winners in this achievement are the warfighters whose lives depend on the best technical armament solutions and support to develop and field products in the shortest time possible."

Fort Stewart Wins Silver

Fort Stewart and Hunter Army Airfield attribute their success in achieving APEA Silver Award status for 2004 to implementing the Army Performance Improvement Criteria and using the criteria as a tool to institute performance reviews and to analyze and monitor their progress.

"Our senior executives and leaders manage strategies, systems, and methods that center on effectively designed measurable performance outcomes," said Janet Blanks, director of plans, analysis and integration, Fort Stewart and Hunter Army Airfield. "These outcomes are the organization's strategic objectives. Our ability to accomplish these objectives is approached through key value-creation processes and key support processes."

Minnesota Guard Takes Bronze

The Minnesota National Guard also used APIC and feedback reports as the foundation for improving processes that enhanced their overall performance and readiness.

"Commitment to performance improvement, focusing on what is important, and soldier care are the key areas that have elevated our successes, said Col. April Corniea, chief, Organizational Development, Minnesota National Guard. "Today, the Minnesota National Guard uses the APIC in its day-to-day operations as an overarching guide for how we do business and implement change."

"The upcoming year will continue to be a challenging period for the Army and for the nation," said Harvey, "but thanks to the leadership and dedication of our Army soldiers and our Army civilians, I am confident that we will continue to fulfill our solemn obligation to the nation to remain both ready to meet and relative to the challenges to the dangerous and complex 21st century security environment."

ARMY NEWS SERVICE (FEB. 1, 2006)
ARMY CIVILIANS GET PRESIDENTIAL RANK AWARD

In a ceremony at the Pentagon Jan. 20, the secretary of the Army presented Presidential Rank Awards to 22 senior civilian employees, a number of whom provided key services following 9-11.

Secretary of the Army Francis J. Harvey presented the awardees pins and a framed certificate signed by President Bush.

"An important component of business transformation is establishing a performance culture in which a concise set of measurable performance objectives are established by all senior civilians who, in turn, are rewarded when their objectives are achieved," Harvey said. "The Presi-

dential Rank awards are an important element of that reward system."

The award winners are chosen by the president after being nominated and evaluated for their leadership in producing results for professional, technical, or scientific achievement. It is considered the most prestigious recognition afforded to career professionals.

Five of the recipients were awarded the distinguished Presidential Rank Award:

- Kathryn A. Condon, assistant deputy chief of staff for operations, was personally involved in orchestrating emergency operations at the Pentagon following Sept. 11, 2001 and for security at the 2002 Winter Olympics. She also supported Army operations in Afghanistan and Iraq.
- Terrance M. Ford, assistant deputy chief of staff for intelligence, was cited as a visionary and forceful advocate for significant intelligence initiatives. Ford directed development of a training course on tactical questions for use by soldiers who are not involved in military intelligence.
- Dr. James R Houston, director, U.S. Army Engineer Research and Development Center, Vicksburg, Miss., transformed seven independent laboratories into a single award-winning center providing critical support to the global war on terrorism. Houston led the development of innovative technologies to support Army warfighters, installations, environmental quality, and water resource development.
- Janet C. Menig, deputy assistant chief of staff for installation management, oversees an annual operating budget of more than $15 billion in support of all 181 Army installations worldwide. She completed 204 competitive source contract awards, and saved 656 million dollars annually. Menig also worked with conservation agencies to enhance Army operations while preserving natural habitats.
- M. Lynn Schnurr, technical advisor, Information Management Directorate, was cited as a driving force in identifying and solving technology issues that directly impact intelligence capabilities and support to force protection in the Central Command theater. Schnurr helped develop a strategy to field a hand-held reporting device with substantial number of embedded technologies.

Seventeen employees were awarded the Meritorious, Executive, or Senior Professional Rank Award:

- Dr. Richard W. Amos
- Dr. James C. Bradas
- Diane M. Devens
- Dr. Bhupendra P.Doctor
- Victor J. Ferlise
- Ernie H. Gurany
- Walter W. Hollis
- Vicky L. Jefferis
- Ronald G. Magee
- Daniel G. Mehney
- Dr. Herbert L. Meiselman
- Jerry V. Proctor
- Philip E. Sakowitz, Jr.
- Dr. James J. Streilein
- Kathryn T.H. Szymanski
- Edward C. Thomas
- Dr. Billy J. Walker

Only 1 percent of career employees receive the distinguished gold pin award, and only 5 percent receive the silver meritorious award. The award comes with a lump-sum payment of 35 or 20 percent of the employee's base pay, respectively.

"The challenges that they have helped the Army meet are different from those we faced before 9-11, as we moved from a time of contingency operations into a dangerous and difficult period of continuous operations" said Harvey.

A reception honoring the recipients followed the ceremony.

AIR FORCE MATERIEL COMMAND NEWS SERVICE (FEB. 2, 2006)

ENGINEER HONORED FOR INNOVATIONS

Francis L. Crumb

ROME, N.Y. (AFMCNS)—The editors of *U.S. Black Engineer and Information Technology* magazine have named Air Force 1st Lt. Robert W. Patton Jr. of the Air Force Research Laboratory as one of their "Modern-Day Technology Leaders for 2006" for outstanding leadership in engineering, science, and technology.

A native of Richmond, Va., Patton is a program manager in the AFRL Information Directorate's Information Connectivity Branch.

The awards recognize African-Americans whose innovations impact entire industries. Recipients will be recognized at a leadership luncheon Feb. 17, during the

20th Annual Black Engineer of the Year Awards Conference in Baltimore, Md. Recipients will also be profiled in the official conference publication, *U.S. Black Engineer and Information Technology*, a leading, global source of technology news and information.

During the conference, seminars and workshops present the latest information on a variety of topics affecting black technology professionals, such as career advancement, diversity programs, and specialized industry updates.

"Lieutenant Patton's accomplishments as a creative and aggressive researcher for improved warfighter data link and satellite communications systems will be recognized at the conference," said Peter K. Leong, chief of the Information Connectivity Branch. "His achievements included design and implementation of new radio communications capability that allowed special operations warriors to send and receive target designations in a more timely and accurate manner.

"The lieutenant's insight also improved ongoing commercial research for a next-generation satellite control center ground-based antenna that can provide multibeam communications channels for telemetry, tracking and control functions of both Department of Defense and NASA satellites," said Leong.

Patton holds a master's in business administration from Embry-Riddle Aeronautical University; and two bachelor of science degrees, one in electrical engineering/industrial technology from the University of West Florida and a second in professional aeronautics from Embry-Riddle. He also earned an associate's of applied science degree in avionics systems technology from the Community College of the Air Force. He enlisted in the Air Force in 1990 and was assigned to Rome in July 2003, following his commissioning.

Crumb is with Air Force Research Laboratory Public Affairs.

AIR FORCE MATERIEL COMMAND NEWS SERVICE (FEB. 3, 2006)
ELECTRONIC SYSTEMS CENTER GETS "SMART"

Chuck Paone

HANSCOM AIR FORCE BASE, Mass. (AFMCNS)—In a sweeping effort to improve its processes, the Air Force recently launched "Smart Operations 21," which combines key aspects of several industry efficiency tools. The most notable among them are Lean and Six Sigma, which have been used extensively to improve customer value while reducing waste, especially in manufacturing processes.

As Gen. Bruce Carlson, commander of the Air Force Materiel Command, noted in his Jan. 27 commander's log, this doesn't mean the Air Force, or AFMC, has been doing things wrong. It simply means "we cannot rest on past success," he wrote.

AFSO 21 is a continuous process improvement initiative. That means it's designed to help people keep finding ways to make things better, even if they're already "good." This requires "a passion for continuous improvement—a spirit and mindset that we can always get better," General Carlson wrote.

Air Force leaders hope that this mindset will be contagious, that everyone will continue looking to eliminate steps that add little or no value to a process or product. They might also look at combining process steps to save time. Those sorts of critical process examinations are at the heart of Lean.

Six Sigma looks at various segments of a process to determine what a customer truly needs. That enables deliverers to determine where they should spend more time or money to achieve greater precision and perfection; conversely it allows them to determine where, from a customer's perspective, the extra time and money aren't warranted.

"Smart Ops 21 is all about continuous process improvement," said Electronic Systems Center Vice Commander Maj. Gen. Arthur Rooney. "There are many weapons in the Smart Ops 21 arsenal, including brain storming, problem solving, benchmarking, Lean and Six Sigma, to name just a few. We must look for opportunities to use these weapons each and every day. In so doing, we will make sure we remain the world's greatest Air and Space Force."

At ESC, Lt. Gen. Chuck Johnson, the center commander, wants to begin implementing this initiative immediately. On his behalf, Rooney has already asked members of the staff to begin thinking about processes that could be streamlined with AFSO 21.

He has identified the ESC Plans and Programs Directorate as the lead organization for implementing AFSO

21 and for meshing it with ongoing Balanced Scorecard efforts.

Paone is with Electronic Systems Center Public Affairs.

AIR FORCE MATERIEL COMMAND NEWS SERVICE (FEB. 6, 2006)
DIRECTED ENERGY SCIENTIST'S CAREER HONORED

Eva Blaylock

KIRTLAND AIR FORCE BASE, N.M. (AFMCNS)—One of the Air Force's most senior scientists, Dr. Robert Q. Fugate, was presented the Air Force's Outstanding Civilian Career Service Award at a ceremony here today, marking his retirement after 35 years of federal service. Fugate, the technical director at the Air Force Research Laboratory's Starfire Optical Range, received the award in recognition of his accomplishments and contributions to the Air Force for a federal civilian career that began on Dec. 1, 1970.

Fugate has served as the technical director and senior scientist at the SOR since his arrival in 1979. He transformed the SOR from a small outpost with five employees working on a single project into a division of 500 government and contractor personnel working on 30 research projects worth $500 million. The division has major facilities at the Kirtland Air Force Base and in Maui, Hawaii.

The Ohio native spent his career conducting research on the physics of propagation of light through atmospheric turbulence and a technique called laser guidestar adaptive optics that corrects distortion caused by the atmosphere. His research has resulted in significant advances in military space surveillance and satellite diagnostic capabilities and has enabled laser propagation over long distances.

The imaging capabilities of adaptive optics have been lauded by the scientific community as igniting a revolution in ground-based optical astronomy. Nearly every major astronomical telescope in the world now has or is building an adaptive optical system based on the techniques developed at the SOR. The largest astronomical telescopes in operation today using laser guidestar adaptive optics have produced new scientific discoveries otherwise unachievable, even surpassing some of the capabilities of the Hubble Space Telescope.

Fugate's achievements are recognized internationally as the ultimate in atmospheric compensation techniques, and his program was recognized seven times consecutively as "world class," the highest rating assigned by the Air Force Scientific Advisory Board.

2005 Civilian of the Year Matthew Stacker (right), receives an award from Air Force Gen. Norton A. Schwartz, commander, U.S. Transportation Command, on Jan. 24 during a ceremony at Camp Arifjan, Kuwait. Stacker, a major in the Army Reserve, is chief of requirements for the U.S. Central Command Deployment and Distribution Operations Center at Camp Arifjan. Photograph by Sgt. Crystal Rothermel.

Throughout his career, Fugate received numerous prestigious awards, including the first Distinguished Presidential Rank Award for Senior Professionals in 2003, presented by President George W. Bush. He was also elected to the National Academy of Engineering in 2004, a prestige achieved by very few government employees. Other awards included the Progress Medal from the Photographic Society of America in 2000, the Harold Brown Award in 1999, the DoD Distinguished Civilian Service Award in 1997, and Fellowships in the Air Force Research Laboratory in 1996 and the Optical Society of America in 1994. Dr. Fugate received his doctorate degree in physics from Iowa State University in 1970.

Blaylock is with Kirtland Air Force Base Public Affairs.

AT&L Workforce— Key Leadership Changes

OFFICE OF THE DEPUTY UNDER SECRETARY OF DEFENSE (BUSINESS TRANSFORMATION) (FEB. 3, 2006)

APPOINTMENT OF ASSISTANT DEPUTY UNDER SECRETARIES OF DEFENSE WITHIN AT&L

In a memorandum dated Feb. 3, 2006, Deputy Under Secretary of Defense for Business Transformation Paul A. Brinkley announced the establishment of two new positions within the Office of Business Transformation. The first is the assistant deputy under secretary of defense for business integration. Elizabeth McGrath will fill the position of ADUSD(BI). The second is the assistant deputy under secretary of defense for strategic sourcing and acquisition processes. Mark Krzysko will be the new ADUSD(SS&AP).

McGrath will serve as the advisor and assistant on all issues regarding establishment of the Business Transformation Agency (BTA) and its relationship with the principal staff assistants (PSAs) within the Office of the Secretary of Defense. She will also work directly with PSA organizations within OSD to ensure that appropriate support relationships are established between the Business Transformation Agency and the PSAs.

McGrath will also include directly establishing and overseeing administrative support of the BTA, while working with the BTA operations office to ensure budgetary, contract management, human resource management, and agency support functions operate using best industry and government practices. She will also facilitate the cooperative management of the BTA between her office and the deputy under secretary of defense (financial management).

Krzysko will serve on the staff as AT&L's advisor on matters relating to acquisition and sourcing processes and initiatives across the Department of Defense. He will serve as the focal point linking the functional communities of DoD's business mission area for specific strategic initiatives. This includes coalescing ongoing efforts throughout AT&L offices and engaging federal agencies to leverage, develop, and implement cohesive strategies for sourcing and acquisition that connect appropriately with federal-level initiatives.

Krzysko will also support the Office of Management and Budget and Office of Federal Procurement Policy as they establish federal direction for strategic sourcing. He will ensure the offices of the Deputy Under Secretary for Acquisition and Technology; Director, Acquisition Resources and Analysis; and Director, Defense Procurement and Acquisition Policy are aligned into a cohesive effort.

Then-acting Deputy Defense Secretary Gordon England established the Business Transformation Agency on Oct. 7, 2005, according to the agency's Web site <http://www.dod.mil/bta/>. The agency will coordinate DoD's business transformation activities that, among other things, seek to reduce system redundancies and cut department operating costs.

According to documents available on the agency's Web site, strategic sourcing is "the collaborative and structured process of critically analyzing an organization's spending and using this information to make business decisions about acquiring commodities and services more effectively and efficiently."

Defense Secretary Donald H. Rumsfeld has made the modernization, or transformation, of DoD's business operations a top priority. The department is slated to invest $4.2 billion for agencywide business modernization this fiscal year.

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 17, 2006)

GENERAL OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president made the following nominations:

Marine Brig. Gen. James F. Flock has been nominated for appointment to the grade of major general. Flock is currently serving as the assistant deputy commandant (Facilities), Installations and Logistics Department, Headquarters, United States Marine Corps, Washington, D.C.

Marine Brig. Gen. Edward G. Usher III has been nominated for appointment to the grade of major general. Usher is currently serving as the assistant deputy commandant (Plans), Installations and Logistics Department, Headquarters, United States Marine Corps, Washington, D.C.

DEFENSE CONTRACT MANAGEMENT AGENCY LEADERSHIP TORCH PASSES TO KEITH ERNST

Tom Gelli

In a Jan. 12, change-of-leadership ceremony attended by Defense Department dignitaries, former Defense Contract Management Agency (DCMA) directors, and current DCMA employees, Air Force Maj. Gen. Darryl A. Scott relinquished the agency directorship to Keith D. Ernst. Ernst, who has been DCMA deputy director since October 2005, will serve as acting director until a military successor to Scott is appointed.

Presiding over the 45-minute ceremony at DCMA headquarters in Alexandria, Va., was Under Secretary of Defense (Acquisition, Technology, and Logistics) Kenneth J. Krieg. Krieg expressed regret about the departure of Scott, but lauded the appointment of Ernst and the qualities, experience, and leadership skills the former Marine Corps pilot and acquisition veteran brings to the job.

Krieg gave great praise to what Scott has done for DCMA during the past 25 months, particularly in the area of customer support, and characterized the general as one of those gifted leaders whose "lessons will live on long after he's left the organization." Krieg thanked the departing director for his exceptional leadership in a time of great change, as well as for what Scott is "willing to take on" as he assumes his next assignment in Baghdad, as commander, Joint Contracting Command–Iraq and Afghanistan.

Scott, who assumed leadership of DCMA on December 5, 2003, expressed his gratitude for having had the opportunity to serve as DCMA director and told the attendees that serving with them had been a "blessing and an honor." He told the audience that he continues to be extremely impressed by the inordinate degree to which members of the DCMA family care about the customer, the mission, and their fellow workers.

"The challenge is to keep moving forward, and I believe you can" said Scott. "As I leave here and become your most demanding customer, I do so without fear, knowing that every system, every piece of hardware, every critical service has passed under the watchful eye of the men and women of the Defense Contract Management Agency. You are the very best."

In accepting the appointment to the position of DCMA acting director, Ernst pledged to go forward with the vision set forth by Scott. He emphasized the continued importance of performance-based management and the conversion of customer requirements into customer outcomes, stating, "We must hold ourselves individually and collectively responsible for achieving those outcomes."

> **"As I leave here and become your most demanding customer, I do so without fear, knowing that every system, every piece of hardware, every critical service has passed under the watchful eye of the men and women of the Defense Contract Management Agency. You are the very best."**
>
> *Air Force Maj. Gen. Darryl A. Scott, former DCMA director, in a Jan. 12, 2006, farewell speech prior to leaving for his new assignment in Baghdad as commander, Joint Contracting Command–Iraq and Afghanistan.*

Gelli is a member of the DCMA Office of Congressional and Public Affairs.

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 18, 2006)
GENERAL OFFICER ASSIGNMENT

The Army Chief of Staff announces the following general officer assignment:

Maj. Gen. William H. Johnson, United States Army Reserve, commander (Troop Program Unit), 99th Regional Readiness Command (Provisional), Coraopolis, Pa., to chief of staff, United States Transportation Command, Scott Air Force Base, Ill.

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 20, 2006)
FLAG OFFICER ASSIGNMENT

Chief of Naval Operations Adm. Mike Mullen announced the following flag officer assignment:

Rear Adm. Stephen E. Johnson is being assigned as director for Strategic Systems Programs, Washington, D.C. Johnson is currently serving as commander, Naval Undersea Warfare Center, Washington, D.C.

AT&L Workforce—Key Leadership Changes

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 27, 2006)
FLAG OFFICER ASSIGNMENT

Chief of Naval Operations Adm. Mike Mullen announced the following flag officer assignment:

Rear Adm. (lower half) Jeffrey A. Wieringa is being assigned as director, Navy International Programs Office, Office of the Secretary of the Navy, Washington, D.C. Wieringa is currently serving as assistant commander for Systems and Engineering, Air 4.0 Naval Air Systems Command/commander, Naval Air Warfare Center, Aircraft Division, Patuxent River, Md.

DEPARTMENT OF DEFENSE NEWS RELEASE (FEB. 2, 2006)
GENERAL OFFICER ANNOUNCEMENT

The chief of staff of the Air Force announces the assignment of the following general officer: Brig. Gen. (select) Everett H. Thomas, commander, 341st Space Wing, Air Force Space Command, Malmstrom Air Force Base, Mont., to vice commander, U.S. Air Force Warfare Center, Air Combat Command, Nellis Air Force Base, Nev.

DEPARTMENT OF DEFENSE NEWS RELEASE (FEB. 3, 2006)
FLAG OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Navy Rear Adm. (lower half) Richard E. Cellon has been nominated for appointment to the rank of rear admiral. Cellon is currently serving as commander, Atlantic Division, Naval Facilities Engineering Command, Norfolk, Va.

Navy Rear Adm. (lower half) Mark D. Harnitchek has been nominated for appointment to the rank of rear admiral. Harnitchek is currently serving as vice director for Logistics, J4, Joint Staff, Washington, D.C.

Navy Rear Adm. (lower half) William E. Landay III has been nominated for appointment to the rank of rear admiral. Landay is currently serving as chief of Naval Research/ Director, Test and Evaluation and Technology Requirements, N091, Office of the Chief of Naval Operations, Washington, D.C.

Navy Rear Adm. (lower half) Peter J. Williams has been nominated for appointment to the rank of rear admiral. Williams is currently serving as assistant commander for Logistics, AIR-3.0, Naval Air Systems Command, Patuxent River, Md.

Navy Reserve Capt. Sean F. Crean has been nominated for appointment to the rank of rear admiral (lower half) while serving as commanding officer, Navy Reserve N4 Fleet Readiness and Logistics Unit, Washington, D.C.

DEPARTMENT OF DEFENSE NEWS RELEASE (FEB. 3, 2006)
GENERAL OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president made the following nominations:

Marine Col. Michael M. Brogan has been nominated for appointment to the grade of brigadier general. Brogan is currently serving as the direct reporting program manager for Advanced Amphibious Assault, Woodbridge, Va.

Marine Col. Timothy C. Hanifen has been nominated for appointment to the grade of brigadier general. Hanifen is currently serving as the deputy director, Capabilities Development Directorate, Marine Corps Combat Development Command, Quantico, Va.

Marine Col. James A. Kessler has been nominated for appointment to the grade of brigadier general. Kessler is currently serving as the executive assistant to the Deputy Commandant for Installations and Logistics, Headquarters, United States Marine Corps, Washington, D.C.

Marine Col. Peter J. Talleri has been nominated for appointment to the grade of brigadier general. Talleri is currently serving as the assistant chief of staff, G-4, U.S. Marine Corps Forces Central Command, Tampa, Fla.

Marine Reserve Col. Tracy L. Mork has been nominated for appointment to the grade of brigadier general. Mork is currently serving as the deputy commander, 4th Force Marine Logistics Group, New Orleans, La.

DEPARTMENT OF DEFENSE NEWS RELEASE (FEB. 24, 2006)
FLAG OFFICER ANNOUNCEMENT

Secretary of Defense Donald H. Rumsfeld announced today that the President has nominated Navy Rear Adm. (lower half) Michael C. Bachmann for appointment to the rank of rear admiral. Bachmann is currently serving as commander, Space and Naval Warfare Systems Command, San Diego, Calif.

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An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

Acquisition Community Connection (ACC)
http://acc.dau.mil
Policies, procedures, tools, references, publications, Web links, and lessons learned for risk management, contracting, system engineering, total ownership cost.

Acquisition Reform Network (AcqNet)
www.arnet.gov/
Virtual library; federal acquisition and procurement opportunities; best practices; electronic forums; business opportunities; acquisition training; excluded parties list.

Advanced Concept Technology Demonstrations (ACTDs)
www.acq.osd.mil/actd/
ACTD's accomplishments, articles, speeches, guidelines, and points of contact.

Aging Systems Sustainment and Enabling Technologies (ASSET)
http://asset.okstate.edu/asset/index.html
A government-academic-industry partnership. ASSET program-developed technologies and processes increase the DoD supply base, reduce time and cost associated with parts procurement, and enhance military readiness.

Air Force (Acquisition)
www.safaq.hq.af.mil/
Policy; career development and training opportunities; reducing TOC; library; links.

Air Force Materiel Command (AFMC) Contracting Laboratory's FAR Site
http://farsite.hill.af.mil/
FAR search tool; Commerce Business Daily announcements (CBDNet); Federal Register; electronic forms library.

Army Acquisition Support Center
http://asc.army.mil
News; policy; *Army AL&T* Magazine; programs; career information; events; training opportunities.

Assistant Secretary of the Army (Acquisition, Logistics & Technology)
https://webportal.saalt.army.mil/
ACAT Listing; ASA(ALT) Bulletin; digital documents library; ASA(ALT) organization; links to other Army acquisition sites.

Association 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
Association news; conventions, courses; conferences, *Journal of Electronic Defense.*

Commerce Business Daily
http://cbdnet.gpo.gov
Access to current and back issues with search capabilities; business opportunities; interactive yellow pages.

Committee for Purchase from People Who are Blind or Severely Disabled
www.jwod.gov
Information and guidance to federal customers on the requirements of the Javits-Wagner-O'Day (JWOD) Act.

Defense Acquisition University (DAU)
www.dau.mil
DAU Course Catalog; *Defense AT&L* magazine and *Defense Acquisition Review Journal*; course schedule; policy documents; guidebooks; training and education news for the AT&L workforce.

DAU Alumni Association
www.dauaa.org
Acquisition tools and resources; government and related links; career opportunities; member forums.

DAU Distance Learning Courses
www.dau.mil/registrar/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 R&D Project Summaries
www.osti.gov/fedrnd/about
Portal to information on federal research projects; search databases at different agencies.

Federal Research in Progress (FEDRIP)
http://grc.ntis.gov/fedrip.htm
Information on federally funded projects in the physical sciences, engineering, life sciences.

Fedworld Information
www.fedworld.gov
Comprehensive central access point for searching, locating, ordering, and acquiring government and business information.

Government Accountability Office (GAO)
www.gao.gov
GAO reports;policy and guidance; FAQs.

General Services Administration (GSA)
www.gsa.gov
Online shopping for commercial items to support government interests.

Government-Industry Data Exchange Program (GIDEP)
www.gidep.org/
Federally funded co-op of government-industry participants, providing electronic forum to exchange technical information essential to research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.

GOV.Research_Center
http://grc.ntis.gov
U.S. Dept. of Commerce, National Technical Information Service (NTIS), and National Information Services Corporation (NISC) joint venture single-point access to government information.

Integrated Dual-Use Commercial Companies (IDCC)
www.idcc.org
Information for technology-rich commercial companies on doing business with the federal government.

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Surfing the Net

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 defenseatl@dau.mil. DAU encourages the reciprocal linking of its Home Page to other interested agencies. Contact: webmaster@dau.mil.

Defense AT&L Writer's Guidelines in Brief

Purpose

The purpose of *Defense AT&L* magazine is to instruct members of the DoD acquisition, technology & logistics (AT&L) workforce and defense industry on policies, trends, legislation, senior leadership changes, events, and current thinking affecting program management and defense systems acquisition, and to disseminate other information pertinent to the professional development and education of the DoD Acquisition Workforce.

Subject Matter

We do print feature stories that include real people and events. Stories that appeal to our readers—who are senior military personnel, civilians, and defense industry professionals in the program management/acquisition business—are those taken from real-world experiences vs. pages of researched information. **We don't print** academic papers, fact sheets, technical papers, or white papers. We don't use endnotes or references in our articles. Manuscripts meeting these criteria are more suited for DAU's journal, *Defense Acquisition Review*.

Defense AT&L reserves the right to edit manuscripts for clarity, style, and length. Edited copy is cleared with the author before publication.

Length

Articles should be 1,500 – 2,500 words. Significantly longer articles: please query first by sending an abstract and a word count for the finished article.

Author bio

Include a brief biographical sketch of the author(s)—about 25 words—including current position and educational background. We do not use author photographs.

Style

Good writing sounds like comfortable conversation. Write naturally; avoid stiltedness and heavy use of passive voice. Except for a rare change of pace, most sentences should be 25 words or less, and paragraphs should be six sentences. Avoid excessive use of capital letters and acronyms. Define *all* acronyms used. Consult "Tips for Authors" at <http://www.dau.mil/pubs/damtoc.asp>. Click on "Submit an Article to *Defense AT&L*."

Presentation

Manuscripts should be submitted as Microsoft Word files. Please use Times Roman or Courier 11 or 12 point. Double space your manuscript and do not use columns or any formatting other than bold, italics, and bullets. *Do not embed or import graphics into the document file*; they must be sent as separate files (see next section).

Graphics

We use figures, charts, and photographs (black and white or color). Photocopies of photographs are not acceptable. Include brief numbered captions keyed to the figures and photographs. Include the source of the photograph. We publish no photographs or graphics from outside the DoD without written permission from the copyright owner. We do not guarantee the return of original photographs.

Digital files may be sent as e-mail attachments or mailed on zip disk(s) or CD. *Each figure or chart must be saved as a separate file* in the original software format in which it was created and must meet the following publication standards: JPEG or TIF files sized to print no smaller than 3 x 5 inches at a minimum resolution of 300 pixels per inch; PowerPoint slides; EPS files generated from Illustrator (preferred) or Corel Draw. For other formats, provide program format as well as EPS file. Questions on graphics? Call (703) 805-4287, DSN 655-4287 or e-mail defenseatl@dau.mil. Subject line: *Defense AT&L graphics*.

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Submission Dates

Issue	**Author's Deadline**
January-February	1 October
March-April	1 December
May-June	1 February
July-August	1 April
September-October	1 June
November-December	1 August

If the magazine fills before the author deadline, submissions are considered for the following issue.

Submission Procedures

Submit articles by e-mail to defenseatl@dau.mil 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.

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http://www.dau.mil/pubs/damtoc.asp

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