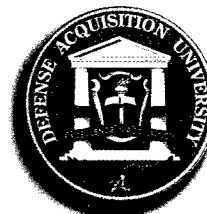


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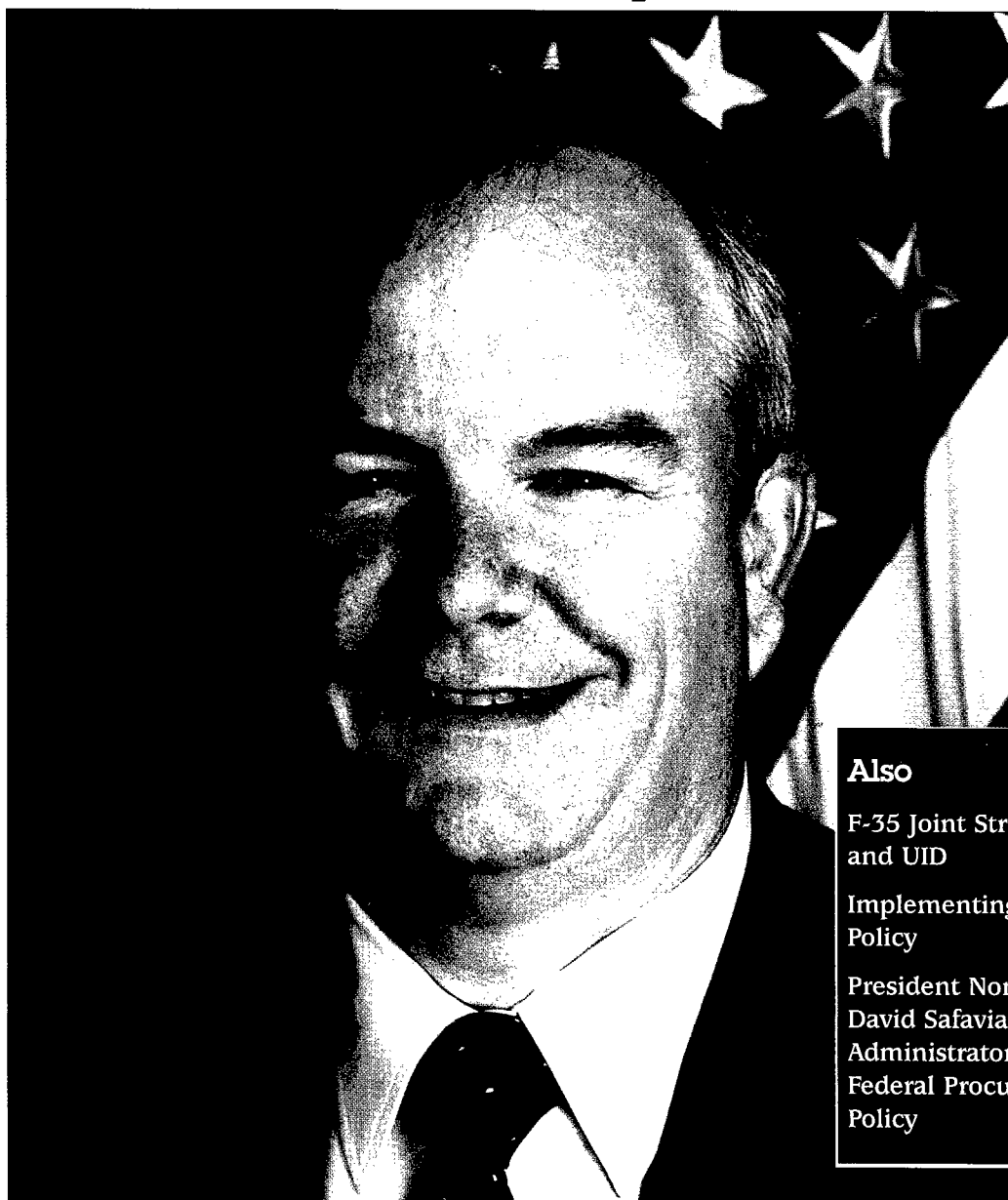
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Jan-Feb 2004

A PUBLICATION OF THE DEFENSE ACQUISITION UNIVERSITY

Unique Identification (UID)— A DoD Business Imperative



Also

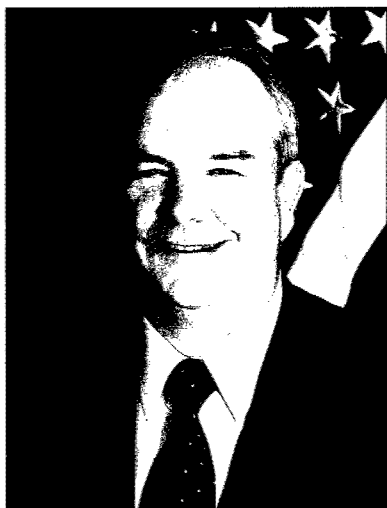
**F-35 Joint Strike Fighter
and UID**

**Implementing the UID
Policy**

**President Nominates
David Safavian
Administrator for
Federal Procurement
Policy**

**Defense AT&L Interviews Michael Wynne
Acting Under Secretary of Defense
(Acquisition, Technology & Logistics)**

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DEFENSE ACQUISITION UNIVERSITY



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Acting Under Secretary of Defense
(Acquisition, Technology and Logistics)
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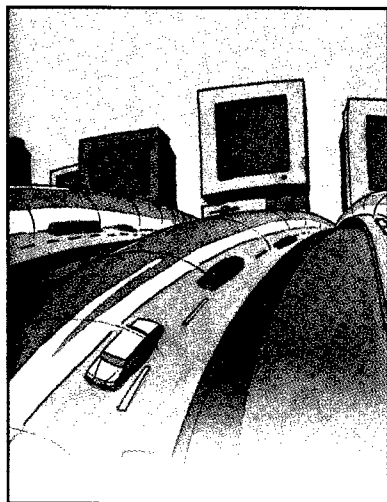
**The Privacy Act and Freedom of
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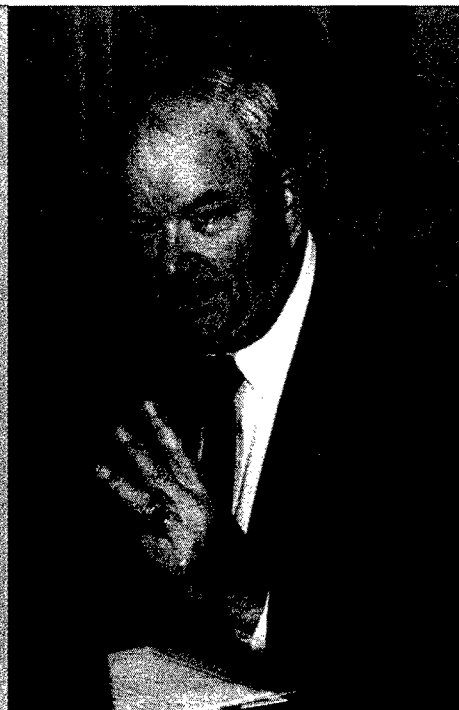
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Interview with Michael Wynne, Acting Under Secretary of Defense (Acquisition, Technology & Logistics)

Unique Identification (UID) Now Mandatory on All New Solicitations

Unique identification is the ability to physically distinguish one item from another. ... We view a unique identifier as a set of data for assets that one, is globally unique and unambiguous; two, ensures data integrity and data quality throughout life; and three, supports multi-faceted business applications and users.



On July 29, 2003, Wynne, acting under secretary of defense (acquisition, technology and logistics), announced a new policy for the unique identification of items that the Department of Defense (DoD) buys. Rob Leibrandt, deputy, Unique ID office and DAU liaison to the Office of the Secretary of Defense (OSD), interviewed Wynne for *Defense AT&L*. In the interview, Wynne expressed his conviction that UID will enhance engineering, logistics, contracting, and financial business transactions supporting U.S. and coalition troops. He explained how, through the new policy, DoD can consistently capture the value of items it buys, control these items during their use, better evaluate technical performance, and combat counterfeiting of parts. According to Wynne, UID is a business imperative for the Department, which has hitherto been without a universal method for parts identification.

Q.

What is a unique identification?

A.

Basically, unique identification, UID, is the ability to physically distinguish one item from another. Even though the items may be exact copies of each other, the unique identifier can be used to distinguish between them. We view a unique identifier as a set of data for assets that one, is globally unique and unambiguous; two, ensures data integrity and data quality throughout life; and three, supports multi-faceted business applications and users.

Q.

Why is unique identification important to DoD?

A.

Unique identification is a business imperative for the Department, which has been without a universal method for parts identification. Our vision for UID is to facilitate item tracking in DoD business systems and to provide reliable and accurate data for program management and accountability purposes in our engineering; acquisition;

financial; property, plant and equipment accountability; and logistics processes. Our goal is to accomplish this while relying to the maximum extent possible on international standards and commercial item markings and not imposing unique government requirements. Unique identification of items will help achieve integration of item data across DoD, federal, and industry asset management; improve item management and accountability; improve asset visibility and life cycle management; and enable clean audit opinions on item portions of DoD financial statements.

Q.

What has been the approach for defining unique identification?

A.

Following the first organized UID offsite in December 2002, I directed the establishment of an integrated product team (IPT) to lead the effort in defining the requirements for a UID policy and implementation. We have been most fortunate to have the dedicated participation and support of folks from the military services and OSD and that of our industry partners, associations, and international defense partners. This has truly been a demonstration in coordination and collaboration to ensure UID brings about positive transformation within the international defense supply chain.

Q.

How do you identify an item as unique?

A.

First, I would point out that UID is a mandatory requirement for all DoD solicitations issued on or after January 1, 2004. The focus of this requirement is on new equip-

ment, major modifications, and re-procurements of equipment and spares. We felt this was the most logical place to begin because it is easier to mark parts at the source of procurement—the manufacturing enterprise (that is, the prime contractor and vendor).

We are relying on current commercial practices to uniquely identify items that an enterprise produces. Unique identification depends upon a combination of data elements that is determined by how the enterprise serializes items. For UID there are two acceptable methods of serialization. The first is serialization within the enterprise identifier, whereby each item is assigned a serial number that is unique among all the items identified under that enterprise identifier and never used again. We look to the enterprise to ensure unique serialization within the enterprise identifier. The second is serialization within the part number, when each item of a particular part number is assigned a unique serial number within the original part number assignment. Again, we look to the enterprise to ensure unique serialization within the original part number.

Our DFARS interim rule on unique item identification and valuation was published in the *Federal Register* on October 10, 2003. One provision of the rule is for our contracts to include a requirement for commonly accepted commercial marks if it's determined that unique item identification or a DoD-recognized unique identification equivalent isn't required and that unique item identification isn't already marked. In these cases where it's not necessary to distinguish between individual items of a product, commercial marks could be used. These are such identifications as the global trade identification number (GTIN)—the most widely known being the universal product code (UPC)—the COMMON LANGUAGE® equipment identifica-

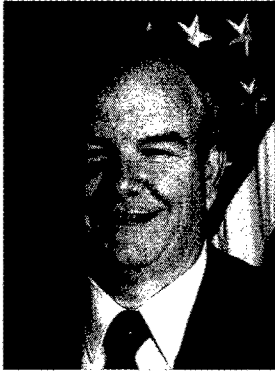
Our vision for UID is to facilitate item tracking in DoD business systems and to provide reliable and accurate data for program management and accountability purposes in our engineering; acquisition; financial; property, plant, and equipment accountability; and logistics processes.



MICHAEL W. WYNNE

ACTING UNDER SECRETARY OF DEFENSE (Acquisition, Technology and Logistics)

Michael W. Wynne is the acting under secretary of defense for acquisition, technology and logistics, a position he assumed May 27, 2003, upon the retirement of Edward C. (Pete) Aldridge Jr. Previously, he served as principal deputy under secretary of defense for acquisition, technology and logistics. The Senate confirmed him to this position on July 12, 2001.



Before joining the Department of Defense, Wynne was involved in private industry venture capital, nurturing small technology companies through their start-up phase as a member of the NextGenFund executive committee and serving in executive positions within two companies.

In 1999, Wynne retired as senior vice president from General Dynamics, where his role was in international development and strategy. He spent 23 years with General Dynamics in various senior positions. In between working with General Dynamics, he spent three years with Lockheed Martin, having sold the space systems division to then Martin Marietta. He successfully integrated the division into the Astronautics Company and became the general manager of the space launch systems segment, combining the Titan with the Atlas Launch vehicles.

Wynne served in the Air Force for seven years, ending as a captain and assistant professor of astronautics at the United States Air Force Academy, where he taught control theory and fire control techniques.

Wynne graduated from the United States Military Academy and also holds a master's degree in electrical engineering from the Air Force Institute of Technology and a master's degree in business from the University of Colorado. He has attended short courses at Northwestern University (Business) and Harvard Business School (PMD-42). He is a fellow in the National Contracts Management Association and a past president of the Detroit Chapter of the Association of the United States Army and the Michigan Chapter of the American Defense Preparedness Association. Wynne has published numerous professional journal articles relating to engineering, cost estimating, and contracting.

tion (CLEI) for telecommunications equipment, and the Health Industry Business Communications Council (HIBCC) code for non-pharmaceutical health care products.

We will also accept existing equivalent unique identifiers used in the commercial marketplace, provided that they meet our criteria for uniqueness. Thus far, we have identified three such identifiers for our use: the global individual asset identifier (GIAI), the global returnable asset identifier (GRAI) and the vehicle identification number (VIN). In addition to these equivalents, the data requirements of Title 14 CFR Part 45, Identification and Registration Marking, for aircraft, aircraft engines, propellers, and propeller blades and hubs are consistent with our UID constructs. Although it is not yet in widespread use, we do anticipate that the newly developed electronic product code (EPC) will provide us with another equivalent.

While items currently in use and in our inventories are not immediately affected by the policy, I have encouraged the component acquisition executives (CAEs) to identify, promote, and fund pilot programs to apply UID to legacy equipment and the supporting automated information systems. One notable example of legacy application of UID is the Army's effort in marking flight and maintenance critical parts on the CH-47 Chinook helicopter. I realize it will be a long road to implementation, but the sooner program managers (PMs) begin to plan for UID implementation and its effects on business processes, the smoother the transition will be.

Q.

In the policy memo, you impress upon the CAEs the need to ensure that program managers understand the criticality of requiring UID. What do you feel will be the impact for PMs and their related functional support disciplines?

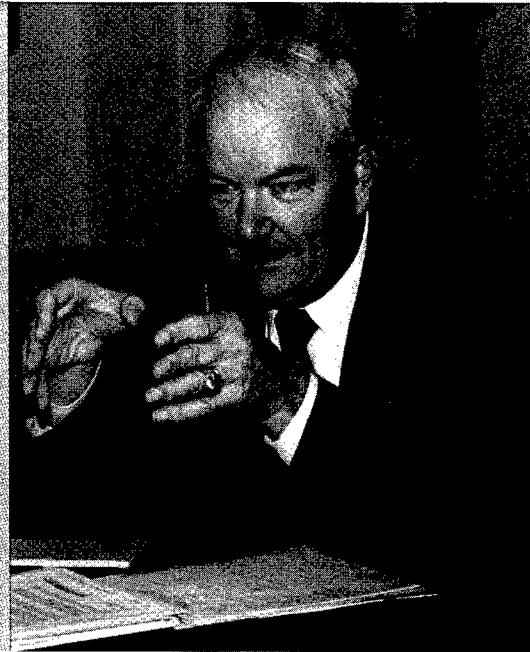
A.

We should all understand that the UID policy is intentionally broad in reach and will affect stakeholders throughout the supply chain. As I see it, the principal stakeholders are program and item managers and their supporting functional disciplines of engineering; acquisition; financial management; property, plant and equipment accountability; and logistics. Further, we have our industry counterparts in these areas to consider as well.

We expect UID to have the following outcomes:

- Engineering will provide for the seamless transfer of product data (specifications or bills of material) into the supply chain to allow for faster production ramp-up and to speed up engineering change processes.
- Acquisition will provide for establishment of requirements and the efficient capture of the UID data elements through the contracting process.

[UID] is a vital tool in the integrated digital environment that threads through our business enterprise architecture to provide financial integrity in acquisitions, stewardship of property and management of inventory. Most important, UID will take combat support to a whole new level.



- Financial Management will provide clean audit opinions on item portions of DoD financial statements.
- Property, Plant and Equipment Accountability will provide physical controls and accountability over tangible items to reduce the risk of undetected theft and loss, unexpected shortages of critical items, and unnecessary purchases of items already on hand.
- Logistics will provide improved asset visibility and life cycle management.
- The industry supply chain will provide enhanced ability to supply innovative, tailored products and to strengthen customer relationships, fostering better buyer-vendor partnerships.

Additionally, we expect to see greater simplicity, standardization, speed, and certainty in automated data capture and electronic information exchange throughout DoD and industry processes. And we've also provided standard contract language for the marking and evaluation of items, to smooth the way for a PM's implementation effort.

There's no doubt that implementation is a rigorous exercise in collaboration and coordination. Ultimately, we hope this will build stronger relationships between DoD, industry, and coalition partners.

Q.

What are the guiding principles for the implementation of UID?

A.

Our philosophy has been to specify the minimum essential elements necessary to achieve our objectives for unique identification of the Department's assets. To the maximum extent practical, we want to use the current

methods among our suppliers, including commercial practices. We will have a preference for international standards. This is in our best interest and the best interest of our coalition partners and industry as well. We have involved the international community and industry in the development of this policy and are continuing to collaborate with them for implementation. Internally, we're guided by our need for the integration of our efforts across the acquisition, financial, and logistics domains.

Q.

How does UID fit with other DoD initiatives?

A.

There is a complementary relationship among UID and ongoing initiatives in our transformation—at the OSD level and in the military services. The UID becomes an enabler that supports the programs for management of serialized items and asset visibility. It is a vital tool in the integrated digital environment that threads through our business enterprise architecture to provide financial integrity in acquisitions, stewardship of property, and management of inventory. Most important, UID will take combat support to a whole new level.

I have chartered the JRIB—the Joint Requirements Implementation Board—as a collaborative means for communicating, educating, and expediting UID implementation. The members of the JRIB, who are stakeholders from the acquisition, financial, and logistics domains, will coordinate the activities of working groups to develop UID business rules, reengineer business practices, and recommend pilot programs or demonstration projects. The JRIB will ensure that the implementation of UID fits the framework of our business enterprise architecture and facilitates transformation initiatives across the domains.

And now, specifically, there's a related initiative with radio frequency identification (RFID). On October 2, 2003, I signed a policy for use of RFID within the Department. As I said in the policy memorandum, we must take advantage of the inherent capabilities of RFID to improve our business functions and facilitate all aspects of the DoD supply chain. RFID-recorded events will be used as transactions of record within maintenance and supply automated information systems. We see the RFID initiative as a vehicle to extend and take advantage of the implementation of the UID policy by focusing on improved data quality, item management, asset visibility, and maintenance of materiel throughout our system. The RFID tag will increase our productivity in every process within logistics.

Q.

You mentioned earlier that the Department recently issued an interim DFARS rule on unique item identification and valuation. What are your expectations from industry with regard to the rule?

A.

The DFARS interim rule is a mandatory DoD requirement for all solicitations issued on or after January 1, 2004. It's my expectation that in the period between the release of the interim rule in October 2003 and its becoming ef-

fective on January 1, 2004, collaboration with our industry partners will continue and the specific language in the interim rule will be finalized with no negative impact to our long-term implementation schedule.

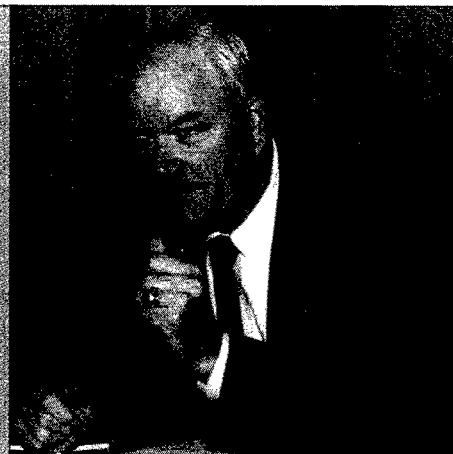
Q.

Where can program managers find guidance for implementation of the UID policy?

A.

We've made the latest information available on our website at < www.acq.osd.mil/uid > and have included the policy memoranda, background information, terms of reference, documentation of team activities, frequently asked questions and answers, and so forth. The Department of Defense Guide to Uniquely Identifying Items is posted there and provides a comprehensive treatment of the subject, with information for program managers to apply to their individual program circumstances. We've also posted DFARS guidance, which is essential for contracting officers to incorporate in their solicitations and contracts. And finally, many of the ongoing implementation efforts are being coordinated through the UID program office. LeAntha Sumpter leads this office, and her deputy, Rob Leibbrandt is the primary UID point of contact.

There's no doubt that implementation is a rigorous exercise in collaboration and coordination. Ultimately, we hope this will build stronger relationships between DoD, industry, and coalition partners.



What is Unique Identification (UID)?

A Unique Identifier (UID) is a data element that differentiates one item from another. Assigning a UID to an item serves two purposes: to enable the association of valuable business intelligence throughout the life cycle of an item and to ensure accurate capture and maintenance of data for valuation and tracking of property and equipment (Figure 1).

The Mechanics of Unique Identification

There are two methods to construct the UID for an item: (1) Serialization within the Enter-

FIGURE 1. What a UID is and What It Isn't

A UID Is

- A Data Element
- A Unique Identifier for an Item
- Globally Unique
- Unambiguous
- Permanent
- Created by Concatenating Specific Data Elements

A UID Is Not

- A Medium for Communicating Data, such as Radio Frequency Identification (RFID) Tags, Contact Memory Buttons, Linear Bar Codes, or 2-D Data Matrices
- A Replacement for the National Stock Number
- Intelligent Data that Yields Information About the Item

prise Identifier, called Construct #1; and (2) Serialization within the Part Number (within the enterprise identifier), called Construct #2. The UID data elements for the constructs are summarized in Figure 2.

Automatic identification technology (AIT) is used to mark (or write) the UID data elements on an item and to read

the UID using an automated reader. Marking the fully constructed UID on the item may not be required because the UID can be constructed from its component data elements as long as those elements are contained in the item mark. Data qualifiers (semantics) label each data element marked on the item. Data qualifiers can take one of three forms: alphanumeric Data Identifiers (DI), numeric

Application Identifiers (AI), or alpha Text Element Identifiers (TEI). For additional information on DoD-accepted data qualifiers (semantics), refer to the DoD Guide to Uniquely Identifying Items at <<http://www.acq.osd.mil/uid>>. Figure 3 shows the data qualifiers to be used in constructing the UID.

The current part number is not part of the UID. It is an additional, optional data element. Once the data elements are identified to the AIT device, the AIT device needs instructions on how to put the data element fields together to create the UID. The instructions are referred to as message syntax. For items that require a UID, DoD requires syntax that follows ISO/IEC 15434, Information Technology—Syntax for High Capacity ADC Media. Standard syntax is crucial to the UID, since the process of identifying and concatenating the data elements must be unambiguous.

Figure 4 shows examples of the data elements and their data qualifiers that are placed on the item. The figure further shows how the AIT devices would output the data elements in a concatenated UID according to the syntax instructions.

FIGURE 2. UID Data Elements for Construct #1 and Construct #2

Based on current enterprise configurations	UID Construct #1 If items are serialized within the Enterprise	UID Construct #2 If items are serialized within Part Number
UID is derived by concatenating the data elements IN ORDER:	Issuing Agency Code* Enterprise ID Serial Number	Issuing Agency Code* Enterprise ID Original Part Number Serial Number
Data Identified on Assets Not Part of the UID (Separate Identifier)	Current Part Number	Current Part Number

*The Issuing Agency Code (IAC) represents the registration authority that issued the enterprise identifier (e.g., Dun and Bradstreet, EAN.UCC). The IAC can be derived from the data qualifier for the enterprise identifier and does not need to be marked on the item.

FIGURE 3. Data Qualifiers Used in Constructing the UID

Enterprise ID	DI	AI	TEI
CAGE/NCAGE	17V		CAG
DUNS	12V		DUN
EAN.UCC		TBD	EUC
Serial No. w/in Enterprise Identifier			SER
Serial No. w/in Original Part No.	S	21	SEQ
Original Part No.	1P	01	PNO
Unique Identified (Including the IAC)	25S	8004	
Unique Identifier (Not including the IAC)	18S		UID
Current Part Number	30P	240	PNR

FIGURE 4. Data Elements and Their Data Qualifiers

UID Construct #1¹

EID DUN 194532636
Serial No. SER 786950



UN194532636786950

IAC EID Serial No.

UID Construct #2²

EID 12V194532636
Orig. Part No. 1P1234
Serial No. S786950



UN1945326361234786950

IAC EID Orig. Part No. Serial No.

¹This example uses Text Element Identifiers.

²This example uses MH10.8.2 Data Identifiers.

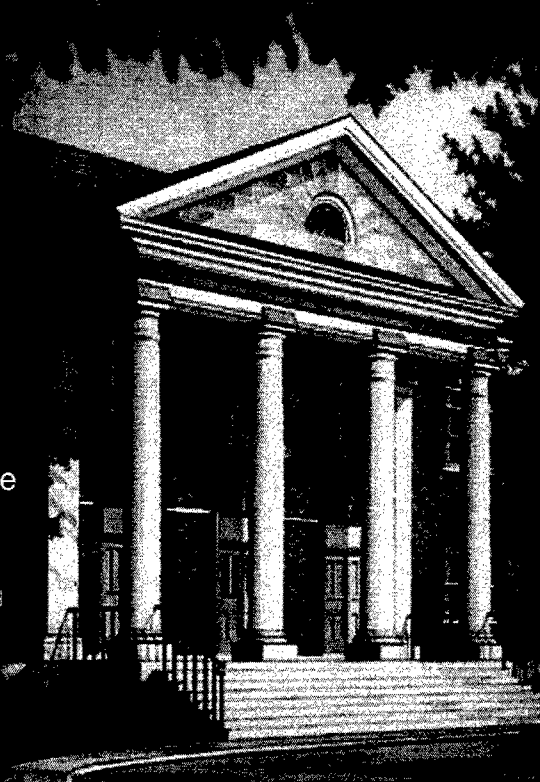
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The Balanced Scorecard and other Thoughts on Metrics

Krieg Address Focuses on Tools for Transformation

Christina Cavoli

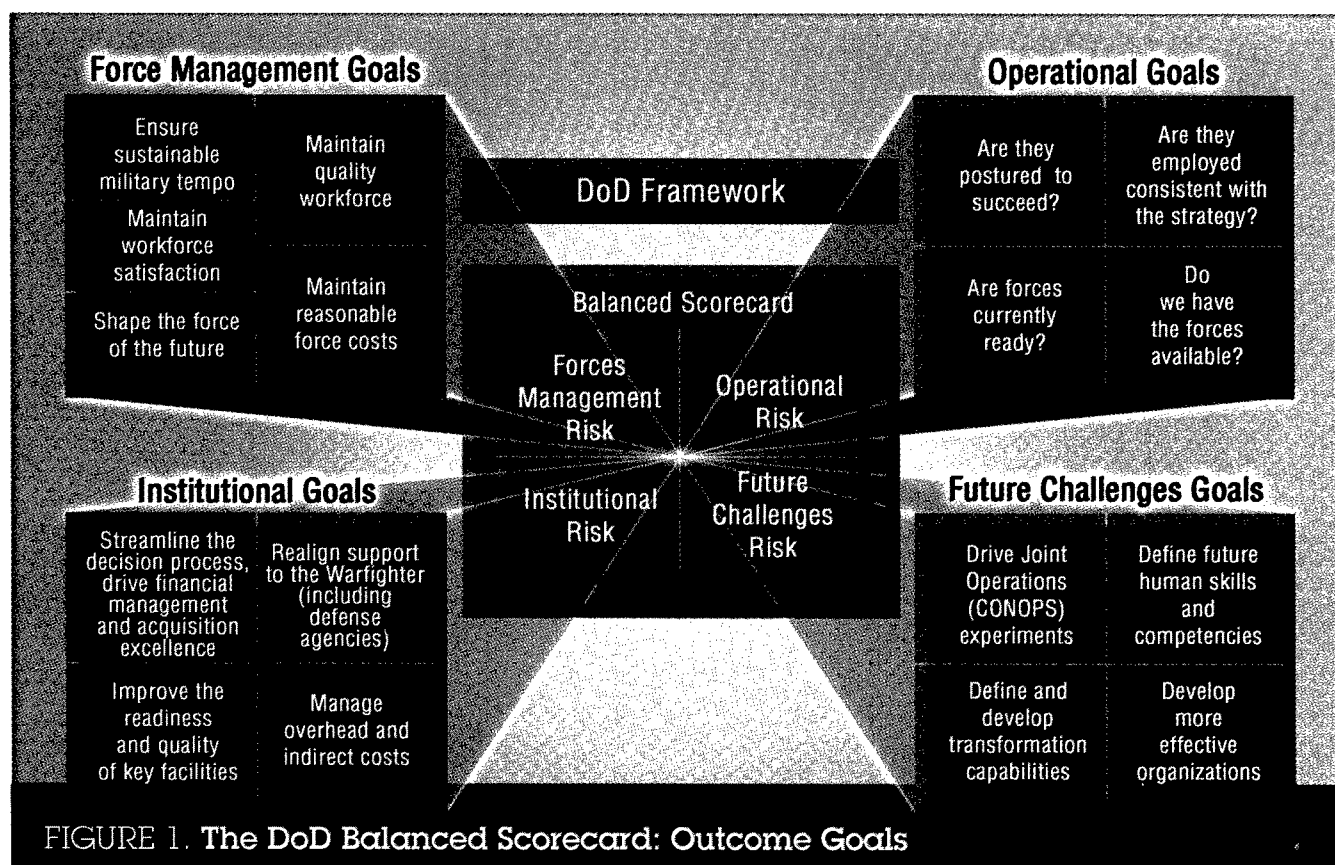


FIGURE 1. The DoD Balanced Scorecard: Outcome Goals

On Oct. 28, 2003, Ken Krieg, special assistant to the secretary of defense and director for program analysis & evaluation (PA&E), addressed DAU faculty and students on transforming the processes and decision tools in the Department of Defense (DoD). The address was also carried via video teleconference to all DAU regions and sites. As director of PA&E, Krieg is charged with changing the process of how we do business within the DoD. His presentation focused on an overview of the balanced scorecard system—

the what and why of metrics within the context of the DoD.

The Background: a Call for Transformation

A list of current U.S. defense priorities puts transforming the DoD as one of the topmost. Given such importance, "transformation" became a ubiquitous buzzword post-9/11. Everything began to be described in terms of transformation. Krieg pointed out that change must revolve around core priorities and must be explicitly defined: attaching the word "transformation" to every effort, transformational or not, rendered the term almost meaningless.

Cavoli is an independent contractor and regular contributor to DAU Press publications.

"Ninety-nine point nine percent of our time is spent arguing about what we should put in our coffers," he said. That is an input-based emphasis that focuses almost exclusively on the program instead of putting the energy into the output, which is the thrust of transformational thinking.

The Balanced Scorecard

So how can DoD move to a transformational view? The purpose of Krieg's organization is to provide the workforce with the appropriate tools for achieving these goals. One of the significant tools touted by PA&E is an idea taken from the private sector—the balanced scorecard approach, which gauges the performance of an organization, project, or system by taking into account measures from several perspectives. Coined in 1992 by Robert Kaplan and David Norton in an article entitled "The Balanced Scorecard—Measures that Drive Performance," this concept helps managers at all levels monitor results in key areas with the goal of becoming a strategy-focused organization.

While there's nothing new about using key measurements to judge the effectiveness of an organization, Krieg as-

"We measure everything, but by measuring everything and aligning nothing at senior levels, we really measure nothing."

serted, the balanced scorecard approach seeks to broaden the scope of the measures. It is not, therefore, simply monitoring present performance, but also capturing information about how well the organization is positioned to perform in the future. For a business, this means measuring not only the bottom line, but also customer knowledge, internal business processes, and learning and growth.

Krieg points out that the DoD faces challenges in implementing the balanced scorecard approach that the private sector does not. The DoD is not a commercial company with profit and loss concerns, but rather acts as an entire economy of its own. Its organization is complex, and requirements of the various parts are extremely diverse. Unlike in a corporate culture, change within the government is complicated by a multiplicity of bosses and goals—often within the same organization. Finally, the lack of a consolidated system makes collecting and measuring data exceedingly difficult. Data can often be painstakingly collected only to find no useful method for tabulating and evaluating them in a meaningful manner. "We measure everything," Krieg stated, "but by measuring everything and aligning noth-

Ken Krieg, Special Assistant to the Secretary and Director for Program Analysis & Evaluation (PA&E)

Ken Krieg currently serves at the DoD as special assistant to the secretary and director for program analysis & evaluation (PA&E). He leads an organization that provides independent advice to the secretary of defense in a range of areas, including defense systems, programs, and investment alternatives as well as providing 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 (SEC), a position he continues to hold. The SEC, composed of the secretary, deputy secretary, service secretaries, and under secretary of defense for acquisition, technology and logistics, is responsible for leading initiatives to improve the management and organization of the DoD.

Prior to joining the DoD, Krieg worked for many years in the private sector, most recently as International Paper's vice

president and general manager of the office and consumer papers division. He also served in a number of defense and foreign policy assignments, including positions at the White House, on the National Security Council staff, and in Office of the Secretary of Defense.

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

ing at senior levels, we really measure nothing.”

Four Scorecard Areas

Krieg asserts that metrics should be mapped out for all areas. The four proposed scorecard areas, each of which focuses on specific ways of controlling threats, are:

- Force risk management;
- Operational risk;
- Future challenges risk;
- Institutional risk.

Goals can be generated from each scorecard area (Figure 1). From each area’s goals, specific performance measures are identified and then monitored, measured, and evaluated. Figure 2 illustrates the progression from goals to metrics in the force management risk area.

Data can be gathered for three different levels of activity. Green metrics identify measurable, defined, and available data; yellow metrics assess performance that is measurable but not yet defined and for which data are unavailable; and red metrics provide a method for assessing performance even when tangibles have yet to be measured. The activity within DoD pertaining to each level breaks down roughly into thirds; using such a system to analyze performance of each of these levels is also a useful method for reporting results to Congress in annual Defense reports.

**New tools
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For the scorecard approach to work, metrics must be cascaded downward. Communication at all levels, linking strategies to avoid conflicting priorities, regular reviews, and established targets and goals are needed throughout an organization. Ultimately, junior-level managers making day-to-day decisions will have an invested feeling that the core, defined things they are expected to deliver will have an integral, measurable role in improving the enterprise and moving it forward. Krieg said, “People want to get stuff done and feel positive about it.” The communication link must circle back; without feedback and response, the balanced scorecard approach, he said, is “just another fad,” and added, “And I’m just another talking head.”

The current reality is that it takes five years to develop a war plan. Yet the world continues to change, perhaps dramatically and unexpectedly, while the details of the war plan are still being negotiated and hashed out. “The energy,” Krieg stated, “is in the wrong place.” New tools are necessary to allow a shift

from the historic view to a new way of thinking, and the balanced scorecard approach provides a method for reaching that goal and enabling the DoD to operate as a strategy-driven organization.

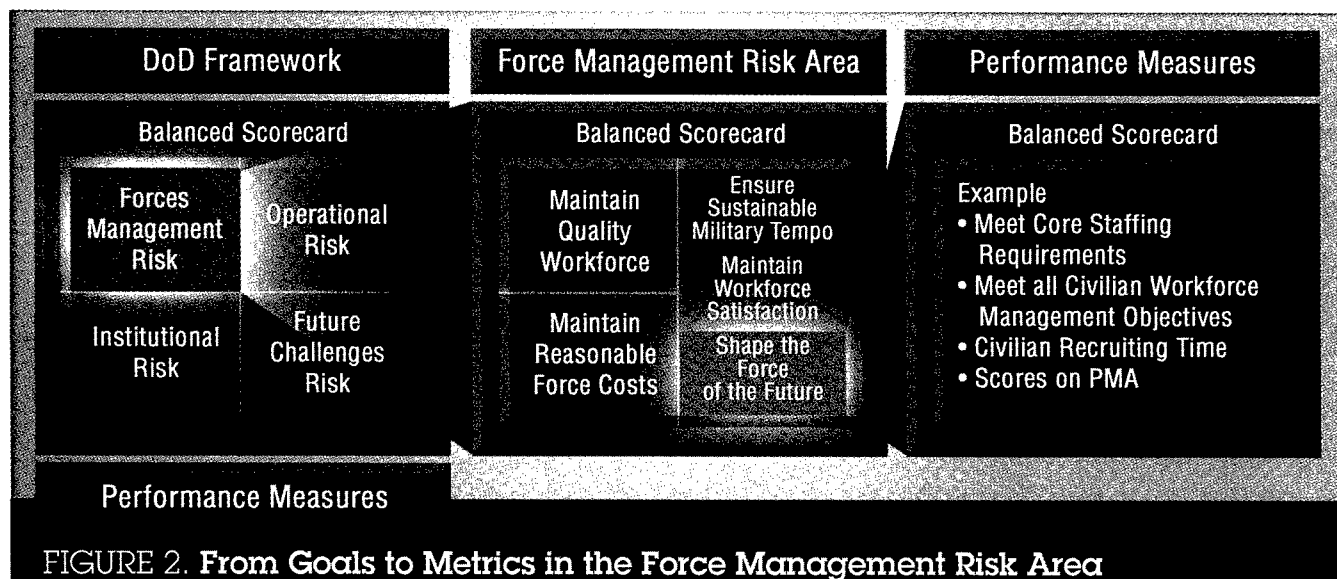


FIGURE 2. From Goals to Metrics in the Force Management Risk Area

F-35 Joint Strike Fighter and Unique Identification (UID)

Mitch Kaarlela

The Department of Defense's (DoD's) largest military contract is making good progress toward critical design review (CDR1). Part of this progress includes an innovative approach to total system performance and integration responsibility (TSPiR) and what is loosely referred to as contractor arms-around support. You are probably wondering what all this has to do with the unique identifier (UID). The Lockheed Martin-led Joint Strike Fighter (JSF) team of LM Aeronautics, Northrop Grumman and BAE SYSTEMS bid the JSF development program—system development & demonstration (SDD)—based upon the need for a technology advance in identification methods to affordably capture the part data we would need to execute our TSPiR duties.

This marked the beginning of our “automated identification” (Auto-ID) project on the JSF program. Our vision is to capture part traceability data on and off aircraft as easily as grocery stores register their items in and out of stock, and to maintain these data with their associated inventory valuation and product support elements. The message is clear: the Auto-ID approach has to be simple in design, easy to use, and affordable. It is encouraging to realize that our JSF vision for Auto-ID is similar in many ways to the DoD's UID vision. This indicates that independent organizations have recognized a common need and come to a common conclusion—automated part marking must be done to reap downstream data usage benefits.

Find a Champion and an Industry Standard

The relatively small LM JSF proposal team had only a few choices when it came to naming a champion for this new Auto-ID approach. As configuration manager, I took on the task of de facto Auto-ID champion since I was the first



Key players at the Auto-ID Phase II demo (left to right): Mitch Kaarlela, senior manager, JSF configuration management (Lockheed Martin); Julia Lujan, Auto-ID project, JSF configuration management (Lockheed Martin); Tim Trayers, JSF Program Office, systems engineering; and Ron McNeal, JSF Program Office, systems engineering.

Photograph courtesy Lockheed Martin

person to recognize the need and propose a solution. Not long after we started the Auto-ID activity, our JSF supply chain management folks recognized the long-term benefits of Auto-ID in part tracking and spares management, and they voiced unanimous support of our objective. This kind of large-scale cultural initiative requires more than just a kickoff meeting: it takes a champion with a completion-oriented personality to guide the endeavor through, otherwise the initiative will collapse in the heat of program implementation.

My first objective was to find the people interested in or concerned about JSF's plans for automated part marking and start building a team. I found that configuration management, supply chain management, information technology, production operations, and materials/processes showed the most interest. This group formed the nucleus

Kaarlela is senior manager - F-35 configuration management, Lockheed Martin, and has more than 20 years experience with the company and its heritage aerospace companies. He is industry vice chair of the Government Electronics and Information Technology Association's G-33 Configuration and Data Management Committee.

of what continues to be a regular, bi-weekly JSF Auto-ID/barcoding meeting. We also experienced a little luck in that a sister facility in Marietta, Ga., had recently transitioned to a mostly wireless barcode system and eagerly shared with us many lessons learned.

We decided that a fast way to get oriented on automated marking technology would be to ask industry associations and seek out U.S. industry best practices. Rule of thumb: Do not plow new ground if your industry association already has an affordable solution. For us in aerospace, that meant talking initially with the Air Transport Association and the Aerospace Industries Association. We also did an informal telephone poll of some other U.S. industry counterparts. The outcome of this benchmarking follows:

- In terms of the physical marking medium, one-dimensional (1D) Code 39-compliant barcode nameplates/labels was the most widely used and affordable solution.

Our vision is to capture part traceability data on and off aircraft as easily as grocery stores register their items in and out of stock, and to maintain these data with their associated inventory valuation and product support elements.

- In terms of the marking format technologies (typically referred to as automation "syntax" and "semantics"), the U.S. aerospace industry uses ATA Spec 2000 and its successor ISO-TS-21849 as the common standard of choice.
- There was no clear industry definition of what the minimum amount of information to be marked on parts should be. To resolve this, we sought out the most recent DoD large-scale aircraft program, the C-17, for help, and we adopted most of their model for our JSF use.

Armed with these data, I was convinced that the JSF program could implement an affordable automated identification solution. It would not be tremendously high tech, but it would fully sustain our production and support objectives.

Make Good Plans and Reduce Risk

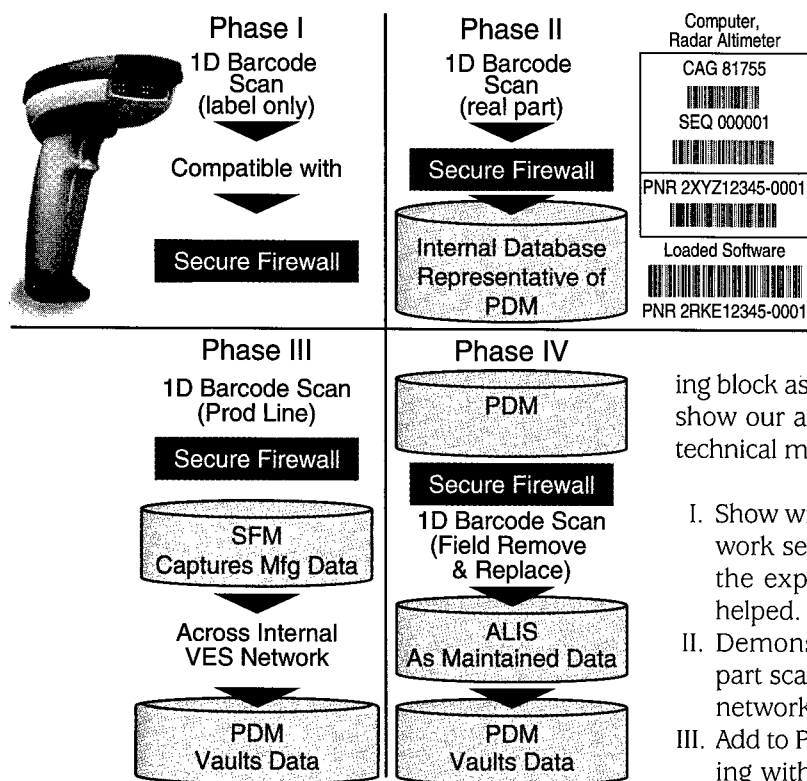
To address the cultural change in marking our parts, it seemed wise to start with a JSF barcoding vision. This vision was captured originally in a simple flow diagram outlining how we expected barcoding to be used in our manufacturing and assembly process. The diagram was expanded in fidelity and eventually grew into a JSF barcoding concept of operations (ConOps). In hindsight, I would recommend that a ConOps be written immediately and distributed to all the interested parties.

We next reviewed the whole Auto-ID task for JSF development and sliced it up into four major technical maturation phases.

Each phase was oriented around a key building block aspect of integrating Auto-ID such that we could show our approach was manageable and low risk. The technical maturation phases are summarized as follows:

- I. Show wireless compatibility within a complicated network security firewall system. This is an area where the experience from our Marietta, Ga., site really helped.
- II. Demonstrate actual data capture from 1D barcode part scan through a security firewall into a computer network and vault into a representative database.
- III. Add to Phase II the connectivity and integration, starting with our shop floor manager (SFM) system and

JSF Auto-ID Technical Demonstration Approach



ending in our product data manager (PDM) database.

- IV. Add to Phase III the capture and integration of the field user remove & replace/service/maintenance/overhaul data ("as-maintained") from our field logistics support database, Autonomic Logistics Information System (ALIS).

We have presently completed the first two of these demonstrations, on our way to a low-risk approach (bottom chart, preceding page).

Consider Your Culture

When implementing a new marking approach, consider the "culture" of the design and manufacturing workforce at your facility. I found that marking parts is one of a few fundamental tasks about which nearly all the JSF team members consider themselves experts. Moving self-declared experts to a new way of part marking can be a challenge, so do not underestimate the time and energy required of your champion. Another cultural issue to consider is the computer toolset that you will employ to achieve automation in part marking and associated data capture. Some product data manager (PDM) tools are more robust than others. Look for capabilities in allowing new fields, field length changes, key field sorting, and ad hoc reporting. So query your information technology (IT) people and see if your tool is nearing its capacity in terms of functionality, integration, or storage. On JSF, we are finding that some legacy computer tools are giving us arbitrary boundaries on things like field lengths in our databases.

Pick Your Approach, Communicate, and Act

Once we synthesized all the available input, JSF concluded that our approach to automated part marking and data capture was affordable and practical. The biggest challenge we faced was how then to communicate this vision to a team of thousands spread out geographically over eight time zones and to get everyone marching in the same direction. For JSF, this meant spreading the word through our biweekly barcoding meetings and getting the Auto-ID ConOps out to the team. Next we prepared a barcoding frequently asked questions (FAQ) sheet for our JSF integrated product teams (IPTs) and shared the FAQ with every IPT staff meeting we could find. As the new approach starts to take hold and personnel begin to realize its full implications, we are starting to hold regular IPT Auto-ID barcode question and answer sessions.

Not long after we started the Auto-ID activity, our JSF supply chain management folks recognized the long-term benefits of Auto-ID in part tracking and spares management, and they voiced unanimous support of our objective.

Don't Forget Your Suppliers

For suppliers, Auto-ID has meant two steps. First, we put the basic automated part-marking requirements in our standard supplier purchase order (P.O.) template so that all P.O.s include it. Second, we convene special JSF supplier configuration management conferences where we share the new part-marking approach plans and address supplier questions. We have also laid the groundwork with our suppliers for the understanding that the best-value affordable approach would invariably be two-phased: Auto-ID for JSF development and an improved approach (we now know as UID) for JSF low-rate initial production (LRIP). So we advised our JSF suppliers to be cognizant of this long-range plan and not to make any capital or facilities decisions in the next few years that would unnecessarily lock them into a single-phase approach. JSF is not completely finished, but we have made tremendous progress in moving a large program toward a new cultural approach.

Monitor Progress and Communicate Some More

We are continuing to monitor our progress toward Auto-ID implementation in our development program. We have found this to be a never-ending cycle of IPT recognition, angst, questions, practical implementation discussion, more questions, and then acceptance. We have found a few "outliers" in our monitoring, but mostly we see our team and suppliers trying their best to achieve the new part-marking approach. We are also formulating a backup plan for those instances—we hope rare—where our parts are received without proper markings so that we can get the parts marked correctly and feed our manufacturing/assembly operations. We also believe that the dynamics of our program are such that we will continue to spread the message of Auto-ID for JSF development to the new folks we regularly have coming on board the program.

Stay In Touch with the Changing Business Landscape

So how does all of this fit in with the UID initiative? That answer is coming in a minute. First, you must realize that it really does benefit a company to stay in touch with what is going on in our industry for new initiatives. JSF is staying closely informed with the Aerospace Industries Association (AIA), the Government Electronics and Information Technology Association (GEIA), and the Office

of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD/AT&L) for part marking. This involvement is how, back in early 2001, we first learned of the new movement, which culminated in a July 29, 2003, policy memorandum that directed what is now called UID. We believe that our JSF one-dimensional Auto-ID part-marking approach is approximately 75 percent common with the new two-dimensional UID part-marking initiative. Once UID is made a part of the JSF contract, we will start work on the technical and cost areas that comprise the approximately 25 percent area of difference between Auto-ID and UID. We believe that our two-step plan of Auto-ID for development (SDD) and UID for low-rate initial production (LRIP) and beyond assists in JSF's being affordable in the long term. We will continue to advise our supplier base of the two-step plan we are on and the latest insights for achieving that plan. We also plan to continue our risk-reduction demonstrations well into the next few years.

To conceptually move to UID for LRIP, we plan to adopt an approach focused on the parts that we were going to serial number track anyway. We call these configuration items/computer software configuration items (CIs/CSCIs). Our target is to have approximately 750 CIs/CSCIs on JSF, and they, therefore, would be the initial items to get a UID mark. Expansion of this quantity may be viable in the future depending on the lessons we learn in early LRIP from our contractor arms-around support activities. As it is implemented, UID is expected to contribute significantly toward total asset visibility in a spiral development process via our evolutionary acquisition system.

JSF is aware of upcoming technology advances in package marking and potentially in part marking—one example is radio frequency identification (RFID) tags. We understand and support the desire for continued technology improvement. We have questions regarding some of the new technologies. What, for example is the potential impact of adding many new low-power active RF emitters or passive RF reflectors to the JSF aircraft in terms of stealth requirements; potential weight increase for the RFID tags (including the lithium batteries); environmental disposal methods for lithium-based items since lithium is considered "hazardous"; and shelf-life change of the batteries? We plan to stay in touch with these new technologies as the implementation aspects are fully defined and challenges resolved for optimum benefit.

Keep The Rest of Your Company Informed

Because of the promising potential of the JSF Auto-ID work and the new DoD UID policy, Lockheed Martin Aeronautics is actively pursuing opportunities within our business unit to further spread these part-marking technologies. This effort includes a review of our legacy aircraft programs and supporting product lines. We continue to be involved in the DoD UID working group and industry association dialog that supports a technical implementation and that complements our best business practices.

Editor's note: The author welcomes questions and comments and can be reached at mitchell.l.kaarlela@lmco.com

NIMA Changes Name to National Geospatial-Intelligence Agency

**DEPARTMENT OF DEFENSE NEWS RELEASE
Nov. 24, 2003**

Today, the National Imagery and Mapping Agency was officially renamed the National Geospatial-Intelligence Agency.

The fiscal 2004 Defense Authorization Act authorized this change. The new name is the latest step in the agency's ongoing transformation efforts to ensure the nation's warfighters and senior policymakers receive the best geospatial intelligence possible in support of national security.

"In 1996, the National Imagery and Mapping Agency (NIMA) was chartered to bring together a variety of imagery and geospatial analysis disciplines into a totally new discipline—geospatial intelligence, or GEOINT," said the National Geospatial-Intelligence Agency (NGA) Di-

rector retired Air Force Lt. Gen. James R. Clapper Jr. "Geospatial intelligence is what we do, and our agency's name now properly reflects that reality."

The agency is both a combat support as well as national intelligence agency whose mission is to provide timely, relevant and accurate geospatial intelligence, or GEOINT, in support of our national security. GEOINT is the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the Earth. Headquartered in Bethesda, Md., National Geospatial-Intelligence Agency has major facilities in the Washington, D.C., Northern Virginia, and St. Louis, Mo., areas with support teams worldwide.

For more information, contact the NGA Office of Corporate Relations, Public Affairs at (301) 227-2057.

Implementing the UID Policy

The CH-47 Approach to Parts Marking

Col. William T. "Tim" Crosby, USA • Fred C. "Chris" Sautter

Over the past several years, the Cargo Helicopter Program Management Office (PMO) has been actively developing a life cycle management capability within the CH-47 Chinook fleet. This effort has been in response to the DoD 5000 requirement, which states that PMOs will be the total life cycle managers for their weapon systems. In the Cargo PMO, we expanded the guidance to focus all our efforts on reducing the burden on our soldiers. Thus we have named our logistics transformation effort "soldier-focused logistics" (SFL). To that end, our program consisted of adopting a fleet wide automatic information system (AIS) that would allow us to manage with the "power of facts." One of the key enablers for this AIS was the ability to interface with Automated Identification Technology (AIT) to provide error-free documentation of our aircraft and components across the fleet.

This article documents the path taken and the lessons learned by the Cargo PMO over the past several years in laying the groundwork for a parts-marking program, which is a key and essential part of our fleet management efforts. We will take you through the various steps leading to a proof of principle [*Editor's note: proof of principle is an engineering term describing areas of technical stretch in a design*] where we brought all the parts of the program together to demonstrate a seamless, end-to-end data solution. This capability has provided the warfighter with an effective tool for fleet management while at the same time, it has directly answered the guidance of the current UID policy to provide "intelligent data" to the Department of Defense (DoD) financial managers.

Cargo PMO Approach

When the Cargo PMO initiated its total life cycle management efforts several years ago, there was no one within



Soldier using the Advanced Maintenance Aid Concept (AMAC) maintenance management software.

Photo courtesy Reno National Guard

the PMO or Army Aviation who had not recognized the common problem. We were a large organization with virtually no financial understanding of what we owned or what it cost us to maintain that extensive inventory because numerous agencies were tracking metrics without synchronization. Accentuating the problem was the realization that the commercial sector had long ago solved these same issues. This was dramatically illustrated each time we went through a checkout line in our local grocery store or Wal-Mart: not only did they have the processes in place to provide us with our bill automatically, but they understood the impact our shopping cart had on their inventory and need to re-order. With a mindset focused on change, we launched a program to totally revamp the way we were doing business within the Cargo PMO.

Requirement: Process Change

A new management system enabled through AIT and parts marking could not be implemented without major

Crosby is currently serving as project manager for the Army's Cargo Helicopter Program, where he has been leading the efforts of Army Aviation to move into the digital logistics world. **Sautter**, an aerospace engineer who made the tough transition to logistician and life cycle manager, is currently working with the Cargo Helicopter PMO.



process re-engineering. While a bar code affixed to an item might seem to be an easy solution for identification, the implementation of this “new” capability within our existing acquisition and information systems required new thinking and new processes. Changes were required in government tech data, vendor and OEM engineering drawings, contract language, and—most important—our information systems. All our legacy processes required modification to accept this new form of data and provide it to the enterprise in a seamless fashion.

In order to address these issues, we took a focused approach to parts marking that included the following:

- Understanding how to mark parts and the costs of those marks;
- Defining the automated environment for this new information system;
- Obtaining a new AIS with the ability to deal with seamless data collection across the enterprise;
- Demonstrating through a proof of principal, the necessary process changes that were required to adopt this new effort.

Part Marking: Methodology and Costs

The first step along the path was to determine exactly the cost and effort to mark parts. While these requirements can be covered in contractual language for a de-

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velopment program, they can be an extremely expensive proposition for legacy weapon systems. As an example, a “simple requirement” imposed on our OEM to change a drawing can incur cost—anywhere from 40 to 80 billable hours. This single factor made previous efforts at legacy parts-marking programs prohibitively expensive. Because our fleet management effort required parts marking as a key enabler, another solution was necessary. We turned to the best commercial practices of the aviation sector, which had previously resolved this issue. Through a close working relationship among manufacturers, operators, and the FAA, process changes were adopted that reduced the billable hour requirements in most cases to less than 4 hours per part number.

Other issues that needed to be addressed before we could fully understand the cost of parts marking of a legacy weapon system were:

- At what physical location (depot, flight line) can parts be marked?
- Where do you place machine-readable code on parts?
- What techniques are required to create part marks for each family of parts?
- How do you control the data included on the marks?

To determine the information necessary to answer these questions, we contracted for the U.S. Army Aviation Parts Marking Demonstration Pro-

gram (Contract: DAAH10-00-C-0043, completed in September 2001) with the U.S. Army Aviation Applied Technology Directorate (AATD) at Fort Eustis, Va. This effort laid the foundation for weapon system managers to move forward with an understanding of the real effort they would need to invest in a parts-marking program to make it truly viable. The output of this demo was:

- A determination of the engineering effort required to obtain approval and air worthiness qualification to mark parts.
- A cross section of sample parts that were marked based upon a range of criteria, including different materials, paint, locations, and environment.

- A determination of the appropriate marking capabilities, from labels to direct part marks.
- The identification of four prime approaches to the marking of parts—
 1. Opportunistic (in the field);
 2. Gateways (supply and transport centers);
 3. Seek and Mark (mark a single type part world wide);
 4. Vendors and OEMs.
- An accounting of the costs to mark parts in legacy environment.

Parts Marking and the Larger Digital Environment

As we contemplated the move from our legacy, paper-based world into an automated maintenance environment (AME), it was necessary to fully understand the impact that changes like these could mean for the warfighter and the AIS. We wanted to get away from the historical approach (where agencies developed single-path solutions) and to adopt a more holistic approach that merged AIT, AIS, and the logistics processes across the environment. To that end, we requested and received funding from the Logistics Integration Agency, now called the Logistics Transformation Agency, to produce a concept of operations for AIT. Contracting with the Logistics Management Institute produced a report entitled "Concept of Operations for AIT in an Automated Maintenance Environment for Army Weapon Systems," AR130T1, March 2002 (referred to as the Con Ops). This document assisted us in defining the focus of our AIT implementation strategy, and it pointed to the critical aspect of that plan as we moved forward.

Data are the Key

The "I" in AIT is "identification." It was critical that each machine-readable code affixed to a part include the minimum data elements necessary to uniquely identify that part across the logistics environment. In the commercial sector, many organizations have different processes and different data elements that define "uniqueness." The Con Ops pointed out that within the DoD AME, there needed to be a clear and precise definition that could be enforced across the logistics community. This definition would register the unique identity for each component that equated to an individual "social security number."

The business rules that defined the uniqueness standard include the following:

- The mark must remain with the part for the life of the part.
- The mark must not change over the life of the part.
- The complete description of the mark has three data elements—
 - Serial number;
 - Enterprise ID (CAGE Code);
 - Part number.

The consistent application of these business rules was fundamental to permitting communication within the enterprise AIS.

AIS and AIT: Avoiding Confusion

There are many data-rich marking capabilities available today, among them contact memory buttons, RFID tags, and 2D bar codes. It is essential, therefore, when selecting the appropriateness of a particular marking technology, to separate the requirement for unique identification from the requirement to store large amounts of data. In the former case, you are looking to exploit the capabilities of the technology to support consistent and repeatable extraction of the part's unique identity. In the latter case, you are looking to exploit the storage capabilities of the technology in support of a focused, homogeneous process environment. Within the Con Ops, this gave rise to definitions of two purposes for AIT: **Primary**, which is to host the part unique identity and **Supplemental**, which is to store additional process-related data. The key point was that the Primary AIT was the UID criteria and would be the common medium across the logistics environment.

Interim Solution Most Critical

The most difficult aspect of a successful implementation of an AIT and AIS environment exists during the interim phase between today's legacy standards and the fully integrated objective system. As we ramp up our AIT program and start utilizing parts with machine-readable code, we are going to have to live for an extended period of time with a fleet that is not fully marked and an AIS that is not fully fielded. We must, therefore, be prepared to live with a mixed system, and the accepted wisdom is that this period will continue for roughly 10 years after the decision is made to mark all legacy parts.

This interim period imposes the requirement on our logistics information systems to retain a seamless link to the old and new data systems. For our parts-marking capabilities, this means that we must include "human-readable" marking with all machine-readable code. On the information side, it requires that our chosen AIS be capable of containing sufficient software intelligence to accept the data elements from both systems.

Defining Uniqueness in a Legacy World

The CH-47 Chinook was first fielded over 40 years ago. When we queried the Army agency responsible for serial number tracking, they informed us that they could not guarantee uniqueness of the data elements (CAGE code, serial number, and part number) that are currently on the components in the field. Searching through some of their databases yielded scores of suspected duplicate parts. The message was clear: we could not duplicate the existing data on our legacy parts using machine-readable code and hope to maintain the uniqueness standard.



Army Aviation was not unique in having this problem. The commercial aviation industry had faced and solved a similar difficulty. Their approach to guarantee uniqueness involved re-marking legacy parts with a new set of data elements to replace the legacy information. These elements were a Unique Component Number replacing the current serial number and a new Enterprise ID which took the place of the CAGE code. This solution provided the Cargo PMO with a path forward that fit within the Con Ops, provided a viable interim solution, could fit within our legacy databases, and guaranteed uniqueness across our fleet. Additionally, this solution fully complied with the DoD UID policy.

Dealing with the Information System

AIT means little without the information system to manage the useful data available in the machine-readable code. For the Cargo PMO, the effort to obtain a viable AIS was a parallel path to our parts-marking program. We had been on track to provide meaningful input into our life cycle management model for several years. The resulting AIS was designed to accept all types of data, but it contained additional software intelligence that helped filter the normal errors inherent in hand-entered information. Thus we were positioned to accept the capabilities of error-free AIT data when the capability of parts marking was fielded. We firmly believe that this up-front work on an AIS is what provided us with the ability to capitalize fully on the enabler of AIT articulated in the UID policy.

Proof of Principle

The proof of principle was a culmination of our individual efforts to exercise the required business process changes within our fleet management program. The core piece of the puzzle was to demonstrate that our AIS was

capable of handling and documenting the change from legacy "hand-entered" data to machine-readable code with a guaranteed uniqueness standard. The demonstration took place at our test site at the National Guard Chinook unit in Reno, Nev., where we are fielding a fully functional maintenance management system that is the backbone of our fleet management capability.

To create the marks and register the parts in our database, we contracted with ID Integration for a parts-marking facility that was the follow-on of the one developed during the earlier demo by AATD. This mobile facility was able to mark our selected parts and its web connectivity allowed us to register and document the uniqueness standard across our fleet.

The final element of the equation was the establishment of the necessary Web links to the Logistics Support Activity (LOGSA) and AMCOM at Redstone Arsenal. These two organizations are the Army agencies responsible for effecting and managing the necessary process changes to deal with a new automated environment. With all these elements together for the first time in August 2003, the Cargo PMO was able to successfully mark the first aircraft component in the field, using 1D and 2D bar codes and capture that data as part of the aircraft build structure. These first pieces of data are currently being used to exercise the necessary process changes to link the flight line to AMCOM in our UID process.

With help and guidance from the DoD UID policy group, the Cargo PMO validated the costs and demonstrated the process changes required for a weapon system manager to implement a parts-marking program that is part of the end-to-end connectivity required to provide "intelligent data" from the flight line to the DoD. While there remain processes within the financial architecture that require resolution, the uniqueness standard and the ability to mark parts in the field has been demonstrated and achieved. With UID as our critical enabler, we are well on our way to linking all the stakeholders in the life cycle management process, transforming logistics management with the power of facts.

Editor's note: The authors welcome questions and comments. Crosby can be reached at william.crosby@peoavn.redstone.army.mil and Sautter at chris.sautter@peoavn.redstone.army.mil.

Facing the Human Capital Crisis

Successful Recruitment Program Pilot at Edwards AFB

Rachel Schwarz

Human capital crisis. Over the past few years, it's become a common catchphrase within the Department of Defense (DoD). What exactly does it mean? Whom does it affect? And what is DoD doing to keep at bay the reality behind the buzzword?

According to a report (Feb. 2003) of the Performance Institute, a private think tank and leading authority on performance-based management practices for government agencies, over half the federal workforce is between the ages of 49 and 69. Over the next few years, 50 percent of the current acquisition, technology, and logistics (AT&L) workforce will be eligible for early or regular retirement. The percentage will continue growing until the number of people eligible to retire from the AT&L workforce reaches a predicted 70 percent in the year 2010. A loss of this magnitude is potentially debilitating for the federal government. As more senior personnel retire, the AT&L workforce will lose far more than just numbers: there will be a precipitous loss of workforce knowledge and experience. Without creating a strategic plan to reduce the impact of this enormous loss of human capital, DoD won't have the resources necessary to successfully carry out the organization's mission.

The human capital crisis is complex and involves numerous agencies within the DoD. The solution is no single quick-fix program, so the government is approaching the problem from several different angles. One specific approach involves the DoD's working with specific agencies to develop general methodologies that will be useful in future resolution of the human capital crisis.

DoD Initiates Pilot Program

Realizing the seriousness of the human capital situation facing DoD, the acquisition workforce and career management (AW&CM) office is taking action to implement processes and procedures to build up the workforce now so it will con-



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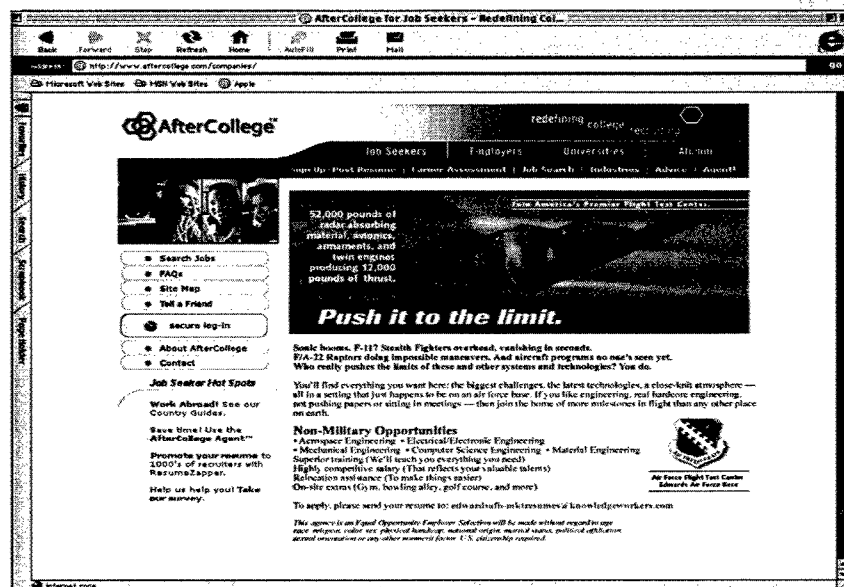
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Schwarz worked for the Acquisition Workforce and Career Management Office while on summer break from Baylor University, where she is currently in her junior year pursuing a bachelor's degree in business.

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to be strong in the future. To this end, in the summer of 2002, the AW&CM office contracted with Knowledge Workers, Inc., a Colorado-based firm specializing in human capital solutions, for assistance in meeting the challenge ahead.

As a first step, Knowledge Workers researched human capital problems within the AT&L workforce and drafted a proposal to prepare DoD for the future: implement a pilot program where Knowledge Workers could "demonstrate a standardized, metric-driven, and measurable recruitment action program paying particular attention to external, mid-level hires."

Site Selected

In the fall of 2002, AW&CM focused on finding an appropriate site to implement a recruitment pilot. "We wanted a location that was having problems," says Steve Tkac, program sponsor, AW&CM office. "Since strategic planners told us the AT&L workforce's greatest need was in engineering, we especially wanted a pilot location with vacancies in engineering career fields. And we really wanted to challenge the system with difficult circumstances."

Edwards Air Force Base (AFB), located in the heart of the Mojave Desert, met the requirements for the recruitment pilot site, and on Jan. 1, 2003, the Edwards Air Force Base Pilot was born. "Having the opportunity to go to Edwards and work with people with similar vision, people who were willing to challenge the system, was a blessing," says Tkac.

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The Edwards Air Force Base pilot created a proactive approach to fighting the human capital crisis, one based on targeting the needed personnel and going after them at the Web sites they visit or the universities they attend.

Existing Processes Researched and Re-engineered

When Knowledge Workers began their work at Edwards AFB, they found a human resources staff that was overwhelmed with paper and unable to give applicants as efficient and responsive support as they would have liked. Knowledge Workers also discovered a passive recruiting approach (attending job fairs and posting jobs on government Web sites), bland marketing materials, and no formal relationships with universities.

To fully understand the hiring process and practices used at Edwards AFB, Knowledge Workers conducted in-depth interviews with key hiring authorities within the Edwards human resources and hiring directorates. From the information gathered in the interviews, Knowledge Workers created the existing, "as-is" process map.

The validated map was then used to determine key points, meaningful to Edwards, to measure recruiting results within the Edwards process. Once the combined Edwards and Knowledge Workers team had selected measurement points, the workflow was embedded in Knowledge Workers' applicant tracking system. This allowed for the automatic capture and reporting of hiring productivity measures in a fully Web-enabled dashboard-style reporting tool that gave key Edwards and DoD decision makers real-time access to applicant data and hiring metrics. Once the basic redesign of the application and hiring system for engineering jobs at Edwards was established, Joe Weiner, Knowledge Workers' managing director, led the pilot team through the creation of a new, more user-friendly Web-based applicant sourcing system that would challenge the conventional recruiting model and bring 21st century technology to Edwards. Now potential employees can search for available engineering jobs in their specific fields and apply online, and recruiting coordinators can respond quickly to qualified candidates. This quick response encourages more candidates to stick around longer in the application process and has resulted in a much larger candidate pool for base engineering jobs. In addition, moving the application process online allows Edwards to track steps in the hiring process more effectively.

Online Visibility Improved

Edwards AFB also increased its visibility in the electronic world, thereby making it easier for potential employees to find their Web site: <<http://www.edwards.af.mil/>>. "We didn't want to simply post jobs on USAJOBS and hope people would find them," explains Tkac, "We wanted to actively pursue passive job seekers who may never have considered working for the DoD." So Edwards entered into a commercial arrangements with Google.com, Aftercollege.com, and Fast-Web.com among other search engines. In the case of Google, when someone browsing the Web entered certain keywords (such as "avionics design," "military aircraft," "electrical engineering," etc.) Google sent the searcher an electronic postcard with a direct link to the Edwards Web site.

New Branding Developed

In addition to improving the application/hiring system, Knowledge Workers, with their partner Bernard Hodes Group, developed a new branding and marketing plan for engineering jobs. "Edwards AFB is regarded as the world's top flight test center," says Tkac. "We wanted their brand to portray that." The new branding design reflects the "Edwards swagger" and is used in recruiting brochures, banner ads, university relations flyers and posters, and an upcoming interactive recruiting CD-ROM—all designed for maximum appeal to the engineering professionals that Edwards seeks and to point potential applicants to the Edwards AFB Web site.

Focus Turns to University Outreach

The team next directed their efforts at reaching out to local universities. Edwards worked initially to develop a close relationship with California State University at Northridge (CSUN). There were two primary reasons for choosing this school over other universities in the area. One, the University has a strong engineering school; and two, it is the nearest four-year university campus to the base.

Knowledge Workers, on behalf of Edwards, initiated the relationship with CSUN, first visiting the Northridge campus to meet, S. T. Mau, dean of the college of engineering and computer science, and several members of his faculty and to learn more about CSUN. Weiner also wanted to understand the dean's attitude toward Edwards AFB as a potential employer of Northridge students. "I can recall vividly the lunch meeting with the dean and his department chairs," he says. "I asked them what they knew about Edwards Air Force Base and was told it was 'hot as hell and in the middle of nowhere.' Given that comment, I knew we needed to change

the view held by this key leadership group before we could ever develop a relationship at the student level."

Site Visit

The initial overtures made, Edwards AFB arranged a site tour for Mau, the department chairs, and student group leaders to show them the cutting-edge engineering facil-

Over the next few years, 50 percent of the current acquisition, technology, and logistics (AT&L) workforce will be eligible for early or regular retirement. ...

A loss of this magnitude is potentially debilitating for the federal government.

As more senior personnel retire, the AT&L workforce will lose far more than just numbers: there will be a precipitous loss of workforce knowledge and experience.

ities at the base and give them an introduction to the career paths available at Edwards for CSUN students. Edwards engineers who had graduated from CSUN participated in the tour to interact with their former professors, telling them about their jobs and how their education had helped prepare them for their careers. "This was a critical part of the pilot," says Tkac. "In essence what we were doing was recruiting recruiters. These professors and advisors have tremendous credibility with their students, and now they are telling them, 'You should consider Edwards.'"

Meet Edwards Nights

Next, "Meet Edwards" nights were held on campus and tour days arranged for professors and students to visit Edwards and learn about life at the base. The initial Meet Edwards event was well publicized with a goal for attendance of 25 to 30 engineering students. The final attendance count was 210 students, many from the Honor's Co-Op program. These efforts made a lasting impression on the professors and students who participated. As a result, Edwards Air Force Base now has great credibility at California State University Northridge. "I believe the relationship we have developed with Cal State Northridge is the most valuable part of the pilot," says Paul Tierney, chief, avionics systems integration at Edwards.

Edwards Scholarship Program

The next step to building a strong and continuing relationship at CSUN was establishing an Edwards scholarship program for students in the school of engineering. Edwards has plans to give up to eight students \$2,000 scholarships when they participate in a paid summer internship program at the Air Force base. Not only will these students receive money towards their college education, they will also receive compensation for their summer work, gain experience in the engineering field, and make valuable contacts for job applications after graduation.

Edwards personnel invested considerable time and effort in building the relationship with CSUN, and the investment paid off. Mau and many professors and students from CSUN now genuinely believe Edwards is a good place to begin an engineering career. "The people at Northridge were pretty skeptical when we first showed up there," says Weiner, "but now that we've spent time developing a relationship with them, I think they really respect us."

Edwards Reaps Benefits

So how have all these changes impacted Edwards AFB overall? As of Sept. 30, 2003, Edwards had hired 23 engineers, and that number would have been much larger if not for the changing mission objectives related to Operation Iraqi Freedom, which delayed personnel hiring decisions. Edwards now has in excess of 7,600 engineering applicants being actively tracked against 102 positions, with nearly 600 applicants against open requests for per-

sonnel action (RPAs) for future hiring. Average days to fill an open position have been reduced by 46 percent. Average days for a new hire to start work have been reduced 33 percent. All of this was accomplished with a modest DoD pilot investment. In addition to faster hiring of better qualified applicants, the Knowledge Workers Applicant Tracking System and HRDashboard Metrics Reporting Tool have allowed Edwards hiring managers and engineering recruiting support staff to be more strategic in their hiring on base.

Jan Taylor, chief of affirmative employment at Edwards comments, "My team initially expressed concern that the new system would be more time consuming and would add to their current workload. But after training from Knowledge Workers, and as they have become familiar with the automated nature of the applicant work flow and database, they really like the system's ease of use and their ability to tell applicants their current applicant status." This is confirmed by Nancy Cox, engineering recruiting coordinator for the avionics systems integration division at Edwards. "Knowledge Workers tools and technology save me at least 50 percent of my day in dealing with applicants and hiring managers," she says. "I now have a system that allows me to track all applicants to the manager level and know in real time exactly what their status is when they call to ask."

Double Payback

The Edwards pilot was valuable for both Edwards AFB and Knowledge Workers. "I look at what we have now as a pick list of supplies, methodologies, and strategies to position Edwards for hiring success well into the future," says Weiner. And not only will the lessons learned at Edwards AFB allow the base to continue to expand and reach out to new candidates, but Knowledge Workers, too, can use what they learned at Edwards as benchmarks when they implement similar methodologies at different sites throughout the nation.

The Edwards Air Force Base pilot created a proactive approach to the human capital crisis, one based on targeting needed personnel and going after them at the Web sites they visit or the universities they attend. It's an approach that says, "Our jobs and our mission are important to you. If you join us, there will be exciting opportunities to develop yourself and your career." It speaks for the success of the pilot that the Department of the Air Force has decided to take over and continue the Edwards pilot and to fund a spiral activity that will reproduce the Edwards successes at up to seven additional Air Force bases in 2004.

Editor's note: Comments and questions should be directed to Steve Tkac at steve.tkac@osd.mil.

Best Manufacturing Practices Survey of Navy's Directorate for Missiles and Surface Launchers

A Process for Benchmarking Program Management Office Teams and Processes

Larry J. Halbig • Thomas A. Harvat • Cmdr. Frederick F. Schulz, USN

On July 11, 2002, the leadership, management, and process champions of the Department of the Navy's Directorate for Missiles and Surface Launchers (PEO TSC-M/L) received a debrief on the results of a best manufacturing practices (BMP) survey of their organization. During their briefing, the BMP survey team co-chairs reviewed the on-site activities conducted during that week; summarized the team's findings in each area surveyed and conducted feedback; provided a draft copy of the BMP survey report for organizational review and comments; thanked the host organization for the invitation to validate its best practices; and welcomed them into an expanding network of excellence.

Shortly after his appointment as under secretary of defense for acquisition, technology, and logistics (USD (AT&L)) in 2001, Edward C. "Pete" Aldridge Jr., announced that the top five goals on his agenda to sustain acquisition excellence were to:

- Improve the credibility and effectiveness of the acquisition and logistics support process.
- Revitalize the quality and morale of the AT&L workforce.
- Improve the health of the defense industrial base.
- Rationalize the weapon systems and infrastructure with our defense strategy.
- Initiate high-leverage technologies to create warfighting capabilities and strategies of the future.

By this time, the men and women of the Navy's STANDARD Missile Program management team had already embarked on a series of activities in keeping with these goals, with successful results. As part of its continuous process improvement efforts, leadership considered obtaining independent validation of its practices using an

In today's environment of highly sophisticated and complex warfare, where a single failure can destroy combat resources, bring about undesirable political consequences, and—most important—imperil human life, it is vital that program management functions be performed to the highest standards of excellence, using the best practices available.

outside team of subject matter experts (SMEs). By benchmarking with the best, the program management office (PMO) believed it could obtain feedback from teams of experts; avoid costly mistakes through reduced reinvention, duplication, and risk; and raise the bar for others by sharing capabilities of the STANDARD Missile team. The BMP survey process provided a credible resource.

This article is intended to provide the AT&L community with information on an available process to benchmark

Halbig is a process champion for BMP surveys with the Best Manufacturing Practices Center of Excellence (BMPCOE). Harvat is a program management analyst with the Surface Ship Weapons and Launchers, Program Executive Officer for Integrated Warfare Systems (PEO IWS 3A). Schulz recently retired from the U.S. Navy as a commander. He served as a member of the DAU faculty, teaching manufacturing management, systems engineering, and acquisition topics.

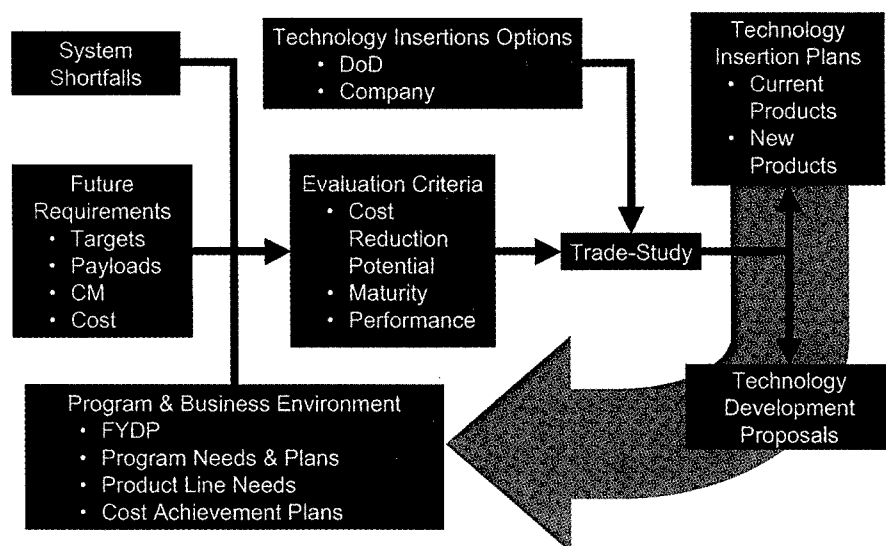


FIGURE 1. **Technical Evaluation and Selection Process**

PMO teams; to enable participants to share individual and organizational perspectives and insights on how the process can add value to all parties involved; and to solicit ideas from others on opportunities for the STANDARD Missile team to continue process improvement efforts already under way.

PEO Organizational Mission

The PEO TSC-M/L (formerly the STANDARD Missile Program office (PMS 422)), is responsible for cradle-to-grave management of the STANDARD Missile Program (including all variants). This responsibility includes concept formulation, design, development, integration, acquisition, test and evaluation, fleet introduction, modernization, and life-cycle maintenance. All functions of the team are performed in a manner consistent with Department of Defense (DoD) acquisition policies and regulations. The PMO team consists of 85 geographically dispersed men and women (both government employees and contractors) and is headquartered in Arlington, Va. PEO TSC-M/L continues to meet the Navy's needs while evolving the STANDARD Missile Program through the application of new technology and best practices. As a result of a recent reorganization, the PEO TSC-M/L is now the program executive office for integrated warfare systems, surface ship weapons and launchers (PEO IWS 3A).

BMPCOE Mission

An Office of Naval Research (ONR) activity, the mission of the Navy's BMP program is to provide support to the fleet by identifying and promulgating the use of best practices throughout industry to improve weapon system performance. The BMP Center of Excellence (BMPCOE), located in College Park, Maryland, is a Navy manufacturing technology program in partnership with the Department of Commerce (DoC) and the University of Maryland. This technology transfer collaboration between government,

industry, and academia is further leveraged by 10 regional satellite centers through voluntary agreements with host organizations. BMPCOE's core competencies include on-site surveys, systems engineering (including risk management), and Web technologies. The BMPCOE serves as a national resource to improve the quality, reliability, and maintainability of the goods and services delivered by the national technology and industrial base.

Critical Thinking—Connecting the Dots

It was while he was a student at the Defense Acquisition University (DAU) that Clay Crapps, deputy program manager for PEO TSC-M/L, first learned about the BMP program. Ex-

ploring the BMP database, he saw the diversity of organizations previously surveyed by BMP teams (including small, medium, and large; government and commercial; both manufacturing and service); and documented practices (including funding, design, test, production, facilities, logistics, and management). At first glance, not many of the practices appeared to apply to a government program office. What was missing was a BMP survey of a DoD PMO. The BMP survey process appeared sound, so Crapps decided to invite the BMPCOE to survey his outfit. "We are always looking for ways to better our processes or performance," he says.

Conducting the PMO Survey

The BMP survey of the PEO TSC-M/L was conducted and completed as planned and on schedule, in accordance with a mature and documented process. During the months of April and May 2001, the PEO TSC-M/L management team process champions developed a list of their best practices. Crapps sent a letter to the BMPCOE director formally requesting a BMP survey of the organization. The first challenge was informing members of the PMO team. Educational briefings and discussion meetings got the word out that a BMP survey is not an audit or an inspection; rather, it's a cost-effective way to promote the things an organization does best and obtain feedback from SMEs on ways to improve organizational practices.

The next issue was to identify the best practices the BMP team was to survey. "We knew we were working hard and doing some good things," says Crapps. As the first program office to be surveyed by the BMPCOE, process champions were not sure which processes would be seen by the BMP survey team and the community as "best." Working with representatives of the BMPCOE, the program office developed, refined, and presented a list of topics. During the pre-survey visit, the PEO TSC-M/L identified 23

Anatomy of a BMP Survey

Developing a List of Presentations

An organization's first step in preparing for a BMP survey is to develop a list of items that it does well and wants the survey team to evaluate. The list should not include anything the organization does not wish published in the final report (classified or proprietary items, for example). Each item on the list should be accompanied by a brief description of the process or practice. The typical number of topics presented during a BMP survey ranges from a minimum of 15 to over 100, depending on the size of the organization.

Organization Invitation

The process begins when the BMPCOE director receives a letter from the host organization (signed at an appropriate management level). The organization should identify a desired target date for the survey and an organizational point of contact (POC).

Hosting the Pre-Survey Visit

Eight weeks prior to the survey, the survey team chair and one or two BMP representatives conduct a one-day pre-survey visit to the facility. Agenda items include an overview briefing of BMP and the survey process; an organizational overview briefing and facility tour; reviews and discussions of proposed topics; and administrative details (including security clearance procedures and on-site logistical support for the survey team members).

Survey Team Preparations

Based on the pre-survey visit, the survey chairperson develops and executes a BMP survey plan. The team's organization is determined by the categories of topics to be presented. Team member selection is based on individuals' knowledge

and experience in those areas. (BMPCOE maintains a U.S.-wide pool of approximately 150 subject matter experts from government, industry, and academia.) Prior to the survey, a list of team members and their biographies is provided to the host organization to allow the organization to review qualifications and eliminate team member(s) that it would prefer not be included.

The On-Site Survey

A BMP survey consists of a five-day visit to the facility (typically commencing on a Monday afternoon and concluding early on the following Friday morning).

- **Day 1:** In-processing; welcome and introductions; organizational overview; and facility tour.
- **Days 2 and 3:** Process champion presentations of their best practices (briefings and process demonstrations). As many as six presentations per day for each team may be scheduled concurrently. These are typically not more than one hour in length, including time for questions and answers and tours. BMP survey teams work to organizational schedules to minimize disruptions to enterprise operations.
- **Day 4:** The survey draft report is prepared by the BMP team.
- **Day 5:** BMP survey team debrief/feedback with enterprise management, staff, and presenters. A draft copy of the survey report is left with the organization for review and comment. While BMPCOE controls the process ratings, the organization controls the data.

Post-Survey

The enterprise approves the draft survey report. The survey report is posted on the BMP Web site. Abstracts are added to the BMP best practices database. BMPCOE publishes and distributes hard copies of the survey report.

items for presentation to the BMP survey team and designated Thomas Harvat as the organizational point of contact. The BMPCOE director, Anne Marie SuPrise, designated Rick Schulz and Larry Halbig as survey team co-chairs. The 23 topics were organized into five best practices categories: design (two topics); test (four topics); production (two topics); logistics (one topic); and management (14 topics). For the survey, the co-chairs selected a team of 10 individuals from a cross section of industry, government, and academia (including DAU; Naval Surface Warfare Center (NSWC) Corona; NSWC Crane; Computer Sciences Corporation (CSC); the BMPCOE; and the DoC.

The on-site survey was conducted July 8 - 11, 2001. During the survey, PEO TSC-M/L presenters provided in-depth descriptions of their practices and the benefits derived from them by the PMO. The BMP survey team validated, documented, and assessed each practice presented and exchanged knowledge and recommendations derived from their own experience and from the BMP best practices database.

Survey Process Results

The BMP survey team validated 16 PEO TSC-M/L practices as among the best in use throughout government and industry. Included are:

- The strategic planning and technology management process—to identify and use new technology and process priorities for insertion into current and future programs (Figure 1, Technical Evaluation and Selection Process, page 25).
- The Configuration Control Board—which streamlined the directorate's change control process by adopting a more parallel procedure that facilitated a timelier approval cycle and avoided expensive delays.
- The revision of the Missile Document MD-57104—a comprehensive process that consolidated systems engineering, quality, and reliability requirements.

- Government program office/contractor co-location—which improved communication.

The full BMP survey report is available on the BMP Web site at < www.bmpcoe.org > .

Firsts for BMPCOE

"We were thrilled to receive Clay's invitation," says SuPrise. "Though the BMP program has conducted many surveys of government enterprises [including all services, operational fleet units, and support activities at various echelons] this was our first survey of a PMO."

At first glance, some might consider surveying a PMO to be a stretch for the BMPCOE, but the majority of the best practices recently validated have been in the management area (currently 33 percent of the total BMP database). "For this survey, my vision was to rely heavily on our partnership with DAU, the DoD program management functional gurus," adds SuPrise. While members of the DAU faculty had served on teams for previous BMP surveys of industry, having a DAU member as co-chair of the team this marked another first. "DAU came through like champs," says SuPrise. "Benchmarking DoD PMO teams is a logical and essential step in the evolution of the BMP survey process. Partnering with the DAU provides an exceptional resource of SMEs for our BMP survey teams."

A Survey Team Member's Perspective

"I found great value in my participation on the BMP survey team, and highly recommend that DAU faculty and staff actively seek to participate on a survey team," says DAU faculty member Jill Garcia. She adds that the benefit is three-fold: (1) staying current with organizations' best practices; (2) networking and making contacts with practitioners; and (3) sharing experiences and knowledge with others to improve performance.

A PM's Viewpoint

"We were the first program office to be surveyed by the BMPCOE, and we hope others will follow," says Crapps. "We will let others learn from us and hope to learn from them once they have participated in the survey process. We believe the BMPCOE provides a credible resource for helping members of the AT&L community identify and mitigate program risks." Crapps adds that the BMPCOE mission aligns perfectly with the USD (AT&L) goals, and their developed tools (such as the Program Manager's WorkStation (PMWS) and Collaborative Work Environment (CWE)) enable rapid access to technical guidelines documents and management of geographically dispersed teams.

On Nov. 22, 2002, at the PEO/SYSCOM Commander's Conference at the DAU, the USD (AT&L) introduced his

The DAU /BMPCOE Strategic Partnership

The education and training mission of the Defense Acquisition University (DAU) is to provide the acquisition, technology, and logistics (AT&L) community with the right learning products and services to make smart business decisions and deliver timely, cost-effective products to our warfighters. Since 1993, DAU has maintained a partnership with the BMPCOE. This collaboration has included curriculum development; incorporation of BMPCOE materials in Communities of Practice; DAU faculty participation in BMP surveys; BMPCOE staff instruction in DAU courses; and teaming on consulting (direct performance support) projects requested by DoD program management offices. In 2001, the DAU president directed the establishment of a BMPCOE satellite center at the DAU Capital and Northeast Region campus at Fort Belvoir, Va.

top five priorities for the next 18 months. The updated goals were to:

- Continue progress with the original five goals.
- Re-engineer AT&L.
- Develop acquisition plans for all major weapon systems.
- Complete plans for a future logistics enterprise.
- Accelerate flow of technology to the warfighter.

He stressed to the conference attendees that their work as PMs had "never been more important or anticipated" in fielding affordable, high quality, technologically superior advanced weapon systems.

In today's environment of highly sophisticated and complex warfare, where a single failure can destroy combat resources, bring about undesirable political consequences, and—most important—imperil human life, it is vital that program management functions be performed to the highest standards of excellence, using the best practices available. PEO IWS 3A is already addressing additional challenges of working with suppliers to reduce hardware cost; preserve its vendor base; and evolve both the STANDARD Missile and Vertical Launching System capabilities to meet increasingly sophisticated threats. The directorate remains committed to excellence in communication and to exchanging best practices with other program offices and the entire U.S. industrial base.

Editor's note: For more information, contact Bill Motley: bill.motley@dau.mil.

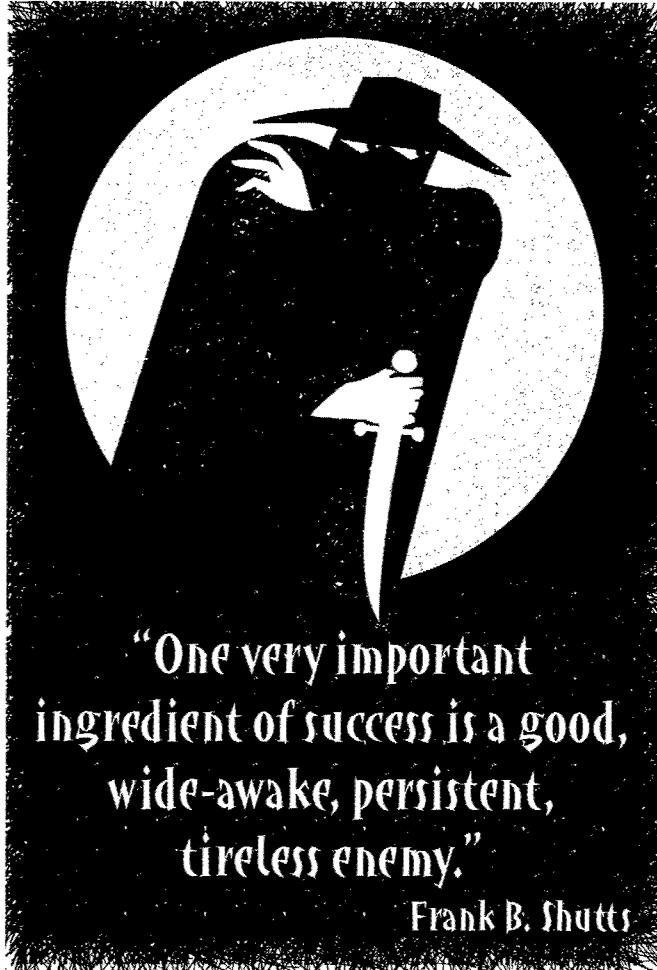
Villains – The Necessary Evil?

Capt. Chris Quaid, USAF • Capt. Dan Ward, USAF

After exploring the topic of heroics (*Program Manager*, Sept.-Dec. 2003), it seemed only natural to investigate the flip side—villainy. Just as heroes and heroines are essential to organizational success, so too, villains, bad guys, enemies, and monsters play an important role in the plotlines of our organizational dramas.

According to the late Army Col. Frank B. Shutts, founder and owner of the *Miami Herald*, “One very important ingredient of success is a good, wide-awake, persistent, tireless enemy.” Since villains are so significant, program managers would do well to understand the types of villains they may encounter and the various contributions of those villains to programmatic success. The most fortunate and effective PMs will square off against a persistent arch enemy who is strong enough to be a challenge—and flawed enough to be beaten.

Villains come in many shapes and sizes. We are going to look at the methods, strengths, and weaknesses of three major villain types that PMs may encounter. Every villain has a soft underbelly of sorts that must be identified, studied, and exploited. But it’s important to understand that these villains can’t be defeated using their own methods because each method is inherently flawed and is an ir-



removable component of what makes these actors villains in the first place.

The Evil Genius

This type of villain is intent on domination and control: Darth Vader, Cruella DeVil, Superman’s Lex Luthor, and Adolf Hitler. Although they are often external to an organization, PMs sometimes encounter the Evil Genius within their organizations, typically in a different division.

Evil Geniuses always have an Evil Plan, and their primary weakness is their arrogant overconfidence in that plan. Arrogance is almost never useful, and when exercised to a villainous degree, it makes inherent weaknesses and flaws virtually invisible to their owner. Evil Geniuses cannot comprehend that their Evil Plans might be flawed, nor can they en-

tertain the possibility of a fatal weakness in their own abilities. Knowing this is the key to defeating the Evil Genius.

The Duke of Wellington explained his success against Napoleon’s marshals this way: “They planned their campaigns just as you might make a splendid set of harnesses. It looks very well; and answers very well; until it gets broken; and then you are done for. Now I made my campaigns of ropes. If anything went wrong, I tied a knot and went on” (quoted by William Fraser in *Words on Wellington*). As if to prove the Duke’s point, in correspondence to Marshal Murat, Napoleon bragged—prior to his defeat—about making plans three or four months in advance: “Nothing succeeds in war except in consequence of a well-prepared plan. It is my custom to leave nothing to chance.” His arrogant confidence in his own planning ability and his refusal to consider the possibility of flaws directly led to Napoleon’s downfall. Convinced he’d cov-

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ered all eventualities, Napoleon was unprepared to respond to the unexpected. *Sic semper tyranus*.

The Destructive Monster

The Destructive Monster is focused solely on negative goals such as destruction or assimilation. Think the Borg from *Star Trek*, Sauron from *The Lord of the Rings*, Glenn Close's Alex in *Fatal Attraction*, and Osama Bin Laden. Their modus operandi is a blunt frontal assault with overwhelming force. Heedless of collateral damage or even self-inflicted wounds, these villains charge ahead, blind to the counterproductive nature of their approach. They don't realize that destruction as a goal is ultimately *self* destructive.

Destructive Monsters are typically external to a PM's organization, and once on the scene, their behavior is fairly predictable. They try to intimidate: they smash and stomp things; they breathe fire or shoot laser beams out of their eyes; they boil your pet bunny. Finesse isn't their strong point, so a reasonably intelligent PM should be able to out-think this kind of villain. The trick is to avoid getting hit over the head while doing so.

Destruction cannot be sustained as an objective for any length of time, so the key to defeating this kind of villain is patient endurance, creative maneuvering, and exploitation of the villain's weakness, which can be found by examining his or her strengths. The seemingly irresistible momentum developed by these villains can be turned against them in an application of the Judo principle of *ju-no-ri* (the principle of gentleness). Professor of Judo Kenji Tomiki explains it this way: "Pull in response to the opponent's push and push in response to his pull. ... while yielding to the force of the opponent's action upon you, you break his balance by striking at the weak point in his posture." Rather than going for direct opposition and confrontation, using *ju-no-ri* enables a PM to take advantage of the villain's mindless approach with maximum effectiveness.

The Criminally Incompetent

No one epitomizes this kind of villain better than Dilbert's Pointy-Haired Boss. The intentions of the Criminally Incompetent are usually unclear, and they are blind to the destruction they cause. However, Criminally Incompetents are also convinced they're in control and everyone else is inept. They tend to be ineffective in meaningful endeavors but all *too* effective at being disruptive. These

"Pull in response
to the opponent's push,
and push in response to
his pull."

Kenji Tomiki
[Professor of Judo]

villains can be found everywhere and are most disconcerting when they show up in an otherwise competent team or program office. However, like the proverbial village idiot, the Criminally Incompetent, in fact, serves a useful social purpose.

The unexpected and interesting thing about Criminally Incompetents is that defeating or removing them isn't necessarily the best approach. Writing in the *Journal of Abnormal and*

Social Psychology, Stanley Schacter says, "The presence of a disruptive, incompetent deviant in an otherwise competent decision-making group enhances the quality of the work by the total group." He goes on to explain that removing an "incompetent deviant" from the group actually decreases the quality of the group's output and, even more surprisingly, tends to result in a previously competent team member's assuming the role. The implication for PMs is that an incompetent team member may not be a bad thing—indeed, counter intuitive as it may seem, he or she could even be a positive influence.

Villainy—It's Not All Bad

Like any leader, a PM's primary responsibility is to communicate a vision and direct the team towards a clearly defined, meaningful goal. Good PMs know how to point their teams in the right direction. Great PMs point them towards great villains. Why? Because villains contribute.

Schwerpunkt

Even the most noble mission can be helped by a weighty opponent, according to management überguru Warren Bennis, who explains that "most organizations have an implicit mission to destroy an adversary, and that is often more motivating than their explicit mission." The presence of a villain sharpens team members' focus and synchronizes their efforts. Defeating the villain becomes the clear goal for the entire team.

Since motivation and organizational focus are key attributes of high performance work groups, anything a PM can do to increase both will increase the group's effectiveness. The German word for this type of focus is *Schwerpunkt*, a term often used by the late Air Force Col. John Boyd in his influential work on decision making cycles (OODA—Observation, Orientation, Decision, Action—Loops) and defined by Boyd biographer Robert Coram as "the glue that holds together various units." *Schwerpunkt* is as important in program offices as in combat units, and

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PMs can reinforce Schwerpunkt by continually reminding the team of the villain's presence.

Cooperation and Communication

One of the most beautiful facts of human nature is that shared strife and common struggle tend to bring people together—the nation's response to 9/11 pointedly illustrates this fact. In novelist Frankfort Moore's words, "There is no stronger bond of friendship than a mutual enemy." The Great Communicator Ronald Reagan understood this when he described the USSR as "an evil empire." Not only did he rally a morale-deprived nation still recovering from Vietnam and faced with high inflation and unemployment, but he also established a resurgence of strong cooperation against a common enemy among the western allies in NATO.

Even the best teams can occasionally struggle to work together the way they should and in the absence of an official bad guy may treat each other as opponents. But as soon as a designated villain enters the scene, barriers and hesitations start to melt away. When a common enemy threatens, people tend to close ranks, set aside previous differences, and pull together.

Individual Development

A growth-oriented office benefits individual members and the team as a whole. The effective PM creates an environment where such growth is encouraged and desirable. One of the things that sustains this climate is the perpetual presence of the enemy at the gate.

Gazelles have to be fast because cheetahs are fast, and vice versa. Slow members of either community don't last very long, and a reduction in the average speed of one group will likely result in reduced speed in the other. A worthy opponent makes you stronger, illuminates your weak spots, and acts as a catalyst for self-development. Keeping a well managed cheetah within your environment or pointing out cheetahs outside the fence can raise the bar and make all your gazelles run a better race.

Self-knowledge

Athenian philosopher Antisthenes wrote, "Observe your enemies, for they first find out your faults." If self knowledge is of any value to PMs (and it is), then listening to your opponents is one of the smartest things you can do. A strong villain will constantly seek out the hero's weaknesses, and in the long run, this actually does the good guy a favor. We can't fix a problem we don't see, and we seldom seek out our weaknesses on our own.

Warning: Find, Don't Fabricate

Because villains contribute to team performance, some PMs may be tempted to consistently play devil's advocate with their team or to set themselves up as a catalyzing opponent. But while villains may be a necessary

evil, you cannot advance the cause of goodness by becoming a villain yourself. By doing so you relinquish both the moral authority to lead and the functional capacity for defining the team's objectives. Villains play an important role, but it is not a role a PM should step into. Our advice to PMs is this: make sure your team has a good villain, and make sure it's not you.

While villains are not usually in short supply, a team may occasionally find itself without an opponent, and the PM must identify one. Resist the urge to villainize a potential ally. Far better to bring such a person onto the team in some fashion. Rather than creating a new villain, the wiser approach is to identify a pre-existing one. Look around for people, organizations, and ideas that are genuinely opposed to your objectives and can serve as a focal point for your team to combat. Perhaps the enemy will be a group like the Taliban. Perhaps it will be the sinister forces of schedule delays, cost overruns, or performance shortfalls. Or perhaps it will be The Bureaucracy itself. The point is to identify a villain your team can directly assault, preferably with measurable outcomes.

The Heroic Response to Villainy

G. K. Chesterton pointed out that "the true soldier fights not because he hates what is in front of him, but because he loves what is behind him." Losing sight of what is being defended is the first step towards losing the battle. Therefore, as PMs point their teams towards a confrontation with a powerful villain, they must emphasize the good that is being defended and not merely the evil that is to be defeated.

Unlike Evil Geniuses, we fight to bring freedom, not domination. Unlike Destructive Monsters, we fight not only to destroy, but to protect. And unlike the Criminally Incompetent, heroic PMs know what they are about—providing this country with the technical means necessary to ensure the interests of liberty and democracy around the world.

The Last Word: Thank You

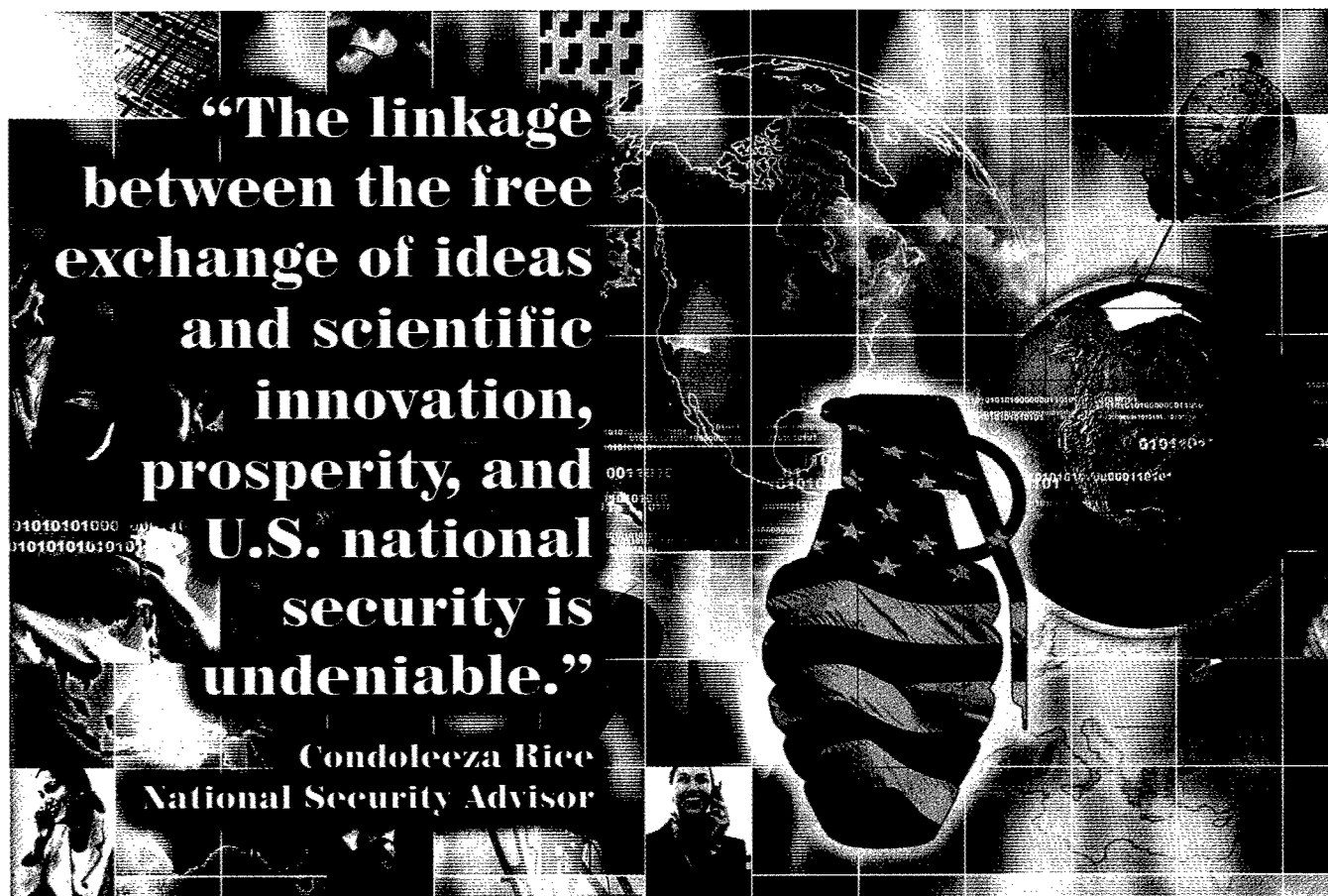
Martial arts opponents bow to each other before and after practice or a match. Judo Master Jigoro Kano explains, "Bowing is an expression of gratitude and respect. In effect, you are thanking your opponent for giving you the opportunity to improve your technique."

So even as you battle your villains, remember to thank them too.

Editor's note: When not off fighting villains, the authors welcome comments and questions. Quaid can be reached at quaidc@nima.mil and Ward at wardd@nima.mil.

Technology Transition—A Critical Element in Homeland Security

Cynthia E. Gonsalves



Think about the battery in your watch. Defense helped develop it, then a commercial company produced it. That's "technology transition"—moving lab technology to a producer that implements it for military—and possibly commercial—use. The same happened with other defense technologies: computers, satellite communications, the Internet, GPS, just to mention a few.

The United States initially sought to transition defense technology to improve the competitiveness of American business. Over the past few years, technology has also moved in the other direction, as we have increasingly transitioned commercial technology into defense to maintain our forces' competitiveness in the battle space. And

now we need to move technology to help homeland security.

Defense and Industry: a Two-Way Street

Interestingly, industry was an impetus for coordinated and rapid defense technology transitions. Over a decade ago, accessing defense labs was a challenge. "What we did is spend an awful lot of time calling people," says one Dow-Corning executive. In addition, the military services' labs approached transitions differently. "There is no policy they could go by," says the same executive. And finally, agreements took too much time.

Primarily to aid industry and enhance its competitiveness, Congress mandated in 1993 that the Department of Defense (DoD) establish an office of technology transition. In the decade since, defense has recognized its need for technology from the private sector. Of the total U.S. research and development (R&D) spending, federal

Gonsalves is the DoD technology transfer program manager, Office of the Deputy Under Secretary of Defense (Advanced Systems and Concepts), Office of Technology Transition.

R&D decreased from 36 percent to 26 percent in 2000. "DoD will rely on the private sector to provide much of the leadership in developing new technologies," according to the *Quadrennial Defense Review*. Today the Office of Technology Transition provides overarching guidance, with approximately 80 defense-related lab sites executing decentralized transitions in their mission areas.

The Take-Away for Industry

The good news for industry is that defense is developing technologies of potential commercial use, and the way to find that technology is through the DoD Office of Technology Transition.

Technology transitions enable new businesses. For example, in 1998, four former Army research lab personnel who helped develop a critical communications technology started Paratek, a privately held company that develops tunable solutions for wireless communications networks. Today that company has 54 employees; is making miniaturized tunable filters for lightweight, man-portable radios for both DoD and commercial purchases; and won the 2001 Army Technology Transfer Award.

Just as initially intended, defense technology transitions are making American businesses more competitive. A small California company, AXT, Inc., recently took a defense technology and captured 15 percent of the world market in a key component for integrated circuits.

But it isn't only individual businesses: entire industries, too, can benefit from defense technologies. Consider the airline industry. You may know that airports use fire-fighting foam, but what you may not know is that it was invented at the Naval Research Laboratory years ago. Here's another example. For years, airports have de-iced aircraft using large quantities of ethylene glycol and propylene glycol, substances harmful to the environment. The Air Force Research Laboratory recently developed a more efficient nozzle for de-icing, resulting in 75 percent less glycol usage. It is being used by the Air Force and the airline industry.

Let's look at the maritime shipping industry. After half the 40,000 cargo containers in Desert Storm went unused, the Navy funded Savi Technology, a company specializing in global supply chain security and asset management, to develop a radio computer tag that reports containers' locations and contents. Defense and industry now use it, with the latter's sales reaching \$20 million annually.

The Take-Away for Defense

Moving the other way, commercial innovations continue to help defense maintain its competitiveness in the battle space and stretch the defense dollar. For example, Silicon Design Inc, a maker of accelerometers triggering car

airbags, developed accelerometers for arming missiles, such as the AGM-114 Hellfire 2 and Patriot PAC 3. Several commercial technology inserts have extended the life of the P-3 aircraft and cut operating costs.

In other instances, Earth Search Sciences Inc., a commercial leader in remote sensing, is developing a space-base system that collects hyperspectral imagery of littorals for naval forces. And Pennsylvania's M. Technologies Inc., the industry leader in the smart weapons multiple carriage industry, developed a bomb rack that doubles an F-16's bomb load.

Speed is of the Essence

Whichever the direction, industry to defense or vice versa, technology transitions must be fast—and that's happening. On Sept. 10, 2002, the Air Force Research Lab transitioned technology for a CBU-107B air-delivered munition, a new capability that destroys a classified target set. The components were made by Textron, General Dynamics, and Lockheed Martin. The first munitions were available Dec. 17—just 98 days later—and subsequently used in Operation Iraqi Freedom.

The Take-Away for Homeland Security

"America's historical strength in science and engineering is perhaps its most critical asset in countering terrorism," according to a National Academies of Sciences report, *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism*. That same sentiment has been expressed by the National Strategy for Homeland Security and the DoD Combating Terrorism Technology Task Force. Much of the technology needed for homeland security must come from defense labs—and some already has.

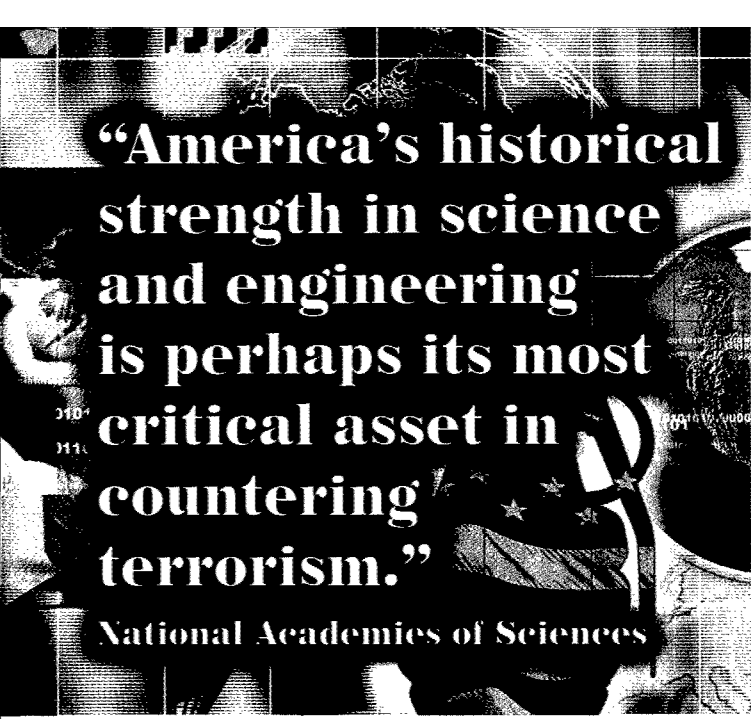
Detection

The Federal Aviation Administration uses a nuclear quadrupole resonance technology developed by the Naval Research Laboratory to detect bulk explosives. Among other advantages over x-ray detectors, the technology requires little image interpretation. The U.S. Postal Service uses an electron beam developed for missile defense to irradiate mail and kill anthrax.

Defense has also supported the development of a system that uses gamma-rays to penetrate the contents of containers that may have sides up to 6 inches thick. This capability could provide greater border security. And defense is developing technology for real-time detection and identification of biological agents—capabilities first-responders may need.

Information Security

The National Strategy for Homeland Security calls for the ability "to share sensitive information securely among all relevant government entities." The Naval Air Warfare Cen-



"America's historical strength in science and engineering is perhaps its most critical asset in countering terrorism."

National Academies of Sciences

ter Weapons Division, along with information security specialists Market Central Inc. and Radionics, Inc., developed a computer security system that uses an access card, code, and electronic switches to provide varying degrees of access. Unauthorized attempts to gain access can trigger access denials, alarms, and armed responses. Potential uses go beyond defense and homeland security and include applications in a variety of industries.

Consequence Management and Recovery

In the event of a terrorist attack, a building's ability to sustain a blast can make a difference in the number of lives saved. Research on such building attributes and bomb blast effects has been conducted by the Defense Threat Reduction Agency, and a National Research Council committee recently urged the agency to step up efforts to share its findings with the commercial design and building community.

Dealing with human injury is another area in which certain defense technologies may be applicable. The Army Medical Research Command and the American Red Cross have developed a haemostatic bandage that assists the clotting process and could conceivably prevent excessive loss of blood from deep cuts.

Value in Movement

As National Security Advisor Condoleezza Rice wrote, "The linkage between the free exchange of ideas and scientific innovation, prosperity, and U.S. national security is undeniable." To have value, technology's got to move. Within defense, the Office of Technology Transition enables the two-way movement that has historically brought value to both defense and industry and that has the potential to make a powerful contribution to homeland security.

Editor's note: The author welcomes comments and questions. She can be reached at cynthia.gonsalves@osd.mil.

The Transfer of Intellectual Property

There are a number of ways to effect the movement of technology and intellectual property between the players.

One widely used mechanism is the **cooperative research and development agreement**. It has attracted companies that traditionally did not conduct defense R&D. The agreement allows Defense to provide personnel, facilities, and equipment to privately funded—or in-kind contribution—R&D efforts of interest to DoD. (Under one such agreement, a U.S. Army officer was assigned to Glaxo SmithKline to test an anti-malaria drug developed at Walter Reed Army Institute of Research.) Similarly, the agreement allows industry to provide funds, equipment, property, and personnel to such endeavors, and protect their intellectual property. Today, over 2,000 of these agreements exist.

Another mechanism is **educational partnership agreements**. These agreements provide personnel, technical assistance, and lab equipment to help today's students become tomorrow's engineers and scientists. Attracting them is becoming a critical issue for defense labs. These agreements also can yield near-term results. Working with the Air Force Research Laboratory, high school students in New Mexico designed a protective satellite door that opens and closes using magnets — an invention that was patented by the Air Force.

One of the most important transition mechanisms is the **patent license agreement (PLA)**. A decade ago, many companies avoided federally developed technologies, even when available. The problem was they were available to anyone, and thus unprotected. Since then, Defense has increasingly filed for patent protection and today it holds 350 active PLAs. And while revenues from these agreements were almost nothing a decade ago, today they bring in over \$6 million annually, providing incentives for technical teams and more funds for labs.

Technology and intellectual property transition by various other means: the use of defense lab facilities by industry; conferences; small business innovation research; dual use technology development by defense and industry; and intermediaries, such as Montana State University's TechLink Center, that arrange partnerships between defense and private sector companies.

DAU Guidebooks Available At No Cost to Government Employees

A Comparison of the Defense Acquisition Systems of Australia, Japan, South Korea, Singapore, and the United States

Author: Stefan Markowski Editor: Tony Kausal

This guidebook describes the national armament systems of Australia, Japan, South Korea, Singapore, and the United States. Beginning with an introduction to the political environment, the acquisition organizations, systems, and processes involved, Kausal and Markowski describe the effects of differences in national culture and traditions, time zones, currencies, fiscal year schedules, and language barriers. Tying these differences to each nation's national armament system, the authors make the case that international armaments cooperation is a difficult but rewarding challenge.

Online

<http://www.dau.mil/pubs/misc/acq-comp-pac00.asp>

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Test and Evaluation Management Guide

4th Ed., November 2001

The objective of a well-managed T&E program is to provide timely and accurate information. This guide has been developed to assist the acquisition community in obtaining a better understanding of whom the decision makers are and determining how and when to plan test and evaluation events. The guide is written for current and potential acquisition management personnel who are familiar with basic terms and definitions employed in program offices.

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Incentive Strategies for Defense Acquisitions Guide

Printed on behalf of the Office of the Deputy Under Secretary of Defense for Acquisition Initiatives by the Defense Acquisition University Press

Incentives should exist in every business arrangement because they maximize value for all parties. DoD needs to adopt strategies that attract, motivate, and reward contractors to encourage successful performance. Using commercial practices will enhance DoD's ability to attract nontraditional contractors. This guide amplifies existing policy regarding use of incentives in defense acquisitions. It explores cost-based and non-cost-based incentive strategies. It clearly defines use of performance objectives or product functionality vs. detailed requirements to seek best value acquisitions. It answers these questions:

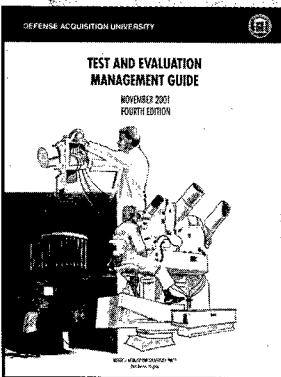
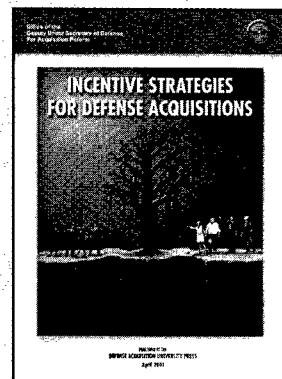
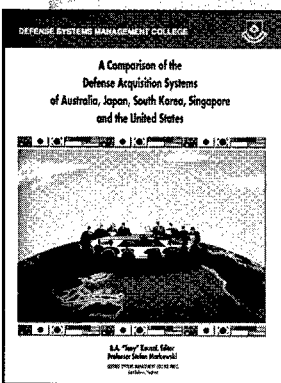
- Why are we concerned with contractual incentives?
- What elements contribute to an effective incentive strategy?
- How can we build and maintain an effective environment for a successful business relationship?
- How can we build the acquisition business case?
- How can we build an incentive strategy that maximizes value?

Online

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Avoid Potholes, U-turns, and Detours: The Road to a Successful Software Program

Linda Polonsky-Hillmer

When the program executive officer, enterprise information systems (PEO EIS) formally accepted the leadership baton from the Defense Contract Management Agency (DCMA) for the standard procurement system (SPS) on Oct. 1, 2003, it gained more than just another information technology (IT) program under its PEO umbrella. As the first and only department-wide standard business solution, SPS is a model for other departments seeking end-to-end business solutions.

But more important, the move is a validation that SPS is a solid program, and as such, has valuable lessons learned to share with program managers (PMs) grappling with IT programs that cross office, agency, or Service boundaries.

Program with a Purpose

SPS began in the last decade as an automated contract-writing system, the most efficient way to use technology to streamline an everyday task. The concept in 1996 was to computerize the basic procurement functions across the military services and agencies—one system for the Army, Navy, Air Force, and 13 Department of Defense (DoD) agencies and three related communities. In the ensuing seven years, SPS evolved from theory to reality: a fully operational system that handled \$44.4 billion in goods and services purchased in FY02 alone. In fact, more than 65 percent of all DoD procurement purchases now flow through SPS.

As a key element supporting the goals of the DoD's business management modernization program (BMMP)—to establish common enterprise architecture requirements for all DoD IT systems in the acquisition, logistics, and financial management arenas—SPS features adaptive technology that allows DoD to cull data from logistics, financial management, and other related business systems to boost business intelligence. In the real world, it means officials can identify logistical needs earlier, use strategic purchasing patterns for better business decisions, and audit the Department's checkbook to provide more timely and accurate payments to contractors.

Polonsky-Hillmer is president of CorpComm Inc., a woman-owned small business specializing in communicating the business of government. She has worked with SPS since the program's inception.

"You have to credit those people who started out recognizing that some standardization and use of technology was a good thing," says Deidre A. Lee, director of defense procurement and acquisition policy. "As the technology grew, so did our realization of what it could do for us," she adds. "Does it generate our business arrangements? Yes. Is it how we document those arrangements, including the terms and conditions and how we'll pay, how we track the money? Yes. But it's more than that: it's the foundation of our business intelligence system that will lead to better business deals and stewardship of our taxpayers' dollars."

Not Always Smooth Sailing for SPS

Yet in 2001, SPS wasn't exactly the technology darling of the Government Accounting Office (GAO). "I must tell you, when I first came on board, I didn't know where SPS was headed," admits Michael Wynne, under secretary of defense (acquisition, technology, and logistics).

According to Bob Parillo, SPS user satisfaction manager, user discontent was widespread as a result of software deficiencies, missing functionality, and cumbersome workarounds (functionality points that weren't encompassed in the software and had to be worked around either manually or by using different automated solutions to arrive at the same destination). The problems spurred Wynne to put the program, along with a host of other IT programs, on notice. SPS was put on a "strategic pause," which essentially stopped the program until SPS and Department leaders could either come up with fixes, or they decided to end the program.

"If SPS was going to survive, we knew we had to develop a get-well plan to show to senior leaders," explains Army Col. Jacob Haynes, SPS PM. "We had a huge user population, coupled with a desire from senior leadership to make this thing work. So we had the basis for success. We just needed to pinpoint the processes that were causing user dissatisfaction."

"It seemed the GAO had the program on its hit list, and they kept citing dissatisfied users as a reason for their investigations," remembers Wynne. Of course SPS wasn't alone: a number of technology-related programs in the

DoD needed to be put under the microscope, he says. But the far-reaching potential of SPS put it near the top of the priority list.

To compound the problem, one person's complaint was another person's positive. "You can cut a purchase order a hundred different ways, depending on the buyer," points out Gino Magnifico, SPS deputy PM. Layer in work-arounds and technical issues like varying response times based on a user's particular hardware platform, and the results looked like an insurmountable challenge.

A Program Management Solution: Identify Crucial Practices for Success

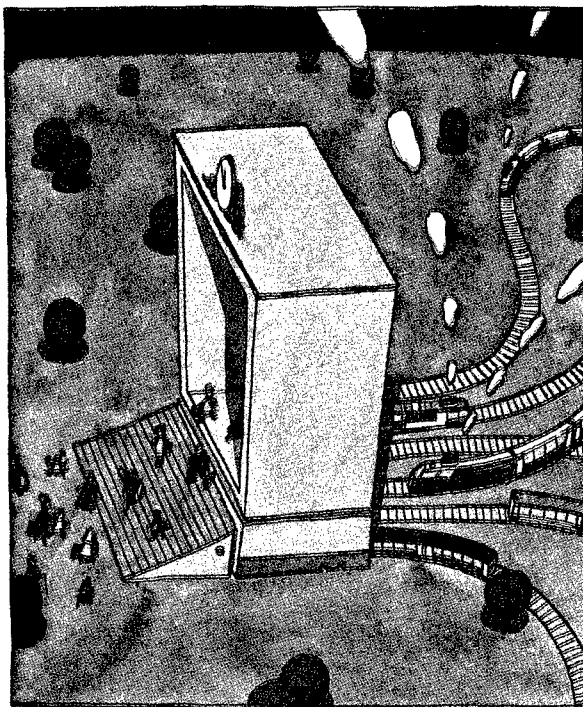
"The changes weren't as simple as just finding some lines of code, or adding more people to answer the phones," Wynne admits. "The answer lay in the very processes the program had relied upon for years, processes that may have worked fine just a few years ago."

Rather than tear immediately into the guts of SPS, program leaders assessed five crucial practices needed to assure success:

Ensure buy-in from the top—The team was in good shape in this category. Because DoD has made modernizing the nation's military a top priority, replacing the myriad legacy systems DoD used for procurement activities

was obviously an integral part of that modernization. As a result, officials at the very top of DoD were aware early on that over the long haul, SPS would save the military millions of dollars at the same time as it streamlined the acquisition process.

Use the "voice of the users" committee as a centralized point for implementing user suggestions and complaints—Again, the team was in a good position. DoD had already established a joint requirements board (JRB)



As a key element supporting the goals of the DoD's business management modernization program (BMMP) ... SPS features adaptive technology that allows DoD to cull data from logistics, financial management, and other related business systems to boost business intelligence.

by continually feeding ideas and suggestions into the software development process. While one version is fielded, the next is already in development, and a third is being fitted for requirements. All three steps incorporate users' feedback immediately to improve subsequent releases.

Design a change management strategy that works—SPS has the unfortunate distinction of being a good example of what happens when you *don't* address change management before deployment begins. "Not only did

to allow the Army, Navy, Air Force, Defense Finance and Accounting Service (DFAS), DCMA, Defense Logistics Agency (DLA), and other Defense agencies to give input into SPS functionality. Without this centralized committee to coordinate input, DoD would have had a difficult time meeting the diverse needs of its thousands of procurement and contracting offices. Under Haynes' proposed changes, this group would need to fill an expanded role.

Develop spirally—This approach had been embraced by SPS from the start. How else do you ensure that the latest technological bells and whistles are included in new versions of your software without introducing costly risks? SPS uses spiral development, which allows the program to manage requirements through fixed sets and immediate development rather than a single, extensive lifecycle in which requirements are changed during the development period. Instead, developers constantly incorporate new technology into the latest version of the software.

Implement continuous comprehensive evaluation (CCE) standards—Unlike the previous three practices, CCE was new to SPS. By taking users' feedback from live testing situations and sending it to developers in real time, changes could be made to the product

users never fully understand why they were being told to use a new system, but the new system was sometimes more time consuming than their old way of doing things," recalls Army Brig. Gen. Edward Harrington, director, DCMA. "Users didn't know that the changes the system enforced were to ensure regulatory compliance and standardized work processes across the Department. They couldn't see the big picture, in part because we, as a program, didn't effectively communicate it to them. So they understandably became disenchanted with the software."

The Nuts & Bolts: Engineering a Program Turnaround

#1: Requirements

Haynes began re-engineering the program by centralizing the requirements process to ensure that users' suggestions are heard and acted upon. When Haynes entered the picture, he had the JRB review and prioritize over 600 deficiencies and enhancement requests to ensure that limited resources were spent on the issues most important to SPS users.

Once requirements were prioritized, a strict configuration management program was instituted to track every item. The new procedure begins by entering each suggestion into a configuration management database of requirements that serves as a central, up-to-date repository accessible to all levels of players. One of the most involved players is the JRB, which prioritizes deficiency corrections and change suggestions based on industry standards. The effective collaboration of stakeholders from across DoD ensures the software meets the needs of its users and the Department as a whole.

#2: Testing

The testing process was next in line for an overhaul. Under Haynes, the JRB was given authority to review, approve, and if necessary, write the test criteria used for government acceptance of the software. Parillo notes that the validity of the testing has been greatly improved by having some of the very same JRB personnel who wrote the functional requirements, approve the test criteria designed to insure those requirements have been met.

By 2002, SPS had incorporated yet another significant change in the process: an independent validation and verification (IV&V) company observing the developer's testing process prior to code cut off.

After resolving issues at the developer level, the software is tested directly by end users and JPMO personnel on "new" databases (that is, fresh installs with no pre-existing data) and "actual" databases (that is, real-world production databases with legacy data). The independent oversight ensures that the application meets its functional and technical requirements before deployment.

#3 Deployment

The third process to go under the knife was the deployment process. As a result, the average deployment schedule dropped from 4.8 to 2.3 days, a move that saved the program \$15 million.

Quality training is a key element to help ensure smooth deployments. The answer is a multi-faceted training approach, including formal training classes supplemented with computer-based training (CBT) and a sophisticated step-by-step on-line help capability. Magnifico offers this advice: incorporate into the developer's contract a flexible, customized training approach that gives the government the rights to use screen shots and other proprietary information to create user guides that are tailored to a specific agency or activity. A complete training strategy should also include the option to develop government trainers.

Perhaps the most critical aspect of software training is timing. "Early in our program, training wasn't integrated with deployment," recalls Parillo. "In some cases, users received classroom training six months or more before they ever saw the software on their desktops. Just-In-Time training should be the goal."

#4: Communication

Effective communications are crucial to a successful program. Haynes put his muscle behind a communications strategy that includes producing a monthly newsletter, establishing a dedicated user satisfaction manager position, and participating in periodic users' conferences.

In all of his communications materials, Haynes steps up to the plate with the good and the bad news, including software release notes that accurately describe which features are new, which are changed, which have any known bugs. Such honesty helps keep users clued in to the program and ensures they don't suffer any unpleasant surprises. "A comprehensive configuration management process is the engine that drives our ability to stay on top of and to communicate the latest developments so users know what to expect," says Haynes.

The Results

After the changes in the requirements, testing, and deployment processes were implemented, in early 2002, SPS began deploying v4.2 Increment 1 and is currently deploying v4.2 Increment 2. (Increment 3 is beginning development and is slated for testing in 2005.) Thanks to the CCE strategy, when a new SPS increment is deployed, another increment moves into development, and planning begins for yet another. The factory-belt approach accomplishes two goals: first, SPS is constantly evaluated and refined; and second and more important, it provides users with the knowledge that SPS is "fluid." The users know, even expect, that future upgrades are in development.

Today the user community enthusiastically embraces SPS. In fact, after participating in joint testing of v4.2, Air Force users petitioned leaders to deploy it ASAP—the first time in the program's history that end users actively petitioned leadership with such a request instead of waiting for top-down mandates.

"SPS is a great example of why strategic pauses work," Wynne says. "The pause gave us the latitude of time to look at the program through critical eyes and pinpoint areas to change."

A Continuing Evolution: Enter PEO EIS

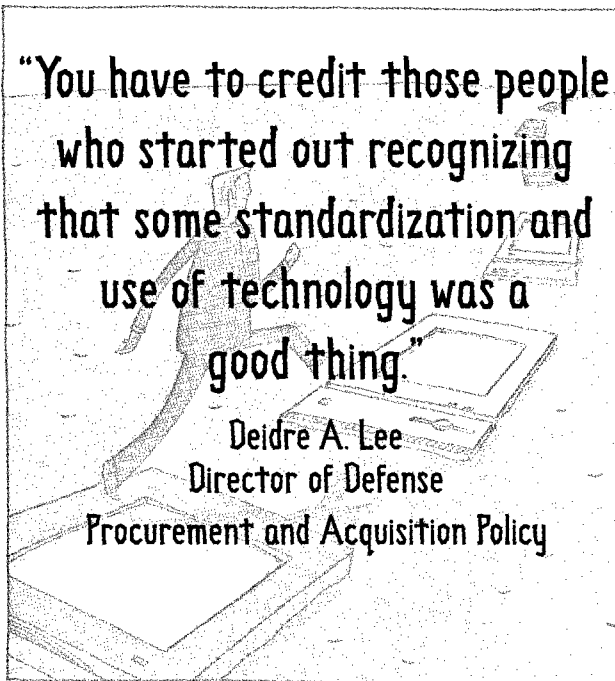
With the strategic pause lifted in early 2003, SPS now interfaces with 32 systems across DoD; when SPS reaches full operational capability (FOC), it will replace more than 76 procurement legacy systems. Financial gurus estimate this area alone will account for \$403.3 million in cost-avoidance savings.

Still, Harrington considers SPS an information-sharing tool, and an impetus to more competition. "It will serve our American citizens better through vastly improved electronic access to our government, and obviously our government will benefit by being able to buy things more efficiently and in a more competitive environment," he points out. "I think Col. Haynes' leadership in forcing stability in the program, the users' confidence in it, and the fact that it functions well are the strong points of SPS right now."

This is the reason Harrington engineered the program's move, with Haynes still at the helm as its PM, from its former home with DCMA to EIS. "An informational technology program manager would have the wherewithal as far as staff, technical help, and business management support to grow SPS for the future," Harrington explains. Kevin Carroll, the PEO at EIS, agrees wholeheartedly. "A fair number of information systems are conceived and developed within an organizational headquarters," he says, "but over time, people start to realize they might not want to manage it from there, [which is why] it is often [moved to] an organization that does program management as its core business function." Carroll continues, "I believe moving SPS under PEO EIS stems in part from our reputation for delivering results to include DoD systems and our customer focus in helping to integrate key

"You have to credit those people who started out recognizing that some standardization and use of technology was a good thing."

Deidre A. Lee
Director of Defense
Procurement and Acquisition Policy



information systems ... We expect to bring our experiences in these areas to help DoD more effectively integrate SPS with [related] systems." Ditto computer infrastructure consolidation, a move to ensure still more cost savings from SPS.

More Program Management Challenges Ahead

"A lot of people automatically assume technology makes their job a snap. SPS won't always make contracting people's job easier," Lee says bluntly. "We're now asking people to put more information in a usable methodology, and because we pass the

data, it adds a level of complexity to the generation of that document. In my day, if I made a mistake writing a contract, I'd ink the change and initial it. In SPS, you must go back into the system and correct the data at all levels."

Nor is SPS a substitute for procurement knowledge. "I get very upset when I hear somebody say, 'The computer gave me the clauses in this contract,'" Lee continues. "The expectation that you'll just get into the system, request a cost-type contract and 'bingo!' it populates it for you won't happen. You still think through the terms and conditions, then put them in the document in a manner where the data can be passed."

Such human misunderstandings only remind officials that now is not the time to slack on communication efforts. "We continually need to explain to people why they are providing the information in this way," she adds. "Most of them will comply when you put it that way."

"Communication is key," adds Haynes, who plans to employ a stepped-up communications plan around v4.2.3. This version of the software holds a web-based, formless capability for SPS, allowing users to post solicitations, write awards, and manage contracts over the Internet.

If there is one overarching lesson resulting from the SPS program, it's that success requires the program management office, user representatives, and the contractor's developers and programmers to work as one team with one focus—the users who are depending on the software to accomplish their mission.

Editor's note: Comments and questions may be addressed to the author at linda@corpcomm-inc.com.

Managing Obsolescence: Value Engineering Change Proposal Proves Its Worth

Steven Gunther • Nanette Ramsey

The emerging digitized battlefield holds exciting potential for greater operational flexibility to meet tactical objectives. Among the innovations on this front is the Enhanced

Position Location Reporting System (EPLRS), which provides a communications backbone for situational awareness, command and control, and other digital messaging. It consists of a dedicated network of radios that move key warfighting information—particularly situation awareness and command and control information—between the user and higher headquarters quickly (within minutes) and efficiently (automatically), greatly increasing combat effectiveness.

EPLRS Program Adopts Value Engineering

The capabilities and technologies contained in EPLRS have evolved over 20 years, but in recent years, use of value engineering (VE) has brought significant improvements and substantial acquisition savings to the EPLRS program, resulting in enhanced system performance, reduced procurement cost, and lower life cycle cost.

In 1997, the EPLRS radio design, like most defense products, was based on around 99 percent use of military components. However, the telecommunications boom in the 1990s coupled with the Perry initiative, which eliminated numerous military specifications, drove the component manufacturers to focus primarily on commercial markets. The military component market declined rapidly,

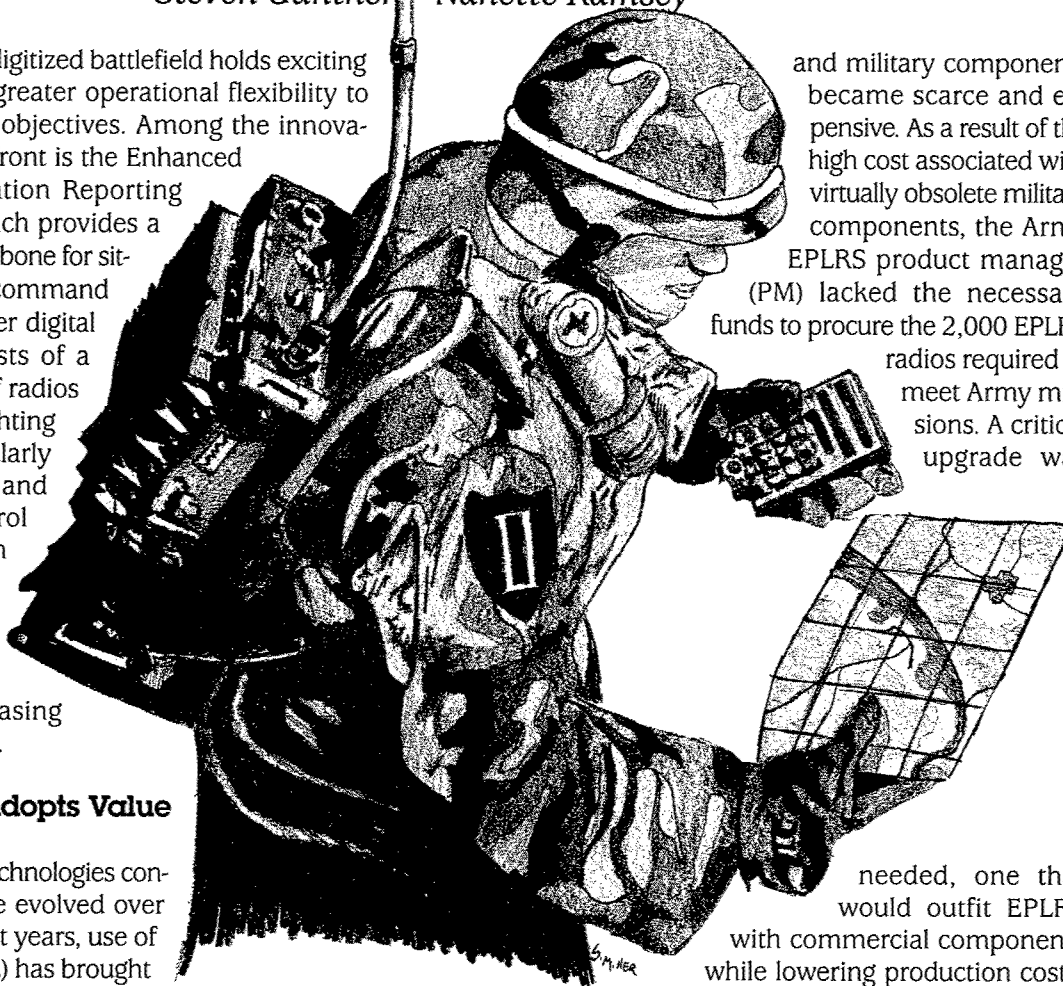
and military components became scarce and expensive. As a result of the high cost associated with virtually obsolete military components, the Army EPLRS product manager (PM) lacked the necessary funds to procure the 2,000 EPLRS radios required to meet Army missions. A critical upgrade was

needed, one that would outfit EPLRS with commercial components while lowering production costs.

The PM identified VE as the appropriate process to achieve the necessary upgrade: it would provide financial incentive to the contractor, Raytheon Company, and result in acquisition savings.

Value Engineering Change Proposal Provides Incentive to Redesign

A value engineering change proposal (VECP) is a change proposal submitted to the government by a contractor in accordance with the VE clause in the contract. If accepted, a VECP will result in acquisition savings that will be shared by the government and the contractor.



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The VECP provided Raytheon with the incentive to redesign EPLRS. A VECP teaming approach was used to create an atmosphere of open communication and trust. This was a critical factor because Raytheon would be investing their own funds to identify improvements to system performance while reducing production cost. As part of that teaming approach, the PM shared feedback on the initial proposal from Raytheon and helped identify key areas of system improvement. The team worked together to complete negotiations quickly and to avoid delays in implementation that could reduce projected savings. As a result, Raytheon completed development of the new EPLRS radio while the team members were negotiating the contract changes and related issues. After VECP implementation and development costs were paid to Raytheon out of the contract savings, life cycle savings were estimated to be nearly \$25 million. The PM was able to procure additional EPLRS radios with enhanced system performance, more reliability (circuit card assemblies reduced from 18 to 12), and lower life cycle costs.

Even though the initial problem of obsolescence had been tackled head on by this approach, Raytheon and the EPLRS PM office maintained their VE team methodology to identify opportunities where new technology could improve performance and provide the warfighter with a better system at a lower cost. In 2001, a second VECP enabled the insertion of new technology. Using the latest hardware packaging techniques, the number of circuit card assemblies was cut almost in half (from 12 to 7), and 5 interconnections were eliminated, which further reduced life cycle cost. Additional improvements increased the system reliability and boosted system data rates by 250 percent (115 Kbps to 288 Kbps).

A third VECP was implemented in April 2003. In this change, four card assemblies from four manufacturers were integrated into one assembly. A host of other hardware advances were added to further enhance system reliability and reduce costs, among them reduction in components by integrating functions into larger programmable devices, cable redesign, and EMI shielding improvements. In addition, over-the-air programming is being added to reduce the manpower necessary for future software upgrades. The third VECP savings translate into a unit cost reduction of approximately \$4,000, and—once again—the savings offset implementation costs. The changes were implemented without any increase to the contract price.

The VECP is a tool for both the government and contractor to deal with technology obsolescence and spiraling costs yet still develop systems that perform better, are more reliable, and cost less.

More Than Cost Savings

Of course, a successful VECP submission results in more than cost savings. "The value engineering process has enhanced Raytheon's reputation as a cost-conscious producer while creating an environment where our workforce is engaged in a dynamic and challenging technology refreshment cycle," says Tushar Patel, Raytheon EPLRS program manager. Raytheon's share of the VE savings is specifically excluded from contract profit limits, thus providing added incentive to continue to develop and introduce effective VE upgrades. The share of the program savings increased from \$3.7 million in 1997 to \$4.7 million in 1999 (the contractor share for 2003 is yet to be determined), while the non-recurring engineering effort, paid for through the

VECP savings, increased by an additional \$11.2 million in 2003.

Various factors contributed to the success of the EPLRS VECP process. The EPLRS PM encouraged and fully supported the process. A robust teaming environment kept communication flowing freely between all concerned parties. This environment accelerated the government evaluation period because the PM was involved at every stage and was able to anticipate proposed changes. In addition, the effects of implemented changes were swiftly integrated into the production and testing cycles. And finally, Raytheon was able to participate as a partner throughout the entire process.

An additional benefit to the government is identified when one takes into account that the second and third VECP were implemented under a performance specification. It is a common misconception that a contractor benefits more by keeping all the savings under an existing performance specification for the allowable period, as opposed to submitting a VECP. The EPLRS program demonstrates that a successful VECP submission is a powerful incentive indeed. The VECP is a tool for both the government and contractor to deal with technology obsolescence and spiraling costs yet still develop systems that perform better, are more reliable, and cost less.

Editor's note: The authors welcome comments and questions on this article. Gunther can be reached at steven.gunther@us.army.mil and Ramsey at nan.ramsey@us.army.mil

PROGRAM MANAGER MAGAZINE

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What Do Managers Manage?

Daniel Knapp

Would those answers satisfy an 8-year-old? How about a 28-year-old? Do they satisfy you?

So what *do* managers manage? Programs? People? Money? Time? All or none of the above?

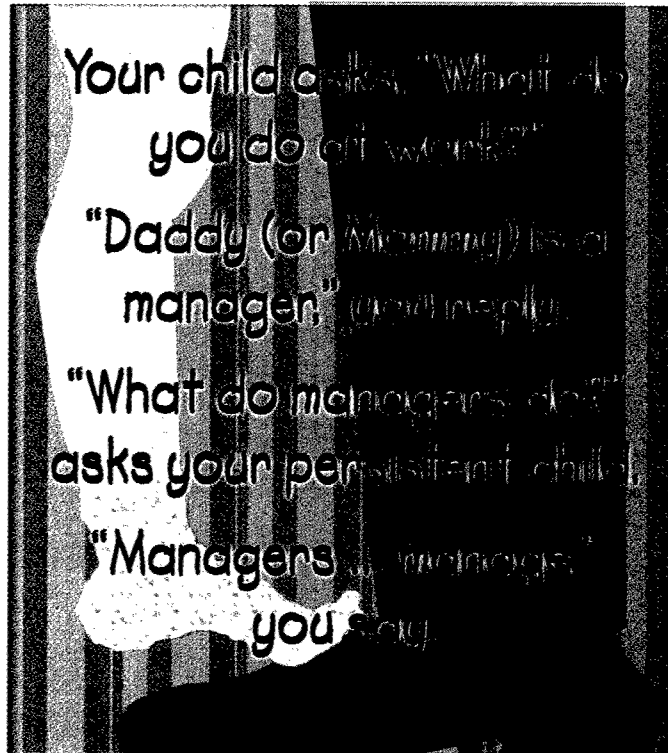
Managing the Forest as Well as the Trees

This article proposes that managers manage change. To be sure, change involves programs, people, money, and time, but if we think only in those terms—the trees—we miss the forest. Managers manage by initiating change or reacting to change. Managers employ several simple models to identify objective and subjective metrics they may use to track program management progress. Keep in mind that the metrics are naught but tools. The objective remains the management of change.

As a practicing manager, you have two overriding concerns: Where are we now? Where do we want to go from here? Many times a manager may not give deep thought to either end of the spectrum. It's so easy to get wrapped up in the day-to-day program operations that we sometimes assume the desired end state is shared by all participants. Yet if pressed, each team member may have a different end state in mind.

Many times we look at metrics for a program and find that we're keeping them for someone else's use. The program manager's commitment to the metric may be less than the effort required to keep the metric.

Using the models developed from the answers to the following groups of questions, you may construct a working model of a program that will serve your own personal needs and ends. (The question base is available at < www.danknapp.com/list.htm > .)



Schedule Model—Similar to your acquisition baseline with a slightly different twist. Think delta analysis. How close are your dates for major milestones to critical path dates for funding and fielding decisions? Program delays of, say, 30 days might push you beyond a funding decision point that ultimately may cost a full year to recoup. A 60-day slip in fielding may cost users a training or deployment window. The best laid plan fails if it does not mesh with outside interfaces. The acquisition baseline begins the schedule model; add delta analysis in the interfaces with user and fund-

ing schedules to identify risk areas.

Financial Model—Similar to the schedule model. Will you have the right mix of funding, research and development (R&D), production, and operations at the right times? Again, this is a delta analysis model. How much of a change in funding or timing of funding would it take to affect your program? If your program depends on second-year obligation for R&D or third-year obligation for production, you likely will experience a timing challenge should testing reveal development delays or should your Milestone C decision date slip.

Functional Model—System basics: move, shoot, communicate. Objective/threshold: how many of the above are at risk given the current state of technology? What decisions are you postponing based on emerging technology? What effect might a delay in this emerging technology impose on the schedule or financial model?

Sure, cost, schedule, technical—nothing really new here, except some of the questions. Ask yourself how many underlying assumptions you accept in the “big three” of

Knapp is a life cycle project director at Program Executive Office Simulation Training and Instrumentation, Orlando, Fla.

cost, schedule and technical. Identify these assumptions and the model takes on a new value to you.

Possible assumptions:

- Commercial hardware will meet the needs of your program.
- You'll re-use 40 percent of the software code from another program.
- Users will continue a stable requirements basis.
- You may schedule system initial operational test & evaluation (IOT&E) close to the completion of scheduled development testing.

These first three models looked at relatively objective elements of your program. Now let's move into the murky world of subjective elements.

Organizational Model—

Most acquisition organizations staff programs using some form of matrix-style personnel assignments. That's a given. Within your program, do you operate as a matrix, or do you revert to stovepipe thinking? What team-building exercises do you employ to encourage cross-functional information flow? How satisfied are you with the teaming within the program? What changes would help?

Decision-making Model—What decision-making structure do you employ on your program? What level decisions are made at what levels within the team? Does your team agree with your assessment? And once you know the answers, is this the way you want decisions made on your program? Would you prefer that program decisions be made at a lower or higher level? What stands in your way? In a perfect world, how would you overcome this obstacle?

Testing Model—The testing model will provide an accurate sense of the status of the program. If testing slips, the program slips—you need more money, and the technology is at risk. Early involvement of some form of testing will provide an objective insight available through no other channel. Will you meet the test entrance criteria? Will you conduct testing as scheduled? How many and what severity of trouble reports? Did you end on time? What is your plan for development and operational testing? Will you use block, spiral, or final acceptance testing? Are you comfortable with that answer? What non-

program players will you need for testing? How sure are you of their availability? What would be the effect on funding should the testing slip several months?

Supportability Model—How will you support the system post-fielding? Is the materiel fielding plan (MFP) up to date? What levels of maintenance, operational, intermediate, and depot will you use? Why? What training and documentation will you need at each level of maintenance? Do you think training and documentation will really be available for concurrency with first unit fielding?

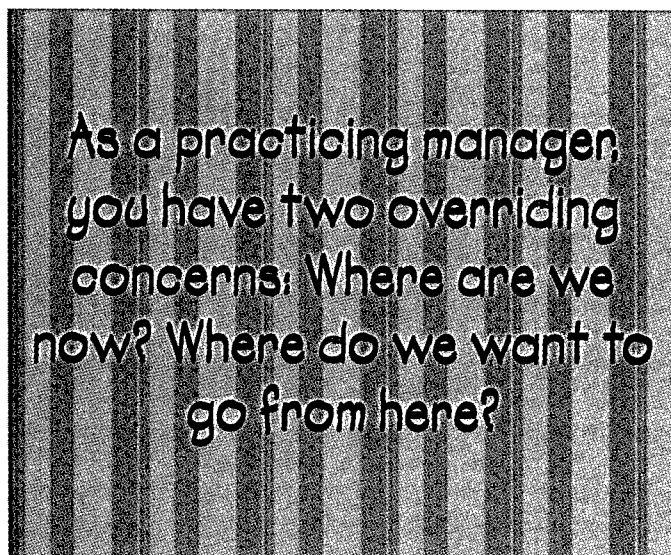
How dependent are you on a specific contractor for spares? How do you maintain configuration management?

Marketing Model—For a government program? Yes, indeed. Who are the major stakeholders in your program? Look at users, users' representatives, proponents of interfacing systems. You probably have a representative of each major stakeholder assigned to your program; however, that in no way takes the place of continually marketing the program to the stakeholder. The *true* stakeholder is more likely than the representative to change during the program. When a true stakeholder changes, you start from scratch with your marketing effort. The true stakeholders make excellent supporters when the program hits a serious bump in the road. Properly groomed, they will rush to your support. But remember: it could well be that your program isn't the original idea of the current stakeholder but of his or her predecessor.

Change Model—Management means managing change. What's your plan for managing change in team personnel, external policy, financial adjustments, environmental law? Where will you find your next big change?

Contractor Model—What contractor, subcontractor, and vendor model is in place? What rights do you have when you don't have privity of contract with a subcontractor or vendor? Are you sure?

Quality Management Model—Think ahead to the ultimate delivery date. Looking back at your program from there, what program changes will you wish you had made? You designed the program in the past with an eye to the future. What do you need to change now, in the light of new information? What key points could make a differ-



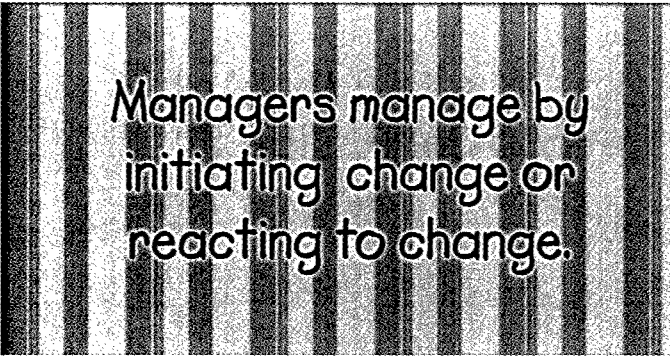
ence if you adjust them? What emphasis do you place on value engineering?

Risk Model—What do you consider the top 10 greatest risks to the program? How do these risks tie back into your metrics? What is your plan for assumption, transfer, sharing of risks. What risks do you “wish away”? Do you need a better strategy?

Dependence Model—What special skills, subject matter experts, consultants, testers, or other specialists will you need for short periods at some time in the program? Where will you get them?

Putting it Together

You’ve answered the questions. What do you think now? How does your program shape up? Is the program where



**Managers manage by
initiating change or
reacting to change.**

you want it to be? At least now you know. What will you change? How will you know that your changes are successful? Your analysis of your program becomes a snapshot in time. To have value, follow-on analysis shows changes from the baseline. For those items you want to change, monitor closely

until the change works as you desire. Where you are happy, great—look again next quarter.

What other models do you see as you look at the abstractness of this article and the reality of your program? Share them!

Editor’s note: The author welcomes questions and comments. He can be reached at dan.knapp@peostri.army.mil.

Air Force and Navy Join in Joint Tactical Radio Merger

**DEPARTMENT OF DEFENSE NEWS
RELEASE
Nov. 21, 2003**

The Air Force and Navy service acquisition executives (SAEs) have jointly decided to merge their respective Joint Tactical Radio System (JTRS Cluster 3 and Cluster 4) acquisition programs. Both Department of the Air Force and Department of Navy anticipate this merged acquisition will yield development and production efficiencies as well as interoperability advantages for the Department of Defense.

"The merger of the JTRS Cluster 3 and Cluster 4 programs will yield large dividends for the Navy, the Air Force and DoD in general. Joint interoperability is a cornerstone to the way we fight now and in the future. Combining our program efforts will ensure that a truly joint radio system is efficiently developed for our aerospace and maritime forces," said Marvin Sambur, assistant secretary of the Air Force for acquisition.

The Air Force and Navy SAEs have established a joint management and oversight structure between the two Services for the combined program, similar to other joint acquisition efforts.

"The Air Force and the Navy are taking a major step towards the goals of the JTRS program by merging Clusters 3 and 4. We can assure interoperability, reduce development costs, and lower acquisition costs by joining our efforts. More importantly, we can be certain that our warfighters will be able to easily communicate in the joint warfighting environment that Secretary Rumsfeld is creating," said John J. Young Jr., assistant secretary of the Navy for research, development and acquisition.

Program leadership will rotate between Air Force and Navy at appropriate times during the acquisition cycle, with the Air Force initially taking the lead for the combined program. This balanced management approach has been structured to ensure a truly joint management team and resulting product. A combined request for proposal for the pre-system development and demonstration phase is being developed.

For more information please call the Air Force press desk at (703) 695-0640.

Statement Required by the Act of Aug. 12, 1970 Section 3685, Title 39, U.S.C. Showing Ownership, Management, and Circulation

Program Manager (now *Defense AT&L*) is published bimonthly at the Defense Acquisition University (DAU), Fort Belvoir, Va. 22060-5565. The university publishes six issues annually. Effective Jan. 1, 2004, *Program Manager* changed its name to become *Defense AT&L*. The Director of the DAU Press is Eduard Boyd; the Editor-in-Chief is Collie Johnson; the Managing Editor is Judith Greig; and the publisher is the Defense Acquisition University Press. All are collocated at the following address:

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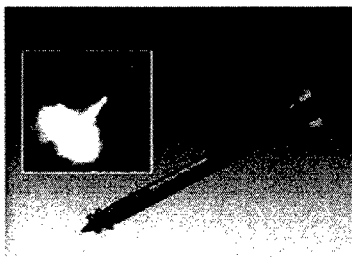
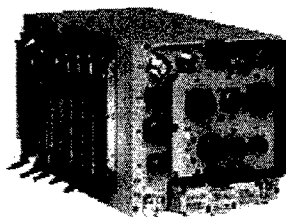
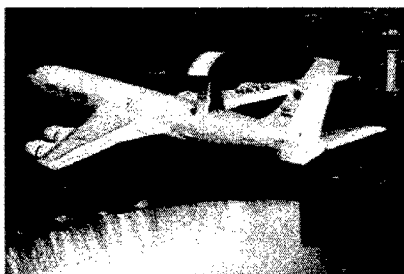
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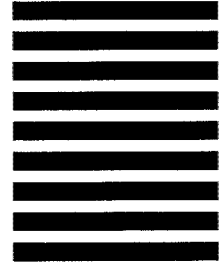
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Army Acquisition Support Center Prepares for the Future

With New Online Look

<http://asc.army.mil>

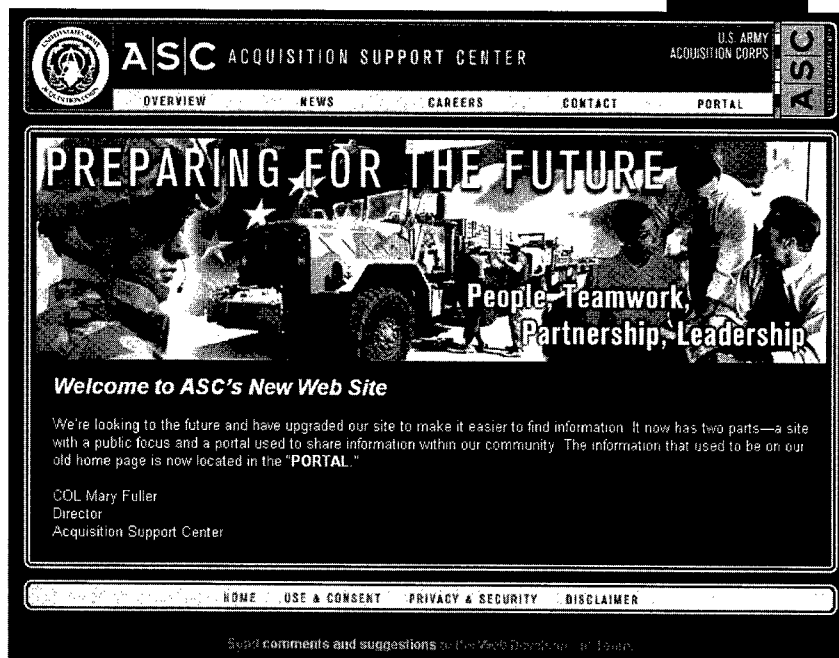
**Reinforcing
Support to the
Warfighter Through
User-Friendly Access
to Information
Resources**

FORT BELVOIR VA

The Army Acquisition Support Center (ASC), the new Field Operating Agency under the Assistant Secretary of the Army for Acquisition, Logistics and Technology, has revamped its Web site to better serve its customers, and ultimately the soldier. ASC's customers, the entire Army Acquisition, Logistics and Technology workforce (AL&TWF), will notice the striking bronze and green design of the new site, <<http://asc.army.mil>>, which reflects the dynamic face of the AL&TWF and reinforces its support of the warfighter. The new Web site provides user-friendly navigation and encompasses the goals and structures that make up the organization.

"Army acquisition plays a critical role in protecting America and America's fighting forces," said ASC Director Col. Mary Fuller. "ASC is preparing for the future and helping to ensure that those who make the decisions that affect our fighting forces are well equipped with the most technologically advanced resources. We have upgraded our Web site to make it a more useful tool for our customers—both in the office and in the field."

ASC, formed by merging the Army Acquisition Career Management Office with the Army Acquisition Executive Support Agency as well as career programs CP-14 (Contracting) and CP-13/17 (LogPro), presents a new site that features in-depth information about the organization's infrastructure, programs, publications, career information, and events. ASC's workforce operates in a dynamic environment using leading-edge concepts and technologies to ensure that warfighters have the equipment and supplies they need to do their job.



The Army Acquisition Support Center is designed to support the readiness of the Army's warfighter by developing a world-class professional acquisition workforce, effectively acquiring and stewarding resources, and providing customers with the best possible products and services.

<http://asc.army.mil>

AIR FORCE PRINT NEWS AF UNVEILS FORCE DEVELOPMENT PLAN

Tech Sgt. David A. Jablonski, USAF

WASHINGTON (Oct. 10, 2003)—Air Force leaders are launching a spread-the-word tour in November to explain force development, a new system that transforms how the Service will train, educate, and assign people to meet mission challenges.

Teams led by major command general officers will visit every base to explain the details of this initiative and to ensure officers understand the concept, policies, and procedures.

Although the first phase of implementing force development targets processes affecting members of the officer corps, all elements—enlisted, civilian, Reserve, and Air National Guard—will eventually benefit from the force development construct, said Air Force Chief of Staff Gen. John P. Jumper.

“Force development is all about getting the right people in the right job at the right time with the right skills to fight and win in support of our national security objectives, now and in the future,” he said. “It will result in significant changes to our current program of officer progression.”

As the chief of staff’s “change agent” for force development, the Air Force Senior Leadership Management Office is leading this effort. AFSLMO officials are working with key Air Staff and Air Force Personnel Center leaders to reassess and transform how the Air Force educates, trains, and assigns the total force.

Current and future phases of this transformation will include adjustments to officer academic and professional military education and professional development processes, enlisted professional development and professional military education programs, management of senior enlisted leaders, and development of Air Force civilian employees.

According to the AFSLMO director, Brig. Gen. Richard S. Hassan, force development doctrine consists of three levels: tactical, operational, and strategic.

At the tactical level, airmen will continue to concentrate on learning primary skills.

At the operational level, airmen begin developing complementary skills and an understanding of the broader Air Force perspective. They will learn how a wide variety of individual capabilities combine to complete an organization’s mission as well as the Air Force’s and its joint partners’.

At the strategic level, airmen combine skills and experiences to develop a knowledge base that extends beyond the Air Force into Defense Department, interagency, and international arenas.

“This is a huge cultural shift for our institution,” Hassan said. “Force development is about better development and better utilization of the total force. It also takes into account that all airmen will not necessarily need to be, or want to be developed through all three levels. We need great tactical and operational leaders in our Air Force and as the chief said, we will value each and every one of them, at all levels.”

Hassan compared the force development construct to the way the Air Force fights.

“When we’ve gone to war we [have] thought about it in terms of doctrine—how we would employ forces,” Hassan said. “For example, you don’t send an [Airborne Warning and Control System] or [Joint Surveillance Target Attack Radar System] over enemy territory uncovered. We deploy our assets in an integrated fashion, not one at a time. But we didn’t do the same thing with our people. In the current system, we think about officers and everybody else all separately, and in some cases leave them uncovered.”

It is all about taking care of the Air Force’s most valuable resource, Hassan said.

“What force development does is recognize their value, consider their expectations, and provide them with the right set of skills to help them be the best they can at what they do,” he said.

DEPARTMENT OF DEFENSE NEWS RELEASE (OCT. 16, 2003)

FLAG OFFICER ANNOUNCEMENT

Navy Rear Adm. (lower half) Charles S. Hamilton II, has been nominated for appointment to the rank of rear admiral. Hamilton is currently serving as deputy Program Executive Officer for Ships, Naval Sea Systems Command, Washington, D.C.

AMERICAN FORCES PRESS SERVICE SELECTING 'BEST PERSON' KEY TO PENTAGON RENOVATION SUCCESSES

K.L. Vantran.

WASHINGTON, Oct. 22, 2003—One of the keys to the success of the Pentagon Renovation Program is putting the best person in the job, program manager Michael Sullivan said at the Federal Buildings Expo here today.

Sullivan began his presentation at the Washington Convention Center with an overview of his organization, noting that about 80 percent of his core staff is contractors.

When considering contractor firms, Sullivan said he looks for "superior past performance, a sound technical solution, and a good organization to implement it." The lowest bid is not necessarily the determining factor, he added.

Innovative acquisition and execution was next on Sullivan's list. This includes looking at situations from different angles. "If you look at regulations as being the Bible, then you're probably lost. If you look at them as guidance, you can do a lot of innovative things," he said.

Sullivan said the Pentagon renovation team polled local, state, and federal entities across the United States and asked what they were doing to motivate contractors. The staff also asked contractors what would motivate them.

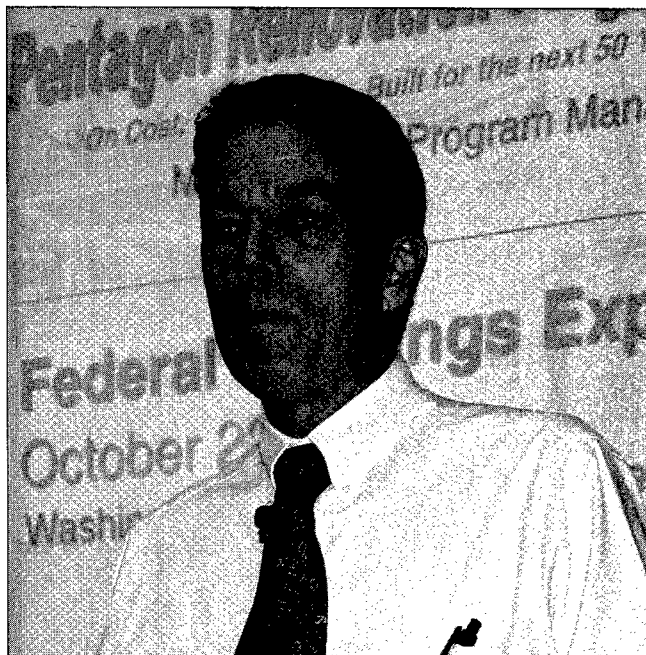
"We tried to embrace that type of philosophy, to ask the people who are going to be motivated," he added.

This led into Sullivan's next point—fostering a team environment. "All stakeholders need to be involved," he stressed.

Measuring performance also is crucial to success, Sullivan said. "If you're not measuring, not keeping score, then you're only practicing," he said, emphasizing that an organization must track performance to "be in the game."

Knowing what the customer wants and delivering on those expectations matters as well, he said. "We're a service organization. We're here to execute projects. If we're not successful, then they don't need us."

Each project, noted the manager, presents challenges, and the renovation of the Pentagon is no exception.



Program manager Michael Sullivan talks about the success of the Pentagon Renovation Project. Sullivan said the project, slated for completion in 2010, is "on track." He was one of the featured speakers on the first day of the Oct. 22-23 Federal Buildings Expo at the Washington, D.C., Convention Center.

Photo by K.L. Vantran

Among the challenges the renovation team faces are moving employees to temporary spaces so areas can be renovated and coordinating contractor work schedules.

A \$2.1 billion renovation of the 60-year old Pentagon began in 1993 and Wedge 1 was nearly completed when American Airlines Flight 77 crashed into the building Sept. 11, 2001.

The Pentagon, dedicated in 1943, is laid out in five concentric pentagonal "rings," the "E" being the outermost and the "A" the innermost. The plane hit the renovated wedge as well as an adjoining section before stopping at "B" ring.

Renovations that included structural improvements such as blast-resistant windows and steel framing saved many lives, noted Sullivan. The renovated area had a new sprinkler system that Sullivan also credits with saving lives. The fire in Wedge 1 burned out in hours, while

Wedge 2, with no sprinklers, burned for more than two days, he added.

What just days before had been a routine renovation became known as the Phoenix Project. Construction crews worked tirelessly to rebuild Wedge 1 by Sept. 11, 2002. In February, the last group of employees returned to work in this area. In July, part of Wedge 2 was finished, and employees have returned to offices there as well.

Because of that fateful day, Sullivan said the remaining renovation has been accelerated. "Putting in steel cages and flash-resistant windows sooner will protect people sooner," he added. The projected completion date moved from 2014 to 2010. "It's aggressive, but we're doing it," he said.

"We're on track. We have to look out all the way to 2010," he added. "We have to pulse ourselves every day. We have to do crisis management every day to get through today's jobs, but we're focused on 2010."

Another project with unique challenges is the Pentagon Memorial, said Sullivan. The memorial will be 184 lighted benches, each containing the name of a person who perished in the terrorist attack. The memorial is funded through private contributions. Sullivan said the team had hoped the \$1.5 million would be raised by mid-November, but so far the fund has only \$50,000. The challenge, he added, is working with the contractor to see what may be done in the interim.

Ultimately, the key is to "be flexible and do what you think is right," Sullivan said.

DEPARTMENT OF DEFENSE NEWS RELEASE (OCT. 23, 2003)

DOD ANNOUNCES RADIO FREQUENCY IDENTIFICATION POLICY

The Department of Defense announced today the establishment of a Radio Frequency Identification Policy (RFID). RFID technology greatly improves the management of inventory by providing hands-off processing. The equipment quickly accounts for and identifies massive inventories, enhancing the processing of materiel transactions to allow DoD to realign resources and streamline business processes.

Implementation of RFID minimizes time spent through the normal means of inventory processing. This technology allows the improvement of data quality, items management, asset visibility, and maintenance of ma-

teriel. Further, RFID will enable DoD to improve business functions and facilitate all aspects of the DoD supply chain.

The new policy will require suppliers to put passive RFID tags on the lowest possible piece part/case/pallet packaging by January 2005. Acknowledging the impact on DoD suppliers, the Department plans to host an RFID Summit for Industry in February 2004. The RFID policy and implementation strategy will be finalized by June 2004.

RFID policy and the corresponding RFID tagging/labeling of DoD materiel are applicable to all items except bulk commodities such as sand, gravel, or liquids.

AMERICAN FORCES PRESS SERVICE (OCT. 24, 2003)

MILITARY WORKS ON FASTER, ALL-DIGITAL TARGETING SYSTEM

Gerry J. Gilmore

WASHINGTON—The U.S. military is developing an advanced communications capability for tactical fighters that will tightly connect the sensors and cockpits of many aircraft.

The 2-year-old Tactical Targeting Network Technologies (TTNT) program links tactical jet fighters' sophisticated sensors and avionics with real-time, digital communications, explained Peter Highnam, a Defense Advanced Research Projects Agency employee who works in the agency's information exploitation office.

The envisioned result, Highnam said, is Information Age effectiveness in the complete process of detection, positive identification, targeting, meeting rules of engagement, strike, and confirmed destruction while minimizing collateral damage.

Highnam said TTNT is being developed to provide the networked infrastructure needed for what he called "the tremendous transformational potential of network-centric warfare."

He identified one example, the rapid and precise location of enemy ground-to-air defense systems. It has been demonstrated that this task is performed "orders of magnitude faster" and more accurately when the sensors on several aircraft work directly together, he said.

Today's military uses a legacy system called Link 16, Highnam explained, but TTNT—an all-digital approach using a broad set of technologies only recently devel-

oped—is far more advanced and can be inexpensively incorporated aboard jet fighters.

Using a cell phone analogy, Highnam compared Link 16 to older models that do a good job providing basic voice and low-rate data communications. TTNT, Highnam said, offers myriad communications conduits, just as today's advanced phones offer capabilities such as voice, e-mail, photos, and Internet capability. And all TTNT communications, he pointed out, will be secure.

"Take that [cell phone] notion, bring it across to the fast-paced world of tactical aircraft, [and that] is what we're about," Highnam noted, citing TTNT's interoperability, high speed, low latency, and ease of use.

"Machine to machine is the only way to get the job done," he concluded.

AIR FORCE RESEARCH LABORATORY PRESS RELEASE (OCT. 24, 2003)

AFRL-ROME AWARDS CONTRACTS FOR JAGUAR PROGRAM

ROME, N.Y.—The Air Force Research Laboratory (AFRL) Information Directorate has awarded five contracts, with a combined value in excess of \$36.5 million, in support of the Joint Air/Ground Operations: Unified, Adaptive Replanning (JAGUAR) program of the Defense Advanced Research Projects Agency (DARPA), Arlington, Va.

The purpose of the JAGUAR program is to develop technologies that will enhance the capabilities of Air Operations Centers (AOCs), while reducing requirements for manpower.

Receiving awards from the directorate's Contracting Division were:

- The Charles Stark Draper Laboratory Inc., Cambridge, Mass., (\$9,337,937) to create and implement a system design for the JAGUAR program to provide a common information environment for component developers and to integrate the components into a unified software system.
- Lockheed Martin, Advanced Technology Laboratories, 3 Executive Campus, Cherry Hill, N.J., (\$8,000,000) to provide for design and development of a plan understanding and monitoring associate.
- BBNT Solutions LLC, Cambridge, Mass., (\$7,763,343) to develop the capability to update models of assets

and procedures that form the primitive elements of the plan. This will then allow a supervisor to quickly and accurately install new models into the overall JAGUAR software system.

- ALPHATECH, Inc., Burlington, Mass., (\$7,000,000) for design and development of a plan generator JAGUAR.
- Northrop Grumman of Fairfax, Va., (\$4,539,219) for "Experiment Design and Evaluation" for the entire JAGUAR process.

During the recent conflict in Iraq, the Central Command (CENTCOM) AOC staff was able to plan and conduct upwards of 2000 sorties per day, from dozens of bases, including search, strike, jamming and tanker support—mixing both fixed and relocatable targets with exquisite attention to hundreds of details for each mission.

However, several clear trends are converging that, without a great step forward in automation, may lead to prohibitive deployment, training, and logistical needs. These future requirements include more unmanned airborne platforms, increased multi-mission aircraft, more engagements per sortie, richer tactics, battlespace volatility, and the need for smaller staffs.

"JAGUAR will address future concerns by uniting technologies for plan generation, plan assessment, and model adaptation in a consistent, model-based framework that can respond to the forthcoming transformations in air operations," said Carl A. Defranco Jr., program manager in the directorate's Information Systems Division.

"This framework will be explicitly aligned with Air Force efforts to insert advanced technology into the AOC, to enable rapid transition," said Defranco, adding that a working prototype of the JAGUAR system is expected in early 2008.

The Information Directorate is serving as technical agent for the DARPA Information Exploitation Office, which develops technologies for sensing, exploitation, command/control, and information integration. The office is also responsible for combining selected technologies into network-centric systems that radically improve U.S. capabilities to prosecute ground targets in combat.

(Francis L. Crumb, (315) 330-3053; E-Mail: crumbf@rl.af.mil)

**AMERICAN FORCES PRESS SERVICE
(OCT. 31, 2003)
NAVY MEDICINE GOES MODULAR TO
DELIVER TIMELY COMBAT CARE**

Gerry J. Gilmore

WASHINGTON—The Navy today showcased a new, deployable medical system that's saving time—and servicemembers' lives.

The Expeditionary Medical Unit (EMU), Navy surgeon Capt. Martin L. Snyder explained while inside an EMU on display in the Pentagon's courtyard, is a rapidly deployable field hospital that's unlike any of its predecessors.

The "task-oriented" EMU is part of "making Navy medicine more expeditionary," Snyder explained, by "getting our medical professionals farther forward, faster, to be able to deal with the combat casualties closer to the point of injury as we possibly can."

Snyder, a 17-year veteran who operated on wounded troops during the Gulf War and also deployed to northern Kuwait during Operation Iraqi Freedom, said the first EMU deployment was to Djibouti, Africa, in September. That unit, he noted, is still in operation.

The logistics of moving military hospitals to the field "had to change," Snyder asserted, noting some older field hospitals needed more than 30 acres of space and took as long as two weeks to set up.

Featuring lightweight, integral aluminum framing, the EMU's structure comes complete with heating and air-conditioning systems, Snyder said. The entire unit, he noted, can be erected on half an acre in about five hours. The modular EMU, Snyder said, can be configured and reconfigured to provide more or less space and additional or reduced amounts of medical care.

"It can be augmented to whatever size you need, and that's the beauty of it," he explained, noting that with older Navy combat field hospitals, "you got what you got."

Housed within the EMU's dun-colored walls of tenting are surgical facilities, a lab, X-ray equipment, a pharmacy, and more. Much of that gear, such as digital X-ray equipment and

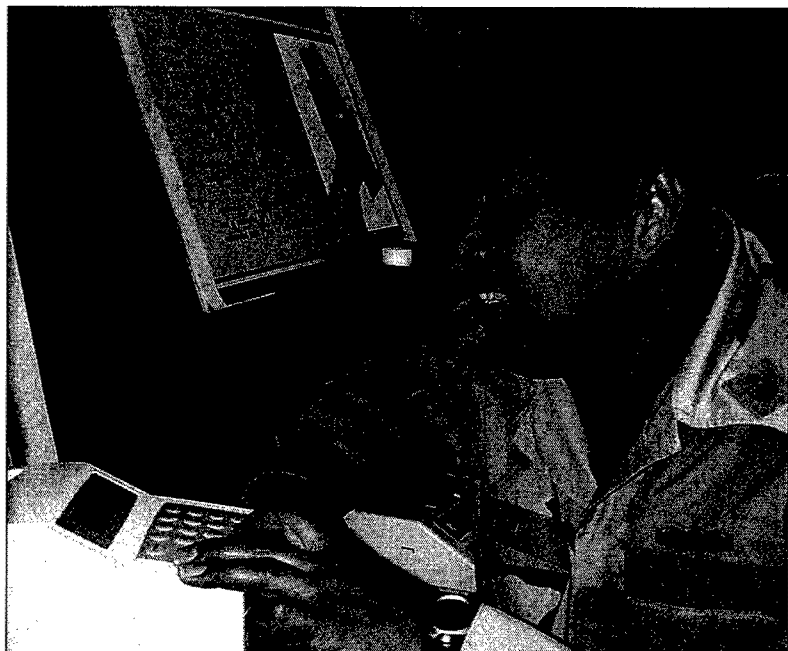
blood analyzers, is also becoming lighter and, hence, easier to transport and set up, he said.

In fact, lab technician Chief Petty Officer Justin R. Sambo noted that the EMU's new 15-pound blood analyzer, which can detect diseases such as hepatitis, weighs hundreds of pounds less than its predecessor.

Civilian contractor James Whittaker pointed out that new equipment eliminates the need for X-ray film and bulky, environmentally unfriendly photographic chemicals. And, he noted, the X-rays can be sent digitally to anywhere in the world.

That kind of progress, Navy Surgeon General Vice Adm. Michael L. Cowan pointed out, is representative of many advances military medicine has achieved over the past several years.

"I think that we've made huge leaps in several areas," Cowan asserted, noting that military medicine across DoD serves more than 8 million customers, including family members and retirees.



Navy lab technician Chief Petty Officer Justin R. Sambo displays the Expeditionary Medical Unit's new 15-pound blood analyzer, which can detect diseases such as hepatitis. The new analyzer weighs hundreds of pounds less than its predecessor.

Photo by Gerry J. Gilmore

One such breakthrough, the admiral pointed out, is the "quick-clot" bandage that's been used in treating casualties during Operation Iraqi Freedom.

"Virtually all of the people who die of [combat] wounds die of blood loss," Cowan explained, noting "there are people alive today because we put that product in the field."

Another innovative medical project now being worked separately by the Army and the Navy, Cowan continued, involves the development of a dehydrated blood substitute that can be reconstituted with sterile water in the field. Pending successful human studies, Cowan said he expects this new blood product to become available within a few years.

"This," the admiral asserted, "will be the 'next big thing' in military medicine."

Prosecuting today's asymmetrical style of warfare—such as in Iraq where U.S. forces first fought and defeated regular troops and are now confronting guerillas while providing reconstruction and humanitarian aid—requires flexibility, not only on the part of combat troops, but also support elements, to include combat medical care.

Cowan noted that the modular, "Lego-block," EMU provides that kind of flexibility. The EMU, Snyder echoed, provides a transformational leap in combat medical care that can be tailored to fit the bill.

"If I go from high-intensity combat to, let's say, humanitarian aid later on, I can now say, 'OK, I need a pediatric unit,'" he concluded.

OFFICE OF MANAGEMENT AND BUDGET NEWS RELEASE

(NOV. 4, 2003)

PRESIDENT TO NAME DAVID H. SAFAVIAN ADMINISTRATOR FOR FEDERAL PROCUREMENT POLICY, OFFICE OF MANAGEMENT AND BUDGET

The President announced today that he intends to nominate David Hossein Safavian of Michigan to be Administrator for Federal Procurement Policy, Office of Management and Budget, Executive Office of the President. Safavian currently serves as Chief of Staff for the General Services Administration in Washington, D.C. Prior to this position he served as Chief of Staff for Congressman Chris Cannon. Earlier in his career, Safavian served as a Shareholder and Managing Partner for Janus-Merritt Strategies, L.L.C. and as an As-

sociate Attorney for Preston, Gates and Ellis in Washington, D.C. He earned his bachelor's degree from St. Louis University, his J.D. from the Detroit College of Law, and his LLM from the Georgetown University Law Center.

Safavian, if confirmed by the Senate, would oversee the Bush administration's competitive sourcing initiative, a controversial effort to let contractors bid on tens of thousands of federal jobs.

DEPARTMENT OF DEFENSE NEWS

RELEASE (NOV. 10, 2003)

FLAG OFFICER ASSIGNMENT

Chief of Naval Operations Adm. Vern Clark announced the following flag officer assignment: Navy Rear Adm. (selectee) Robert E. Cowley III is being assigned as commander, Navy Exchange Service Command, Norfolk, Va. Cowley is currently serving as deputy for acquisition and business management, Office of the Assistant Secretary of the Navy (RD&A), Washington, D.C.

U.S. AIR FORCE AGILE ACQUISITION NEWSLETTER (NOVEMBER 2003)

FIRST PHASE OF PEO REALIGNMENT UNDERWAY

The realigning and relocation of the Air Force PEO element, designed to clarify lines of responsibility, and increase speed and credibility in acquisition programs is proceeding on schedule.

- The first major step in Phase 1 occurred Oct. 1 when the PEO for weapons moved from the Pentagon to Eglin Air Force Base, Fla. Maj. Gen Robert Chedister, who is also the commander of the Air Armaments Center, is now the PEO, backed up by Judy Stokley, his acquisition execution deputy.
- The realignment of the Weapons PEO will be followed in December with similar moves for the PEO for Command, Control and Combat Support (PEO/C2&CS) to Electronics Systems Center at Hanscom AFB, Mass., and the creation of a new PEO/Aircraft at the Aeronautical Systems Center at Wright-Patterson AFB, Ohio. The Aircraft PEO will be formed by merging the current PEO for Fighter and Bomber and PEO for Airlift and Tankers.

When implemented the Aircraft PEO will have responsibility for all aircraft programs except the F-35 Joint Strike Fighter and the F/A-22 Raptor. The F/A-22 will have its own PEO. The Joint Strike Fighter PEO responsibility will continue to rotate annually between the Navy

and Air Force. Each of those programs will have their own PEOs in Washington. The Air Force's PEO for Services also will remain in Washington.

NATIONAL SECURITY AGENCY PRESS RELEASE (NOV. 14, 2003)

HARRY GATANAS RETURNS TO THE NATIONAL SECURITY AGENCY AS SENIOR ACQUISITION EXECUTIVE

Lt. Gen. Michael V. Hayden, Director, National Security Agency/Chief, Central Security Service (NSA/CSS), USAF, is pleased to announce that Harry D. Gatanas, a retired Army general, will be returning to NSA and reassuming the responsibilities of Senior Acquisition Executive (SAE). Gatanas brings to NSA/CSS over 28 years of active duty service in a wide variety of acquisition assignments. He has served in positions such as the Army's Director for Contracting and was the Army's key staff officer for weapons systems acquisition. During his previous assignment at NSA/CSS, he served as the Agency's first SAE and laid the foundation for broad, systemic reform within the functional areas of contracting and program management. Gatanas also established processes for major systems procurements and ensured that the NSA/CSS' acquisition workforce received the training and development necessary to keep pace with the Agency's revitalized acquisition programs.

Gatanas will officially begin his position at NSA/CSS in early December.

DEPARTMENT OF HOMELAND SECURITY (DHS) PRESS RELEASE (NOV. 14, 2003)

SMALL BUSINESS INNOVATION RESEARCH (SBIR) SOLICITATION

The U.S. Department of Homeland Security's Science and Technology division announced today the release of a Small Business Innovation Research (SBIR) Program Solicitation by the Homeland Security Advanced Research Projects Agency (HSARPA). The notice, which is available at www.fedbizopps.gov and the DHS web site: www.dhs.gov, invites small businesses to submit innovative research proposals that address high priority technology areas of the DHS.

"In addition to acting as the driving force of our nation's economy, small businesses are leaders in developing new and unique technologies," said Dr. Charles McQueary, DHS Under Secretary for Science and Technology. "Through the SBIR Program we will introduce

HSARPA to small businesses and invite them to be a part of our team." Through this solicitation HSARPA is seeking proposals for the following research and development topics: new system/technologies to detect low vapor pressure chemicals; chem-bio sensors employing novel receptor scaffold; advanced low cost aerosol collectors for surveillance sensors and personal monitoring; computer modeling tool for vulnerability assessment of U.S. infrastructure; Marine asset tag tracking system; AIS tracking and collision avoidance equipment for small boats; ship compartment inspection device; and advanced secure supervisory control and data acquisition (SCADA) and related distributed control systems.

Participation in the HSARPA SBIR Program is restricted to for-profit small businesses in the United States with 500 or fewer employees, including all affiliated firms. Interested small firms will apply first for a six-month Phase I award not to exceed \$100,000, to define the scientific, technical, and commercial merit of a particular concept. Firms, whose concepts prove successful in Phase I, may be invited to apply for a two-year Phase II award not to exceed \$750,000 to further develop the concept, usually to the prototype stage.

"Our goal with the SBIR program is to benefit from the nation's small businesses in the research and development arena, a critical source of innovation," said Kevin Boshears, Director, of the Department of Homeland Security's Office of Small and Disadvantaged Business Utilization. "Like our small business procurement program, the SBIR program makes small business participation part of the Department's culture in support of our national mission."

The U.S. Department of Homeland Security's Science and Technology division serves as the primary research and development arm of the DHS, utilizing our nation's scientific and technological resources to provide federal, state, and local officials with the technology and capabilities to protect the homeland. HSARPA is the external research funding arm for the Department of Homeland Security. This agency within Science and Technology is expected to develop revolutionary changes in technologies that support homeland security, to advance those technologies that are "critical," and to "accelerate the prototyping and deployment of technologies" that reduce homeland vulnerabilities.

DEPARTMENT OF DEFENSE NEWS RELEASE (NOV. 18, 2003) DOD RELEASES SELECTED ACQUISITION REPORTS

The Department of Defense has released details on major defense acquisition program cost and schedule changes since the June 2003 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the Sept. 30, 2003, reporting period. This report can be viewed at: <http://www.defenselink.mil/News/Nov2003/d20031118sar.pdf>.

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

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

The current estimate of program acquisition costs for programs covered by SARs for the prior reporting period (June 2003) was \$1,135,706.5 million. After adding the costs for new programs that were reported in the June 2003 reporting period (shown in the sidebar), the adjusted current estimate of program acquisition costs was \$1,246,366.3 million. There was a net cost increase of \$511.8 million (+ 0.04 percent) during the current reporting period (September 2003). This increase was due to the reallocation of seven EELV (Evolved Expendable Launch Vehicle) missions from Boeing to Lockheed Martin as a result of the Procurement Integrity Act remedy and increased prices on the EELV Buy II mission awards.

September 2003 (77 programs)

For the September 2003 reporting period, there were quarterly exception SARs submitted for four programs (GCSS ARMY, WIN-T, EELV, and SBIRS HIGH). The reasons for the submissions are provided below.

	Current Estimate (\$ in Millions)
June 2003 (73 programs)	\$1,135,706.5
Plus four new programs (FCS, AGM-88E, ASDS, & E-2 AHE)	+110,659.8
June 2003 Adjusted (77 programs)	+110,659.8
Changes Since Last Report:	
Economic	\$ 0.0
Quantity	.00
Schedule	.00
Engineering	.00
Estimating	+511.8
Other	.00
Support	.00
Net Cost Change	+\$511.8
September 2003 (77 programs)	\$1,246,878.1

ARMY

GCSS (Global Combat Support System) ARMY—The SAR was submitted to close-out reporting due to removal of GCSS Army from the Major Defense Acquisition Program (MDAP) list. The developmental approach for the program was restructured to take advantage of the latest commercial-off-the-shelf technology. SAR reporting will resume at System Development and Demonstration (Milestone B), currently planned for May 2005. No cost changes were reported.

WIN-T (Warfighter Information Network—Tactical)—An initial SAR was submitted for WIN-T following approval of System Development and Demonstration (Milestone B) in August 2003.

AIR FORCE

EELV (Evolved Expendable Launch Vehicle)—The SAR was submitted to report a schedule slip of 10 months (from September 2003 to July 2004) in the Operational Launch Service Demonstration for the Heavy Lift Vehicle (HLV). This delay was due to the downstream impact of government launches being prioritized to meet warfighter needs, slips in the launch dates of the first three Delta IV missions, and significant modifications to the Complex 37B launch pad to accommodate the HLV launch. Program costs increased \$511.8 million (+ 2.5 percent) from \$20,284.5 million to \$20,796.3 million, due to the reallocation of seven missions from Boeing to Lockheed Martin as a result of the Procurement Integrity Act remedy (+ \$223.8 million) and

IN THE NEWS

increased prices on the Buy II mission awards (+ \$288.0 million).

SBIRS (Space Based Infrared System) HIGH—The SAR was submitted to report schedule slips of nine months (from May 2003 to February 2004) for the Highly Elliptical Orbit (HEO) Sensor 1 Delivery and 10 months (from November 2004 to September 2005) for the HEO Message Certification. HEO Sensor 1 Delivery has slipped due to a series of design deficiencies, technical issues identified during final performance testing, and problems meeting the Electromagnetic Interference specification. HEO Message Certification delays are due to the late delivery of the HEO 1 sensor payload and launch delays. No cost changes were reported.

	Current Estimate (\$ in Millions)
WIN-T (Warfighter Information Network—Tactical)	\$12,040.5

New SAR

(As of September 30, 2003) The Department of Defense has submitted an initial SAR for WIN-T (Warfighter Information Network—Tactical). This report does not represent cost growth. The baseline established on this program will be the point from which future changes will be measured. The current cost estimate is provided above.

CAREER DEVELOPMENT

PENN STATE UNIVERSITY AND DAU SIGN STRATEGIC PARTNERSHIP AGREEMENT

On November 12, 2003, the Defense Acquisition University (DAU) signed a strategic partnership agreement with Penn State University. Under the terms of this agreement, DAU and Penn State will collaborate on research projects in the area of supply chain management, and DoD AT&L workforce members will have opportunities to earn online a special Certificate in Supply Chain Management from a recognized leader in this area of concentration.

C/S SOLUTIONS, INC., AND DEKKER, LTD SIGN MEMORANDA OF AGREEMENT WITH DAU

In ceremonies held at the Defense Acquisition University (DAU) on Nov. 19, 2003, DAU Commandant Army Col. Ronald Flom signed memoranda of understanding (MOUs) with C/S Solutions, Inc., and Dekker, Ltd. The MOUs established a strategic cooperative effort between DAU and the signing partners to share educational opportunities and materials in a mutually beneficial scenario. Both C/S Solutions and Dekker provide training centered on providing the best possible information on business practices to help clients develop world-class business management organizations.

The terms of the agreement will enable Department of Defense (DoD) personnel to attend C/S Solutions and

Dekker courses, facilitate involvement in DAU course development by both partners, and enable the partners to provide feedback to DAU on training pilots and other course development activities.

EARN CONTINUOUS LEARNING POINTS

To access DAU Continuous Learning Center modules that will help acquisition workforce members fulfill the USD(AT&L) requirement for 80 continuous learning points every two years, go to <http://clc.dau.mil>. Note that this is a separate program from Defense Acquisition Workforce Improvement Act (DAWIA) certification, and classes are open to everyone.

NEW PERFORMANCE BASED LOGISTICS (PBL) COURSE

The Defense Acquisition University has announced a new course focused on Performance Based Logistics. LOG-235 is a hybrid course, consisting of a distance learning portion (LOG-235A, prerequisite for 235B) and a resident classroom portion (LOG-235B). LOG-235B is now open for registration; LOG 235A opened for registration on Dec 1, 2003. Those interested in applying should use the DAU registration process at <http://www.dau.mil/registrar/apply.asp>.

To view the 235B class schedule, go to <http://acc.dau.mil/simplify/ev.php> and click on "235B" under "New PBL Course Offered."

NEW INFORMATION TECHNOLOGY (IT) COMMUNITY OF PRACTICE

The Clinger-Cohen Act (CCA) Implementation Community of Practice (CoP) now resides under a broader fledgling CoP on Information Technology (IT). The IT CoP is focused on the IT Acquisition workforce. Other "sub-communities" like CCA and working groups like the IT Functional Integrated Product Team will be joining the IT CoP shortly. Access the IT CoP through the Acquisition Community Connection (ACC) Web site at <http://acc.dau.mil/simplify/ev.php>.

WIDE AREA WORKFLOW—RECEIPTS AND ACCEPTANCE (WAWF-RA) TRAINING NOW AVAILABLE FROM DAU CONTINUOUS LEARNING CENTER WEB SITE

DOD AT&L workforce members can now access WAWF-RA training from the DAU CLC Web site at <http://clc.dau.mil>. WAWF-RA is the system that allows DOD to reach its e-invoicing goals and reduce interest penalties due to lost or misplaced documents, and supports DoD's goal of moving to a paperless acquisition process. The training modules take approximately three hours to complete. The DAU CLC link to the WAWF-RA training is a result of close collaboration between DAU, AT&L/DPAP, and the WAWF-RA Program Office.

CALL FOR PAPERS

The *Acquisition Review Quarterly*, a journal published by the Defense Acquisition University Press, will be publishing a special edition on Performance Based Logistics. A call for papers has been issued, with a deadline of 31 December 2003. We encourage you to participate. Download the Call for Papers from the Acquisition Community Connection Web site at <http://acc.dau.mil/simplify/ev.phpclick>.

NDIA TO SPONSOR DEFENSE SYSTEMS ACQUISITION MANAGEMENT COURSE OFFERINGS FOR INDUSTRY MANAGERS

The National Defense Industrial Association will sponsor an offering of DAU's Defense Systems Acquisition Management (DSAM) course to interested industry managers Jan. 12-16, 2004, at the Wyndham North in Dallas, Texas; and March 8-12, 2004, at the Wyndham Hotel Salt Lake City in Salt Lake City, Utah. DSAM uses the same acquisition policy information provided to DoD students who attend the Defense Acquisition University courses for formal acquisition certification. It is designed to meet the needs of defense industry acquisition managers in today's dynamic environment, providing the latest information related to:

- Defense acquisition policy for weapons and information technology systems including discussion of the new DoD 5000 series (directive, instruction, and guidebook).
- Defense acquisition and logistics excellence initiatives.
- Defense acquisition procedures and processes.
- The Planning, Programming, and Budgeting System and the congressional budget process.
- The relationship between requirements generation, resource allocation, science and technology activities, and acquisition programs.

For further information, contact Christy O'Hara (703) 247-2586 or e-mail cohara@ndia.org. Prospective government students must first contact Air Force Maj. Jim Ashworth at (703) 805-5809 or e-mail james.ashworth@dau.mil.

POSITION CATEGORY DESCRIPTIONS & EXPERIENCE, EDUCATION & TRAINING REQUIREMENTS FOR FISCAL YEAR 2004

Richard K. Sylvester, Deputy Director, Defense Procurement and Acquisition Policy (Acquisition Workforce and Career Management) has released the fiscal 2004 approved position category descriptions and career field experience, education, and training requirements. The requirements are effective Oct. 1, 2003.

Unless designated as DESIRED, the requirements are MANDATORY for certification. The lists also include training requirements that will change during the fiscal year as new courses are deployed; each new course is listed with a projected deployment date. The career fields with projected changes include: Contracting; Industrial/Contract Property Management; Purchasing; and Life Cycle Logistics (Sustainment path).

The descriptions and requirements can be downloaded from the Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap>. Should you have any questions, please contact Karla Merritt at (703) 681-3444 or e-mail karla.merritt@osd.mil.

FE-201, INTERMEDIATE FACILITIES ENGINEERING COURSE NOW AVAILABLE

The Defense Acquisition University now offers the Intermediate Facilities Engineering Course (FE-201) as a nonresident, self-paced course available through the Internet. FE-201 is the Level II certification course in the Facilities Engineering career field. Students must pass a final examination within 60 days of the start

date. The required prerequisite for this course is ACQ-101.

CHANGE IN LENGTH OF CON-202 AND CON-210

In an effort to be more responsive to the contracting workforce, the Defense Acquisition University has worked to streamline the current CON-202, Intermediate Contracting, and CON-210, Government Contract Law, by reducing redundancies within and across the courses and making more efficient use of class time. These revisions will produce the same levels and quality of learning with less time spent in the classroom. To this end, DAU will soon offer CON-202 in 10 days vice 15 days and CON-210 in 5 days vice 10 days. An added benefit of this streamlining effort will be the potential for students to complete both CON-202 and CON-210 within one three-week block of time since, in many cases, a CON-210 class will be taught immediately after a CON-202 class. These changes will result in some date changes to the current schedule for most of the CON-210 classes. Students currently enrolled in a CON-202 or CON-210 class that will be affected by these changes will be notified in advance. Watch the DAU Web site, <http://www.dau.mil>, for the revised class schedules.

BCF-209 REVISED IN FISCAL 2004

BCF-209, DAU's Selected Acquisition Report (SAR) Course, has been revised for fiscal 2004. Instead of one 5-day classroom course, BCF-209 will be split out to include a Web portion and an in-classroom portion in fiscal 2004. In addition, the course title has been changed to "Acquisition Reporting Course."

- BCF-209A will be two hours of Web course material, delivered via Atlas (DAU Virtual Campus). Designed for students requiring knowledge of acquisition reports and those who prepare and review reports, BCF-209A is a prerequisite for BCF-209B and BCF-209C. DAU had planned to make BCF 209A available in early October 2003; however, deployment has been delayed while the course is upgraded and improved. Although BCF 209A is a prerequisite for BCF 209B and BCF 209C, students may register for BCF-209B or BCF-209C now. Currently, DAU expects to have BCF 209A available around mid to late November 2003.
- BCF-209B and 209C are run together at the same time, in the same classroom. Those students who apply for 209B will attend only the first 2 days to learn the Acquisition Program Baseline (APB) and Defense Acquisition Executive Summary (DAES) reports using the Consolidated Acquisition Reporting System (CARS)

for Major Acquisition Information Systems (MAIS) programs. The 209B students will leave after the second day.

- Students who are in the BCF-209 B and 209C class, who are registered as "209C" students, must remain for the entire 4 days. BCF-209C is designed for students who prepare the APB and DAES reports, and the Selected Acquisition Report using the CARS for Major Defense Acquisition Programs (MDAPs). (BCF-209C includes everything taught in BCF-209B and more.)

Certificates will be provided based upon the class in which students enrolled—BCF-209B or 209C. BCF 209A/B/C are all assignment-specific courses. The BCF-209A schedule is expected to be loaded by mid to late November 2003. The BCF-209B and BCF-209C schedules have been loaded and are available for registration.

For more information on registering for DAU courses, visit the DAU Web site at <http://www.dau.mil/registrar/apply.asp>.

2004 DEFENSE ACQUISITION UNIVERSITY CATALOG

The FY 2004 Defense Acquisition University Catalog is now available online at the following link: <http://www.dau.mil/catalog/default.asp>. The 2004 curriculum lays the foundation for meeting the career-long training and professional development needs of the Acquisition, Technology and Logistics (AT&L) workforce. Every course fits within the framework of the AT&L Performance Learning Model adopted by DAU in 2002, which emphasizes Performance Support, Rapid Deployment Training, Continuous Learning, and Knowledge Sharing.

DEFENSE ACQUISITION UNIVERSITY MIDWEST CAMPUS MOVED TO KETTERING, OHIO (OCT. 24, 2003)

The Defense Acquisition University Midwest (DAUMW) Campus moved from Wright-Patterson AFB (WPAFB), Ohio, to 3100 Research Blvd, Pod 3, Kettering, Ohio 45420, on Nov. 12, 2003. The new location is located about five miles south of WPAFB. Also effective Nov. 12, the DAU Midwest Campus Student Services representatives can be reached at their new numbers: Siciley Baker, (937) 781-1095, student lodging information and student messages; Leslie Guinto, (937) 781-1091, class Information; and Karen Heather-ton, (937) 781-1096, Education Program Analyst.

CAREER DEVELOPMENT

AIR FORCE PRINT NEWS (NOV. 13, 2003) APPLICATIONS NOW ACCEPTED FOR INTERN PROGRAM

Shelley R. Rich

Air Force Research Laboratory Propulsion Directorate

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFPN)—Air Force Research Laboratory Propulsion Directorate officials are kicking off the 3rd Annual Wright Scholar Research Assistant Program for summer 2004. High-school juniors and seniors can now apply for the opportunity to work hands-on research, while under the guidance of science and engineering mentors. This program also gives students an up-close look at Air Force careers and educational opportunities.

Application deadline is Jan. 16, 2004.

The paid internships run for a 10- to 12-week period for up to 40 hours per week.

Students will experience science and engineering tutorials given by Air Force Institute of Technology officials, and a weekly guest lecture series covering topics from rocket science to robots and mechatronics. Students will also participate in the University of Dayton Summer Science and Engineering Enrichment program.

Eligible student applicants must meet the following qualification requirements:

- Be 16 years old at the time of appointment.
- Be a U.S. citizen.
- Be a high-school junior or senior at time of application.
- Seniors must provide a college acceptance letter before working.
- Be in the top 20 percent of their class or have a 3.25 overall grade point average.
- Home-schooled students may be considered if they score in the top 20 percent overall on a national standardized test.

For instructions on how to apply for this program and more information, visit www.pr.af.mil/jobs/scholar.htm. The Point of Contact is Shelly Rich at (937) 255-1870, Monday through Friday, 8 a.m. to 5 p.m. EST, or e-mail shelleyrich@wpafb.af.mil.

EQUIVALENCY EXAM FOR PMT-250

DAU continues to administer an equivalency exam for its Program Management Tools (PMT-250) course. The equivalency exam is intended

to provide an opportunity for students who already possess the knowledge contained in the course to demonstrate their proficiency. It is not intended to take the place of the course for students who are not already proficient in the material.

The exam is comprised of seven module areas; students have only one opportunity to take the exam and must obtain a score of 70 percent or higher in all seven module areas to pass. If the exam is successfully completed, the student receives credit for course completion. If the exam is not successfully completed, the student will have to apply for and complete a Web-based offering of PMT-250.

Before applying for the exam, students should ensure they meet one of the following criteria: 1) Certified Level III in career fields other than Program Management (PM) and preparing to enter the PM career field training track to take PMT 352; or 2) Certified Level II in the PM career field prior to Oct. 1, 2001, and will be applying to take PMT-352 at a later date.

DEFENSE ACQUISITION 2004— UNDERSTANDING THE ACQUISITION REVOLUTION

(JAN. 27 - 28, 2004, ARLINGTON, VA.)

Paul Wolfowitz, Deputy Secretary of Defense has tasked all military departments to "create an acquisition policy environment that fosters efficiency, flexibility, creativity, and innovation....[that will]...rapidly deliver affordable, sustainable capability to the warfighter that meets the warfighter's needs." *Defense Acquisition 2004, Understanding the Acquisition Revolution*, offers you a unique opportunity to thoroughly understand the extensive defense acquisition process—from concept to delivery—from the leading visionaries and policy makers in the defense acquisition community. Scheduled for Jan. 27-28, 2004, this year's event will be held at the Doubletree Hotel, Crystal City, Va. Participants will:

- Discuss new defense acquisition legislation with members of the Senate Armed Services Committee.
- Hear transformational ideas and policies from leading defense acquisition visionaries.
- Gain key insights from government & industry colleagues on your role in the defense acquisition process!

To register, call (800) 882.8684 x5165 or go to the Institute for Defense and Government Advancement (IDGA) Web site at <http://www.idga.org>.

AIR ARMAMENT CENTER PUBLIC AFFAIRS NEWS RELEASE DEFENSE ACQUISITION UNIVERSITY COMES TO EGLIN; \$3 MILLION SAVINGS

Capt. Karen Roganov, USAF

EGLIN AFB, Fla. (Nov. 14, 2003)—Defense Acquisition University, a corporate university providing certified courses, tailored training, and performance support to some 135,000 acquisition, technology and logistics workforce members began offering classes this week through a new satellite campus here.

"It's anticipated that more people will get trained due to the convenience of the classes, and that amounts to enabling the workforce by sharpening the minds that forge the sword," said Maj. Gen. Robert W. Chedister, Air Armament Center commander during a recent signing of a Memorandum of Agreement and ribbon-cutting ceremony held to kick-off the endeavor. "We estimate an annual savings of \$3 million due to reduced travel and per diem costs," he said.

Most classes are a week in duration. The university courses create an environment where students learn before, during, and after the training intervention, according to Dr. Jack Dwyer, university site manager here and one of a few instructors.

"For example, we'll teach acquisition folks to be flexible in adapting to the program management situations they face daily and be innovative in continually developing and implementing initiatives to streamline and improve the defense acquisition process." In addition to Dwyer, other instructors will be brought in temporarily to teach classes.

"During the 2004 fiscal year, 19 courses are scheduled at Eglin to get 700 people trained," said Gary Byrum, regional director of operations for Defense Acquisition University South, located in Huntsville, Ala. Space permitting the Eglin satellite could open up to other interested services such as the Navy Ocean Systems Center in Panama City, he said.



Air Force Maj. Gen. Robert W. Chedister, Commander, Air Armament Center, cutting the ribbon at the opening of the DAU South Region satellite campus at Eglin AFB, Fla. Assisting him is DAU President Frank J. Anderson Jr.

The Defense Acquisition University works closely with the Office of the Secretary of Defense to quickly address new policy and tailor the training to meet the changes.

"That's our competitive advantage," said Byrum.

In line with learning, in October Eglin's center commander created the Air Armament Academy, in-house training with a "University Style."

Now, some Defense Acquisition University tailored training will fall under the academy umbrella, said Ken Pickler, academy project team member. According to Frank J. Anderson, President, DAU, "the two organizations will work closely together to make the Air Armament Center a learning organization, where learning is so ingrained in the fabric of the organization that you cannot 'not' learn."

DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT (OCT. 10, 2003) **UNIQUE ITEM IDENTIFICATION AND VALUATION**

DoD has issued an interim rule amending the Federal Acquisition Regulation Supplement (DFARS) to add policy pertaining to item identification and valuation. The rule requires contractors to uniquely identify, through the use of item identification marking, all items to be delivered to the government. The rule also adds requirements for contracts to provide for identification of the government's acquisition cost of items that are built or acquired by a contractor during contract performance and subsequently delivered to the government. The requirements in this rule apply to all solicitations issued on or after Jan. 1, 2004.

The interim rule, published in the *Federal Register* on Oct. 10, 2003, may be viewed online at <http://www.acq.osd.mil/uid/>.

FEDERAL ACQUISITION REGULATION (OCT. 20, 2003) **CONTRACT BUNDLING**

The Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council have agreed on a final rule amending the Federal Acquisition Regulation governing contract bundling. The final rule, published in the *Federal Register* on Oct. 20, 2003, may be viewed online at <http://www.acqnet.gov/far/FAC/fac2001-17.pdf>.

DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT (DFARS) CHANGE NOTICE 20031114 (NOV. 14, 2003) **PROVISIONAL AWARD FEE PAYMENTS (DFARS CASE 2001-D013)**

Final Rules:

Provides policy and guidance for using provisional award fees under cost-plus-award-fee contracts. This tool, in appropriate circumstances, may be an effective incentive mechanism. Acquisition teams should carefully evaluate the need for this tool and the potential benefits as part of acquisition strategy planning processes. Proper use of provisional award fees is expected to improve contractor cash flow, foster a healthy contractual relationship between the Government and the contractor, and further the benefits of the award fee incentive.

A training module on provisional award fees is available through the Defense Acquisition University Web site at

<http://www.dau.mil>, under **Continuous Learning/Continuous Learning Modules/Self-Paced Modules**.

The DFARS changes in this rule apply to solicitations issued on or after Jan. 13, 2004, and will be incorporated into the DFARS on Jan. 13, 2004. Contracting officers may, at their discretion, apply the DFARS changes to solicitations issued before Jan. 13, 2004, provided award of the resulting contract(s) occurs on or after Jan. 13, 2004. Contracting officers may also, at their discretion, apply the DFARS changes to any existing contract with appropriate consideration.

DOD ACTIVITY ADDRESS CODES IN CONTRACT NUMBERS (DFARS CASE 2003-D005)

Requires use of a contracting office's DoD activity address code (DoDAAC) in the first six positions of a solicitation or contract number, instead of the DoD activity address number (DoDAAN) found in DFARS Appendix G. This new numbering system took effect on Oct. 1, 2003, in accordance with Defense Procurement and Acquisition Policy memoranda dated June 9, 2003, and Oct. 2, 2003 (available at <http://www.acq.osd.mil/dpap/policy/policydocs.htm>). No change is required for existing solicitation and contract numbers. Activities whose DoDAAC and DoDAAN are identical will continue to use the same characters in the first six positions of solicitation and contract numbers.

Appendix G is removed in its entirety from the DFARS, as a result of a recommendation of the DFARS Transformation Task Force. The two-position order codes from DFARS Appendix G, that contracting offices use when placing an order against another activity's contract or agreement, are now available at a separate location on the Defense Acquisition Regulation Web site at <http://www.acq.osd.mil/dp/dars/dfars.html>.

For reference purposes, archived versions of Appendix G are available in the HTML format of the DFARS at <http://www.acq.osd.mil/dp/dars/dfars.html> by using the "Prior Version" option shown at the beginning of each Appendix G part.

DoDAACs are maintained by the Defense Logistics Agency (DLA). Registration through the DLA Web site at <https://www.daas.dla.mil/daashome/> is required to gain access to DLA's database. While awaiting completion of the registration process, the following Air Force Web site is suggested as an alternate source for DoDAAC information: <https://dodaac.wpafb.af.mil>.

PURCHASE OF FEDERAL PRISON INDUSTRIES PRODUCTS (DFARS CASE 2002-D003)

Updates and clarifies policy on purchasing products from Federal Prison Industries (FPI). The changes—

- (1) clarify requirements for conducting market research before purchasing a product listed in the FPI Schedule;
- (2) clarify requirements for use of competitive procedures, to include the use of small business set-asides and multiple award schedules, if an FPI product is found to be noncomparable to products available from the private sector;
- (3) specify that a contracting officer's comparability determination is not subject to the arbitration procedures of FAR 8.605;
- (4) specify that a DoD contractor may not be required to use FPI as a subcontractor; and
- (5) prohibit the award of a contract to FPI that would allow an inmate worker access to classified or sensitive information.

These changes—

- (1) implement Section 819 of the National Defense Authorization Act for Fiscal Year 2003 and further implement Section 811 of the National Defense Authorization Act for Fiscal Year 2002;
- (2) become effective 30 days after the date of publication, as required by Section 819 of the National Defense Authorization Act for Fiscal Year 2003; and
- (3) apply to solicitations issued on or after December 15, 2003, and will be incorporated into the DFARS on December 15, 2003.

An Aug. 15, 2003, information paper addressing recent FAR and DFARS changes on the purchase of FPI products is available at <http://www.acq.osd.mil/dpap/Docs/FederalPrisonIndustriesInc.pdf>.

Interim Rule

CENTRAL CONTRACTOR REGISTRATION (DFARS CASE 2003-D040)

Removes DFARS policy on Central Contractor Registration (CCR) that duplicates FAR policy published as Item I of FAC 2001-16 on Oct. 1,

2003. DoD's automated systems presently rely on the use of Commercial and Government Entity (CAGE) codes to facilitate accurate and timely contract payments. Therefore, DoD-unique CAGE code requirements must be retained in the DFARS. An alternate paragraph is provided at DFARS 252.204-7004 for use with the clause at FAR 52.204-7, Central Contractor Registration, to address the need for CAGE code information in the CCR database. Public comments on these interim DFARS changes are due by Jan. 13, 2004.

U.S. SENATE COMMITTEE ON APPROPRIATIONS PRESS RELEASE HOUSE-SENATE CONFERENCE APPROVES SUPPLEMENTAL FOR MILITARY OPERATIONS AND RECONSTRUCTION EFFORTS IN IRAQ AND AFGHANISTAN

WASHINGTON, D.C. (Oct. 29, 2003)—The House-Senate Conference Committee today approved \$87.5 billion in supplemental funding for military operations and reconstruction efforts in Iraq and Afghanistan. The reconciled bill now goes to the House and Senate floors for consideration and final passage. Text of the conference report and the accompanying statement of the managers will soon be available on Thomas.loc.gov, and highlights of the bill are below:

- \$17.8 billion for the salaries and benefits of military personnel for active component troops and Guard and Reserve troops activated for duty in Iraq, Afghanistan, and other areas around the world;
- \$39.2 billion for operations and maintenance in support of Operation Iraqi Freedom, Operation Enduring Freedom, and Operation Noble Eagle, of which \$1 billion is to support coalition partners;
- \$5.5 billion for procurement, including an additional \$62.1 million for up-armored Humvees;
- \$333.8 million for military research, development, testing, and evaluation;
- \$658 million for the Defense Health Program;
- \$600 million for the Defense Working Capital Fund to cover added fuel costs;
- Provided \$313 million of the funds to repair Department of Defense infrastructure damaged by Hurricane Isabel;

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- \$524 million for military construction (\$112 million of which is for damage to military facilities caused by Hurricane Isabel);
- \$156.3 million for Department of State operations;
- \$16.6 million for safe and secure facilities for the United States Agency for International Development in Iraq and Afghanistan;
- At least \$38 million for operating expenses of the United States Agency for International Development for costs associated with Iraq and Afghanistan;
- \$18.6 billion for Iraq for security, rehabilitation, and reconstruction (the amount also includes \$200 million for assistance to Liberia, \$200 million for assistance to Jordan, and \$20 million for assistance to Sudan). Of those funds, \$100 million is for democracy building activities in Iraq to support the development of a constitution and national elections;
- \$872 million to continue political and economic development programs in Afghanistan;
- \$170 million for Department of State narcotics control, law enforcement, nonproliferation, anti-terrorism, and de-mining programs;
- \$287 million to continue programs and activities to build the new Afghanistan Army;
- \$50 million for peacekeeping expenses in Iraq relating to additional foreign troops;
- \$35 million for anti-terrorism training and equipment needs in Afghanistan; and
- \$983 million for operating expenses for the Coalition Provisional Authority.

In addition, the conferees authorized medical and dental screening at no cost for Reservists who are ordered to active duty; expanded pre-mobilization and post-mobilization eligibility for TRICARE; and made TRICARE available to Reservists who are unemployed, or who are not offered health care benefits by their civilian employer.

AMERICAN FORCES PRESS SERVICE (NOV. 25, 2003) **CHU CALLS AUTHORIZATION ACT "TRANSFORMATIONAL"**

Jim Garamone

WASHINGTON—The Defense Department's top personnel and readiness official called the fiscal 2004 National Defense Authorization Act "transformational" for its support of the department's aim to change to confront the threats of the future.

President Bush signed the act into law during a Pentagon ceremony Nov. 24. The \$401.3 billion budget funds the department through Sept. 30, 2004.

David Chu, under secretary of defense for personnel and readiness, spoke about the personnel provisions of the legislation. "The department is very grateful for Congress's action in passing the act," Chu said during an interview.

The under secretary said the act is historic and will allow the department to rewrite those rules that need to be modernized for DoD to be effective in the early 21st century.

The act doesn't give the Bush administration all it wanted in the personnel realm, Chu said, but it does substantially advance the agenda on three key fronts. "First, it has given us authority for a new era in how we manage and treat our civilian personnel—the National Security Personnel System," he said.

Second, he said, the act provides a better balance between environmental stewardship and the training needs of the Department of Defense.

Finally, the act continues to support the transformational aspect of military compensation, Chu said. The act provides for an across-the-board military pay increase of 3.7 percent. In addition, mid-grade officers and mid-grade noncommissioned and petty officers will receive targeted raises of up to 6.25 percent.

On the civilian personnel side, the legislation sets up the National Security Personnel System. The system is a new way of managing DoD's civilian workforce, and was a centerpiece of Defense Secretary Donald H. Rumsfeld's transformation efforts. The new system will make managing the civilian workforce easier and will allow defense managers to reshape the force to respond to the challenges of the 21st century, Chu said.

"We have great civilians in the department, but frankly they, as an institutional element of the department, were handicapped by the rules in which we had to operate," he said. "What this does is liberate us from the perceived restrictions of the past. It gives us a modern transformational way of hiring people, advancing them, reassigning them."

The system also will give the civilian workforce a whole new pay construct called "pay banding," which will include pay for performance. "We will be moving away from the general-schedule system," Chu said. "This allows us to be much more competitive in terms of setting salaries, and allows us to adjust salaries as duties change."

The change will make it easier for defense managers to reward top performers, Chu said. "It will be helpful in terms of recruiting, because it says to a young person, 'This is the kind of organization that if you are a high performer, you'd like to join,'" Chu said.

The legislation also gives the department a new way to negotiate with unions. Now the department will be able to bargain at the national level on cross-cutting human resource issues, the under secretary said.

"It's now our job to implement the act," Chu said. Department officials will communicate with workers and listen to their suggestions. "One of the first things we will resolve is who gets to be the first group of employees to join this new system, and how is that transition going to unfold," Chu said. He is appointing an implementation team and said he will have the answers shortly. He added that employees will start to see changes from the new system in 2004.

The under secretary also spoke about the environmental provision of the authorization act. He said the changes to the Marine Mammal Act and the Endangered Species Act recognize that DoD is a good steward of the environment. He said that when many DoD installations have been closed, the areas make "extraordinary wildlife areas because we kept out development."

But there has been an increasing clash between stewardship and military training, he said. "It is critical that our people train in a realistic way: that they are prepared, and they know exactly what to do when they hit the

ground in a combat environment," Chu said. The changes Congress made will allow the military to do just that, he added.

DoD officials still believe the pay of a mid-career NCO still is a little short of comparable salaries in the private sector, so another targeted pay raise is a possibility. "Ultimately it's the president's decision to make," Chu said. "I can't commit to what we're going to do, but I do think we will look seriously at this (targeted pay raise) again. We want to be fair to our people, especially with the burdens they bear."

OFFICE OF DEFENSE PROCUREMENT AND ACQUISITION POLICY TRANSFERS TWO E-GOV INITIATIVES TO FEDERAL COUNTERPARTS

The Office of Defense Procurement and Acquisition Policy (DPAP) announced that two major Department of Defense eBusiness initiatives are being transitioned to their Federal counterparts. The DoD BusinessOpportunities (DoDBusOpps) Web site will be retired by the end of FY04, and functions transitioned to the Federal Business Opportunities (FedBizOpps) Web site (<http://www.fedbizopps.gov>).

"Eliminating the DoD Web presence will make it easier for vendors to find contracting opportunities in a single location", said DoDBusOpps Program Manager Richard Clark, "Moreover, we are meeting the e-Gov mandate to simplify and unify the e-Business jungle."

The Federal Technical Data Solution (FedTeDS) utilized an existing Department of Defense (DoD) system, DoDTeDS, deployed in the Air Force and tested by Navy, as a foundation to leverage the best practices. FedTeDS provides a secure Government-wide location for vendor access to sensitive but unclassified acquisition-related materials, including technical data packages and construction drawings. To avoid duplication, DoD turned off the DoD-unique DoDTeDS application in March.

"The work the Air Force and Navy did with DoDTeDS is strongly reflected in this new product" said Mark Krzysko, Deputy Director for Defense Procurement and Acquisition Policy (eBusiness). "We are proud to retire DoDTeDS knowing that the improved FedTeDS is streamlining procurement processes for all Federal agencies."

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OFFICE OF THE UNDER SECRETARY OF DEFENSE
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OCT -8 2003



DPAP/EB

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

SUBJECT: Wide Area Workflow Joint Requirements Board

In the attached memorandum of February 6, 2003, Mr. E.C. Aldridge, Jr., and Dr. Dov Zakheim stated the importance of complete implementation of Wide Area Workflow (WAWF) to achieve the Department's financial management and E-Government goals and reduce operations costs. In support of achieving these goals through the use of WAWF, I am reconstituting the WAWF Joint Requirements Board (JRB) to better facilitate the rapid implementation of WAWF across the Department. Mr. Mark Krzysko, my Deputy Director for E-Business will co-chair the JRB with Mr. Michael Williams, Executive Director Information Technology at Defense Contract Management Agency. I appreciate your continued support of this board and expect your utmost support of Wide Area Workflow implementation.

My action officer regarding this subject is COL Ray Montford, 703-614-3882, ray.montford@osd.mil.

Deidre A. Lee
Director, Defense Procurement and
Acquisition Policy

Attachment:
As stated



Editor's Note: To download the Feb. 6, 2003, memorandum from Secretaries Aldridge and Zakheim, go to the Director, Defense Procurement and Acquisition Policy Web site: <<http://www.acq.osd.mil/dpap/policy/policydocs.htm>>.

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OFFICE OF THE UNDER SECRETARY OF DEFENSE

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October 10, 2003

DPAP/P

MEMORANDUM FOR DIRECTORS, DEFENSE AGENCIES

DEPUTY ASSISTANT SECRETARY OF THE ARMY
(POLICY AND PROCUREMENT), ASA(ALT)
DEPUTY ASSISTANT SECRETARY OF THE NAVY
(ACQUISITION MANAGEMENT), ASN(RD&A)
DEPUTY ASSISTANT SECRETARY OF THE AIR
FORCE (CONTRACTING), SAF/AQC
DEPUTY DIRECTOR FOR LOGISTICS (DLA)
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, ARMY CONTRACTING AGENCY

SUBJECT: Applicability of the Javits-Wagner-O'Day (JWOD) Program and the
Randolph-Sheppard (RS) Act

The purpose of this memorandum is to clarify the procurement relationship between products and services available from the Committee for Purchase From People Who Are Blind or Severely Disabled (JWOD Act) and the Randolph-Sheppard (RS) Act operation of vending facilities (including cafeterias and mess halls). Specifically, there is a provision in the Federal Acquisition Regulation that requires contracting officers to give effect to both statutory schemes in the same procurement.

The purpose of the JWOD Act is to provide employment for those who might otherwise not be able to make a living. The JWOD Act requires that a significant percentage of workers at JWOD facilities or under JWOD programs must be disabled. By contrast, the RS Act requires that a priority be given to blind persons licensed by a State agency for the operation of vending facilities on Federal property. However, while the RS Act provides entrepreneurial opportunities to blind vendors to own and operate their own businesses, it does not place any requirements on the RS licensees with respect to the staffing of the facility.

Today's acquisition environment supports contracts that utilize both RS and JWOD resources. In May 1998, changes were made to 41 CFR 51-5.2(e), Mandatory Source Requirement, to state "contracting activities procuring services which have included within them services on the Procurement List shall require their contractors for the larger service requirement to procure the included Procurement List services from nonprofit agencies designated by the Committee." Subsequently, the Federal Acquisition Regulation (Sections 8.001, 8.003, 44.202-2 and 52.208-9) was amended on December 18, 2001, to make corresponding changes relating to preferences for award of subcontracts under service contracts to nonprofit workshops designated under the JWOD Act. Based upon

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the foregoing, solicitations for the operation of vending facilities must contain a contract requirement that the prime contractor subcontract with JWOD for any JWOD-listed product or service. Because this requirement applies to all prime contractors for vending facilities, it is consistent with the priority under the RS Act.

By requiring blind vendors receiving contracts for the operation of cafeterias or mess halls at Department facilities to hire staff under JWOD, this requirement has the desired effect of recognizing the statutory purposes of both JWOD and the RS Act. Your continued support of both JWOD and the RS Act is extremely important to the Department and vital to the recognition and achievements of people with disabilities.

If you have any questions regarding the Department's policies or procedures for doing business with RS or JWOD, please contact Ms. Susan Schneider at (703) 614-4840.



Deidre A. Lee
Director, Defense Procurement and
Acquisition Policy

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OFFICE OF THE UNDER SECRETARY OF DEFENSE

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OCT 14 2003

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS
AND TECHNOLOGY)
ASSISTANT SECRETARY OF THE ARMY (FINANCIAL
MANAGEMENT AND COMPTROLLER)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH,
DEVELOPMENT AND ACQUISITION)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT
AND COMPTROLLER)
ASSISTANT SECRETARY OF THE AIR FORCE (ACQUISITION)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL
MANAGEMENT AND COMPTROLLER)
DEPUTY DIRECTOR FOR LOGISTICS OPERATIONS (DLA)
DIRECTORS OF DEFENSE AGENCIES
DIRECTORS OF DOD FIELD ACTIVITIES

SUBJECT: Implementation of the Department of Defense (DoD) Trading Partner Number
(TPN) for Intra-governmental Transactions

To facilitate accurate accounting of intra-governmental transactions across the government, the Office of Management and Budget (OMB) developed a process for better identifying these transactions as they occur. This process is in its early stages of implementation, and there is a DoD integrated process team (IPT) working our transition strategy and plans. However, you need to be aware of one initial requirement that is beginning to take effect across the government.

As noted in the OMB guidance and business rules provided at Attachment A, Federal Agencies that acquire goods or services from or provide goods or services to another Federal Agency must identify themselves with a unique trading partner number (TPN) on intra-governmental transactions. All TPNs are registered by Federal Agencies in the Federal Register (FedReg) module of the Business Partner Network (BPN) as a part of the electronic government (eGov) Integrated Acquisition Environment (IAE) initiative. Non-DoD agencies use Dun and Bradstreet's Data Universal Numbering System (DUNS) numbers as their identifiers. The OMB is allowing the Department to use DoD Activity Address Codes (DoDAACs) preceded by the alpha characters of "DOD" as TPNs. The DoDAAC file (known as the DoDAAF) serves as the basis for the DoD TPN file and is transmitted to the FedReg module daily.

Because some Federal Agencies are already beginning full implementation of the OMB business rules for all intra-governmental transactions, the use of the TPNs as prescribed is effective immediately when processing transactions with non-DoD agencies. When a non-DoD Agency requests your TPN or DUNS number to process a transaction, you should provide the



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"DOD" plus DoDAAC identifier (e.g., "DOD" plus HQ0019 equals DODHQ0019). The construction of this 9-character DoD TPN meets the OMB requirement.

Additionally, it is crucial that the records of your agency's/activity's DoDAACs are complete and kept current. It is critical that you review your DoDAACs as recorded in the DoDAAF and maintain the information accordingly. Mr. Jack Carter of the Defense Logistics Agency (DLA) is the DoD's Agency Registration Official (ARO) for intra-governmental transactions. Additionally, a list of Central Service Points (CSPs) of Contact is provided at Attachment B. The CSPs are those individuals, assigned by Service/Component, who can assign new DoDAACs. If you are unsure of your DoDAAC or need to request one be assigned, please contact the appropriate CSP from Attachment B. Any other questions regarding the DoDAAC can be addressed to Mr. Carter, the DoD ARO, at 703-767-0684 or via e-mail at jackie.carter@dla.mil.

Further guidance regarding the use of intra-governmental transactions will be issued at a later date. Our action officers for this issue are Eileen Parlow, Office of the Under Secretary of Defense (Comptroller), 703-697-7297, eileen.parlow@osd.mil, from the Finance Domain; and Lisa Romney, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, 703-614-3883, lisa.romney@osd.mil, from the Acquisition Domain.



Deidre A. Lee
Director, Defense Procurement and
Acquisition Policy



JoAnn Boutelle
Deputy Chief Financial Officer

Attachments:
As stated

Editor's note: To download the attachments to his memorandum, go to the Director, Defense Procurement and Acquisition Policy Web site: <http://www.acq.osd.mil/dpap/policy/policydocs.htm>.

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OCT 17 2003

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MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (ACQUISITION,
LOGISTICS AND TECHNOLOGY)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH,
DEVELOPMENT AND ACQUISITION)
ASSISTANT SECRETARY OF THE AIR FORCE (ACQUISITION)
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Allocability and Allowability of costs Associated with the Intergovernmental
Personnel Act (IPA) Mobility Program

This memorandum supercedes my January 28, 2003, memorandum on the Intergovernmental Personnel Act (IPA) Mobility Program (5 USC Sections 3371 through 3375) in its entirety. The guidance contained in this memorandum applies to all DoD personnel involved in negotiating, signing, and administering IPA agreements.

Background. The IPA Mobility Program (5 USC Sections 3371 through 3375) provides for the temporary assignment of personnel between the Federal Government and state and local governments, institutions of higher education, Indian tribal governments, federally funded research and development centers (FFRDC), and other eligible organizations. These assignments are intended to facilitate cooperation between the Federal Government and the non-Federal entity through the temporary assignment of skilled personnel. When non-Federal personnel are assigned to a Federal entity, there is a written agreement which records the obligations and responsibilities of the Federal and non-Federal entities, including provisions for reimbursement of costs associated with the program. Questions were raised regarding the allocability and allowability of some of these costs.

The regulations governing the implementation of the IPA program are contained at 5 CFR Part 334. In addition, the Office of Personnel Management (OPM) published guidance regarding various aspects of the IPA program at <http://www.opm.gov/programs/ipa/index.asp>. This guidance includes the following statement:

"Agencies should not authorize reimbursement for indirect or administrative costs associated with the assignment. These include charges for preparing and maintaining payroll records, developing reports on the mobility assignment, and negotiating the agreement. Other prohibited costs include tuition credits, office space, furnishings, supplies, staff support, and computer time."



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Our discussions with OPM disclosed that the above statement is not intended to prohibit the reimbursement of an allocable share of contractor indirect costs, including the types of costs specifically listed, provided such allocation is consistent with the contractor's established cost accounting practices. OPM is currently clarifying the guidance to state that (1) the statutory authority establishing the IPA program does not specifically prohibit reimbursement of indirect costs, and (2) reimbursement of such costs should be determined by the agency that enters into the agreement.

Reimbursement of Indirect Costs. DoD contracting personnel may provide for the reimbursement of contractor indirect costs associated with the IPA program, provided such costs are the type that are allocable and allowable under the regulations that govern the reimbursement of contractor costs (e.g., FAR Part 31 or applicable OMB Circulars) for federally funded awards (cost-based contracts, grants, agreements). However, before reimbursing any indirect costs associated with IPA agreements, DoD personnel must ensure that the organization (e.g., university, non-profit organization, FFRDC) and its cognizant federal agency for negotiation and administration of indirect cost rates have a written agreement that specifies the proper allocation of indirect costs associated with IPA agreements (see Allocation of Indirect Costs below). Absent such an agreement, DoD personnel should not authorize the reimbursement of indirect costs associated with IPA agreement.

Allocation of Indirect Costs. A written agreement specifying the proper allocation of indirect costs associated with IPA agreements is essential to ensure that all cost objectives of the contractor absorb their proper share of indirect costs. Due to the unique nature of these agreements, indirect cost allocations should generally be limited to applicable fringe benefit costs and a reduced allocation of General and Administrative costs that includes only those functions or categories that provide benefit to IPA agreements.

For those organizations subject to Cost Accounting Standards (CAS) 403, 410, or 418, DoD personnel should ensure that the organization has a written agreement with its cognizant federal agency specifying the special allocation for indirect costs associated with IPA agreements. For those organizations covered by OMB Circulars A-21 and A-122, and not subject to either CAS 403, 410, or 418, DoD personnel should ensure that the organization has a written agreement with its cognizant federal agency that includes a special indirect rate for IPA agreements.

Cost Sharing. The guidance in this memorandum does not preclude DoD personnel from providing for cost sharing of indirect costs under IPA agreements in accordance with applicable OPM guidance at <http://www.opm.gov/programs/ipa/index.asp>, which includes the following:

Cost-sharing arrangements for mobility assignments are negotiated between the participating organizations. The federal agency may agree to pay all, some, or none of the costs associated with an assignment. Costs may include basic pay, supplemental pay, fringe benefits, and travel and relocation expenses.

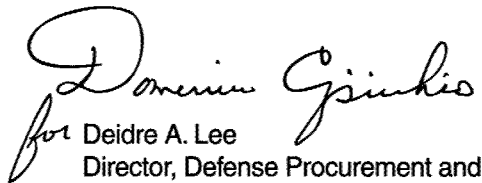
Cost-sharing arrangements should be based on the extent to which the participating organizations benefit from the assignment. The larger share of the costs should be absorbed by the organization which benefits most from the assignment. Exceptions might occur when an organization's resources do not permit costs to be shared on a relative benefit basis.

Applicability of Guidance to Existing and Future IPA Agreements. This guidance should be applied to all future IPA agreements. The guidance also may, but is not required, to be applied in determining the reimbursement of allocable indirect costs for existing IPA agreements. However, DoD personnel may modify existing agreements only when adequate consideration is exchanged in return for the modification.

Limitation on Compensation. IPA compensation should normally not exceed Level I of the Executive Schedule. However, there may be exceptional circumstances where the need arises for the compensation plus benefits to exceed Level I. The selecting official must justify such exceptions in writing in accordance with Component procedures. In no case should annual compensation, excluding benefits but including basic pay, allowances, differentials, bonuses, and awards, exceed Level I.

Policy Responsibility for IPA. The Office of the Deputy Under Secretary (Civilian Personnel Policy) has overall responsibility for policy concerning the IPA. The point of contact for the IPA at Civilian Personnel Policy is Ms. Jeanne Raymos (703-695-7901), jeanne.raymos@osd.mil.

If you have any questions regarding this memorandum, please contact Mr. David J. Capitano, Senior Procurement Analyst, at 703-847-7486 or david.capitano@osd.mil.


for Deidre A. Lee
Director, Defense Procurement and
Acquisition Policy

CONFERENCES, WORKSHOPS & SYMPOSIA

AIR FORCE 2004 ACQUISITION TRAINING MANAGERS CONFERENCE

SAF/AQXD will be sponsoring the 2004 Acquisition Training Managers Conference on March 23-26, 2004, at the Southbridge Hotel & Conference Center in Southbridge, Mass. This conference is a chance for all Air Force acquisition training managers to get hands-on computer training on all of the acquisition tools available to Air Force acquisition training managers and to the acquisition workforce. This year's conference will focus on Continuous Learning. Check the Conference Web site at http://www.safaq.hq.af.mil/acq_workf/training/conference/index.htm for more information and updates.

TEST & EVALUATION (T&E) CONFERENCE AND EXHIBITION

Sponsored by the DoD Director, Operational Test and Evaluation (DOT&E), and the National Defense Industrial Association (NDIA), DoD's 6th Annual Test and Evaluation Conference and Exhibition will be held March 1-4, 2004, in Sparks, Nev. Twenty years have passed since the U.S. Congress put into law the requirement that an independent Operational Test and Evaluation Office be established within the Office of the Secretary of Defense for the purpose of assuring that realistic operational Test and Evaluation is conducted, and such testing is promptly and candidly reported to Congress prior to a system entering Full Rate Production. It's time to examine this very important and very visible part of the Defense Systems Acquisition establishment to see how successful it has been, what its benefits and liabilities have been, as well as other relevant issues.

DOT&E invites abstract submissions on topics that address current DOT&E issues. For a list of possible abstract topics, visit the NDIA Web site at <http://register.ndia.org/interview/register.ndia?#March2004>.

Abstracts must have a descriptive title, complete listing of abstract authors also indicating presenter(s), and name(s) of organization(s) of author(s). Abstracts must be unclassified and not exceed 250 words in length. Please e-mail abstracts to Dania Khan at dkahn@ndia.org by Nov. 28, 2003. Author notification will be sent Dec. 17, 2003. Questions? Please contact Dania Khan, dkhan@ndia.org or call (703)247-2587.

This conference will be held concurrently with the 20th Annual National Logistics Conference and will share exhibit space. For exhibits information, please contact Derek Jenks at djenks@ndia.org or (703)247-2582.

For questions regarding the conference contact Dania Khan at (703) 247-2587, dkhan@ndia.org or James O'Bryon at (443) 528-2711, jamesobryon@obryon-group.com.

20TH ANNUAL NATIONAL LOGISTICS CONFERENCE & EXHIBITION

The 20th Annual National Logistics Conference and Exhibition will be held March 1-4, 2004, in Sparks, Nev. This year's event will be held in conjunction with the 6th Annual Test & Evaluation Conference and Exhibition. This combined event is an excellent opportunity to raise awareness of the capabilities and services of your organization to the DoD logistics and research and development communities. The conference and exhibition will provide contact with all levels of government and industry decision makers. The exhibition is open to all conference attendees and registered guests. Watch the National Defense Industrial Association Web site at <http://register.ndia.org/interview/register.ndia?#March2004> for further information on conference registration, exhibits, and topics covered.

U.S. ARMY PEO ENTERPRISE INFORMATION SYSTEMS (PEO EIS) INDUSTRY DAY

The U.S. Army Program Executive Office Enterprise Information Systems (PEO EIS) and the the Armed Forces Communications-Electronics Association (AFCEA) Belvoir Chapter/Federal Business Council, will sponsor the second PEO EIS Industry Day March 17-18, 2004, at the Sheraton National Hotel in Arlington, Va.

Industry Day will provide a forum for PEOs to highlight their key role in Army Transformation—focusing on contemporary information technology initiatives. Project and Program Managers (PMs) will be sharing their vision and goals with their industry counterparts in areas of process improvement and strategic movement to a well-connected Objective Force. This year's theme will be "Integrating IT for Warfighters." For details and online registration, go to <https://my.eis.army.mil/pws/index.htm>.

DEFENSE PROCUREMENT CONFERENCE

The Defense Procurement Conference, sponsored by the Office of the Director, Defense Procurement and Acquisition Policy, will be held May 25-28, 2004, in Orlando, Fla. Attendance is by invitation only. More information will be posted as it becomes available at <http://www.acq.osd.mil/dpap/Conferences/index.htm>.

DEPARTMENT OF DEFENSE NEWS RELEASE (OCT. 23, 2003)

DOD PRESENTS FUBINI AWARD

Deputy Secretary of Defense Paul D. Wolfowitz presented today the Eugene G. Fubini Award for 2003 to retired Air Force Gen. Larry D. Welch, former Air Force Chief of Staff and current president of the Institute for Defense Analyses. The Fubini Award was established in 1996 by then-Secretary of Defense William Perry to recognize annually an individual from the private sector who has made highly significant contributions to the Department of Defense in an advisory capacity over a sustained period of time. The award is named after the late Eugene G. Fubini, a long-time advisor to DoD and the first recipient of the award.

For more than 45 years, Welch has provided advice regarding a remarkably broad range of activities—including modernization plans, organizational reforms, force enhancements, strategic road maps, operational plans, future of U.S. nuclear weapons, ballistic missile defense, weapons of mass destruction threats, and other critical national security issues. His counsel reflects a unique combination of vision, leadership, operational experience, and technical expertise.

Welch began his public service in 1953 when he joined the Air Force as an aviation cadet. His military career culminated in 1986, when he was appointed the Chief of Staff of the Air Force by the President, a position he held until 1990. In 1991, after retiring from the Air Force, he assumed his current position as president of the Institute for Defense Analyses.

He has served on numerous federal advisory committees, including the Defense Science Board (1993-present); the Threat Reduction Advisory Committee (Chairman); the Defense Intelligence Agency Advisory Board; the U.S. Strategic Command Strategic Advisory Group; the National Nuclear Security Administration Advisory Committee; the U.S. Space Command Independent Strategic Advisory Group; the Joint Advisory Committee on Nuclear Weapons Surety. He also served on the National Missile Defense Independent Review Team; the Ballistic Missile Defense White Team; the Comanche Independent Review Panel; and the Independent Assessment Panels on Strategic Command, Intelligence, and Special Operations.

Praised for his unbiased opinions, Welch has employed a common sense approach to tackling complex security issues. He is a trusted advisor to the Department of

Defense, offering solutions to critical national security issues. Information on the award can be found at <http://www.acq.osd.mil/dsb/eugenefubiniaward.htm>.

DEPARTMENT OF DEFENSE PRESS ADVISORY (OCT. 31, 2003)

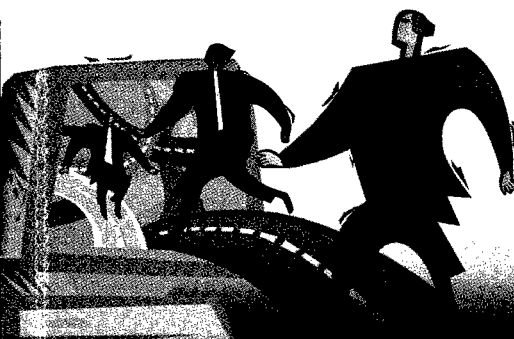
2003 PHOENIX AWARD WINNER ANNOUNCED

Secretary of Defense Donald H. Rumsfeld has announced that the 3rd Battalion, 7th Infantry Regiment, 3rd Infantry Division (Mechanized) at Fort Stewart, Ga., is the 2003 winner of the Phoenix Trophy. The Phoenix Trophy is symbolic of the “best” of the Department of Defense field-level maintenance units.

The award was made Wednesday night, Oct. 29, during an awards banquet held in conjunction with the 2003 DoD Maintenance Symposium and Exhibition in King of Prussia, Pa. Diane K. Morales, deputy under secretary of defense for logistics and materiel readiness, and Navy Vice Adm. Gordon Holder, director for logistics, joint staff, presented the award on behalf of Rumsfeld.

The 3rd Battalion, 7th Infantry Regiment, 3rd Infantry Division (Mechanized), nicknamed the “Cottonbalers,” was extremely busy during fiscal 2002, completing several demanding exercises and a “real world” deployment for Kosovo Force Operation (KFOR). Deployed as a mechanized infantry battalion supporting the NATO KFOR for six months, this unit performed superbly. It deployed with 54 pieces of assigned equipment and drew 512 pieces of rolling stock in Kosovo as part of the mission support requirement. Operating under extremely difficult circumstances, this unit’s dedicated efforts resulted in an exceptionally high readiness rate of 97 percent for the fiscal year.

Five other units also received secretary of defense awards in recognition of outstanding achievements in military equipment and weapon system maintenance. In the small category, Strike Fighter Squadron Eight One, Naval Air Station, Oceana, Va., and the 74th Fighter Squadron, Pope Air Force Base, Fayetteville, N.C., were winners. In the medium category, Shore Intermediate Maintenance Activity, Mayport Naval Station, Mayport, Fla., and Marine Aviation Logistics Squadron 12, Marine Corps Air Station, Iwakuni, Japan, took home awards. The large category winner was Marine Aviation Logistics Squadron 14, Marine Corps Air Station, Cherry Point, N.C.



Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

Department of Defense

Under Secretary of Defense (Acquisition, Technology and Logistics) (USD(AT&L))
<http://www.acq.osd.mil/>

ACQWeb offers a library of USD(AT&L) documents, a means to view streaming videos, and jump points to many other valuable sites.

USD(AT&L) Knowledge Sharing System (formerly Defense Acquisition Desk-book)

<http://deskbook.dau.mil/jsp/default.jsp>
Automated acquisition reference tool covering mandatory and discretionary practices.

Director, Defense Procurement and Acquisition Policy (DPAP)

<http://www.acq.osd.mil/dpap>
Procurement and Acquisition Policy news and events; reference library; DPAP organizational breakout; acquisition education and training policy and guidance.

DoD Inspector General

<http://www.dodig.osd.mil/pubs/index.html>

Search for audit and evaluation reports, Inspector General testimony, and planned and ongoing audit projects of interest to the acquisition community.

Deputy Director, Systems Engineering, USD(AT&L/IO/SE)

<http://www.acq.osd.mil/io/se/index.htm>
Systems engineering mission; Defense Acquisition Workforce Improvement Act information, training, and related sites; information on key areas of systems engineering responsibility.

Defense Acquisition University (DAU)

<http://www.dau.mil>
DAU Course Catalog, *Defense AT&L* magazine and *Acquisition Review Quarterly* journal; course schedule; policy documents; guidebooks; and training and education news for the Defense Acquisition Workforce.

Defense Acquisition University Distance Learning Courses

<http://www.dau.mil/registrar/apply.asp>
Take DAU courses online at your desk, at home, at your convenience!

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; ASAAALT Bulletin; digital documents library; ASA(ALT) organization; quick links to other Army acquisition sites.

Navy Acquisition Reform

<http://www.ar.navy.mil>
Acquisition policy and guidance; World-class Practices; Acquisition Center of Excellence; training opportunities.

Navy Acquisition, Research and Development Information Center
http://www.onr.navy.mil/sci_tech/industrial/nardic/

News and announcements; acronyms; publications and regulations; technical reports; "How to Do Business with the Navy"; much more!

Naval Sea Systems Command

<http://www.navsea.navy.mil>
Total Ownership Cost (TOC); documentation and policy; Reduction Plan; Implementation Timeline; TOC reporting templates; Frequently Asked Questions.

Navy Acquisition and Business Management

<http://www.abm.rda.hq.navy.mil>
Policy documents; training opportunities; guides on areas such as risk management, acquisition environmental issues, past performance, and more; news and assistance for the Standardized Procurement System (SPS) community; notices of upcoming events.

Navy Best Manufacturing Practices Center of Excellence

<http://www.bmpcoe.org>
A national resource to identify and share best manufacturing and business practices being used throughout industry, government, and academia.

Naval Air Systems Command (NAVAIR)

<http://www.navair.navy.mil>
Provides advanced warfare technology through the efforts of seamless, integrated, worldwide network of aviation technology experts.

Space and Naval Warfare Systems Command (SPAWAR)

<https://e-commerce.spawar.navy.mil>
Your source for SPAWAR business opportunities, acquisition news, solicitations, and small business information.

Joint Interoperability Test Command (JITC)

<http://jitic.fhu.disa.mil>
Policies and procedures for interoperability certification. Access to lessons learned; link for requesting support.

Air Force (Acquisition)

<http://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.

Defense Systems Management College (DSMC)

<http://www.dau.mil>
DSMC educational products and services; course schedules; job opportunities.

Defense Advanced Research Projects Agency (DARPA)

<http://www.darpa.mil>
News releases; current solicitations; "Doing Business with DARPA."

Defense Information Systems Agency (DISA)

<http://www.disa.mil>
Structure and mission of DISA; Defense Information System Network; Defense Message System; Global Command and Control System; much more!

National Geospatial-Intelligence Agency

<http://www.nima.mil>
Imagery; maps and geodata; Freedom of Information Act resources; publications.

Defense Modeling and Simulation Office (DMSO)

<http://www.dmsomil>
DoD Modeling and Simulation Master Plan; document library; events; services.

Defense Technical Information Center (DTIC)

<http://www.dtic.mil/>
Technical reports; products and services; registration with DTIC; special programs; acronyms; DTIC FAQs.

Defense Electronic Business Program Office (DEBPO)

<http://www.acq.osd.mil/dpap/ebiz>
Policy; newsletters; Central Contractor Registration; Assistance Centers; DoD EC Partners.

Open Systems Joint Task Force

<http://www.acq.osd.mil/osjtf>
Open Systems education and training opportunities; studies and assessments; projects, initiatives and plans; reference library.

Government-Industry Data Exchange Program (GIDEP)

<http://www.gidep.org/>
Federally funded co-op of government-industry participants, providing an electronic forum to exchange technical information essential to research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.



Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

Federal Civilian Agencies

Acquisition Reform Network (AcqNet)

<http://www.arnet.gov/>
Virtual library; federal acquisition and procurement opportunities; best practices; electronic forums; business opportunities; acquisition training; Excluded Parties List.

Committee for Purchase from People Who are Blind or Severely Disabled
<http://www.jwod.gov>

Provides information and guidance to federal customers on the requirements of the Javits-Wagner-O'Day (JWOD) Act.

Federal Acquisition Institute (FAI)

<http://www.faionline.com>
Virtual campus for learning opportunities as well as 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)

<http://www.asu.faa.gov>
Online policy and guidance for all aspects of the acquisition process.

General Accounting Office (GAO)

<http://www.gao.gov>
Access to GAO reports, policy and guidance, and FAQs.

General Services Administration (GSA)

<http://www.gsa.gov>
Online shopping for commercial items to support government interests.

Library of Congress

<http://www.loc.gov>
Research services; Congress at Work; Copyright Office; FAQs.

National Technical Information Service (NTIS)

<http://www.ntis.gov/>
Online service for purchasing technical reports, computer products, videotapes, audiocassettes, and more!

Small Business Administration (SBA)

<http://www.sbaonline.sba.gov>
Communications network for small businesses.

U.S. Coast Guard

<http://www.uscg.mil>
News and current events; services; points of contact; FAQs.

Topical Listings

**U.S. Department of Transportation
MARITIME Administration**

<http://www.marad.dot.gov/>
Provides information and guidance on the requirements for shipping cargo on U.S. flag vessels.

Acquisition Community Connection (ACC)

<http://www.pmcop.dau.mil>
Includes risk management, contracting, system engineering, total ownership cost (TOC) policies, procedures, tools, references, publications, Web links, and lessons learned.

Commerce Business Daily

<http://cbdnet.gpo.gov>
Access to current and back issues with search capabilities; business opportunities; interactive yellow pages.

DoD Defense Standardization Program

<http://www.dsp.dla.mil>
All about DoD standardization; key Points of Contact; FAQs; Military Specifications and Standards Reform; newsletters; training; nongovernment standards; links to related sites.

Earned Value Management

<http://www.acq.osd.mil/pm>
Implementation of Earned Value Management; latest policy changes; standards; international developments; active notebook.

Fedworld Information

<http://www.fedworld.gov>
Comprehensive central access point for searching, locating, ordering, and acquiring government and business information.

MANPRINT (Manpower and Personnel Integration)

<http://www.manprint.army.mil>
Points of contact for program managers; relevant regulations; policy letters from the Army Acquisition Executive; as well as briefings on the MANPRINT program.

Association of Old Crows (AOC)

<http://www.crows.org>
Association news; conventions, conferences and courses; *Journal of Electronic Defense* magazine.

DAU Alumni Association

<http://www.dauaa.org>
Acquisition tools and resources; government and related links; career opportunities; member forums.

Aging Systems Sustainment and Enabling Technologies (ASSET)
<http://catt.bus.okstate.edu/asset/index.html>

A government-academic-industry partnership. The technologies and processes developed in the ASSET program increase the DoD supply base, reduce the time and cost associated with parts procurement, and enhance military readiness.

Electronic Industries Alliance (EIA)

<http://www.eia.org>
Government Relations Department; includes links to issue councils; market research assistance.

International Society of Logistics

<http://www.sole.org/>
Online desk references that link to logistics problem-solving advice; Certified Professional Logistician certification.

National Contract Management Association (NCMA)

<http://www.ncmahq.org>
"What's New in Contracting?"; educational products catalog; career center.

National Defense Industrial Association (NDIA)

<http://www.ndia.org>
Association news; events; government policy; *National Defense* magazine.

Project Management Institute

<http://www.pmi.org>
Program management publications, information resources, professional practices, and career certification.

Software Program Managers Network

<http://www.spmn.com>
Site supports project managers, software practitioners, and government contractors. Contains publications on highly effective software development best practices.

If you would like to add your acquisition or acquisition and logistics excellence-related Web site to this list, please put your request in writing and fax it to Judith Greig, (703) 805-2917. DAU encourages the reciprocal linking of its Home Page to other interested agencies. Contact the DAU Webmaster at: **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

Subjects may include, but are not restricted to, all aspects of program management; professional and educational development of DoD's AT&L Workforce; acquisition and logistics excellence; Defense industrial base; research and development; test and evaluation; modeling and simulation; commercial best business practices; and interviews with Government-Industry Defense executives.

Defense AT&L is not a forum for academic papers, fact sheets, technical papers, or white papers (these are typically recognized by their structured packaging, e.g., Introduction, Background, Discussion, Methodology, Recommendations, Conclusions). Those papers are more suited for DAU's journal, *Acquisition Review Quarterly*. *Defense AT&L* magazine publishes, for the most part, 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.

Good writing sounds like comfortable conversation. Write naturally and avoid stiltedness. Except for a rare change of pace, most sentences should be 25 words or less, and paragraphs should be six sentences. Vary your syntax. Avoid falling into the trap of writing one declarative sentence after another. Package your article with liberal use of subheads.

Length of Articles

Defense AT&L is flexible regarding length, but articles most likely to be published are generally 2,000-3,000 words or about 10 double-spaced pages, each page having a 1-inch border on all sides. However, do not be constrained by length requirements; tell your story in the most direct way, regardless of length. Do not submit articles in a lay-out format, nor should articles include any footnotes, endnotes, or references. Be sure to define all acronyms.

Photos and Illustrations

Articles may include figures, charts, and photographs. They must, however, be in a separate file from the article. Photos must be black and white or color. *Defense AT&L* does not guarantee the return of photographs. Include brief, numbered captions keyed to the photographs. Place a corresponding number on the lower left corner, reverse

side of the photographs. Also, be sure to include the source of the photograph. *Defense AT&L* publishes no photos from outside the Department of Defense without express permission. Photocopies of photographs are not acceptable.

With the increase in digital media capabilities, authors can now provide digital files of photos/illustrations. (Our author guidelines at <http://www.dau.mil/pubs/pm/articles.asp> contain complete instructions on transmitting these files.) Note that they must meet the following publication standards set for *Defense AT&L*: color and greyscale (if possible); EPS files generated from Illustrator (preferred) or Corel Draw (if in another format, provide program format as well as EPS file); TIFF files with a resolution of 300 pixels per inch measuring 5 inches by 7 inches; or other files in original program format (i.e., Powerpoint).

Biographical Sketch

Include a short biographical sketch of the author(s)—about 25 words—including current position and educational background.

Clearance

All articles written by authors employed by or on contract with the U.S. Government must be cleared by the author's public affairs or security office prior to submission. In addition, each author must certify that the article is a "Work of the U.S. Government." This form is found at the end of the *Defense AT&L* Author Guidance. Click on "Copyright Forms" and print the last page only, sign, and submit with the article. Since all articles appearing in *Defense AT&L* are in the public domain and posted to the DAU Web site, no copyrighted articles will be accepted. This is in keeping with DAU's policy of widest dissemination of its published products.

Submission Dates

Issue	Author's Deadline
January-February	1 November
March-April	1 January
May-June	1 March
July-August	1 May
September-October	1 July
November-December	1 September

Submission Procedures

Articles (in MS Word) may be submitted via e-mail to judith.greig@dau.mil or via U.S. mail to: DAU PRESS, ATTN: JUDITH GREIG, 9820 BELVOIR RD, SUITE 3, FORT BELVOIR VA 22060-5565. For photos/illustrations accompanying your article, send us the original photos or follow the guidance under "Photos and Illustrations"—opposite column. All submissions must include the author's name, mailing address, office phone number (DSN and commercial), and fax number.

Don't wait. Send us your article now.

<http://www.dau.mil/pubs/pm/articles.asp>