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JULY AUGUST 1999

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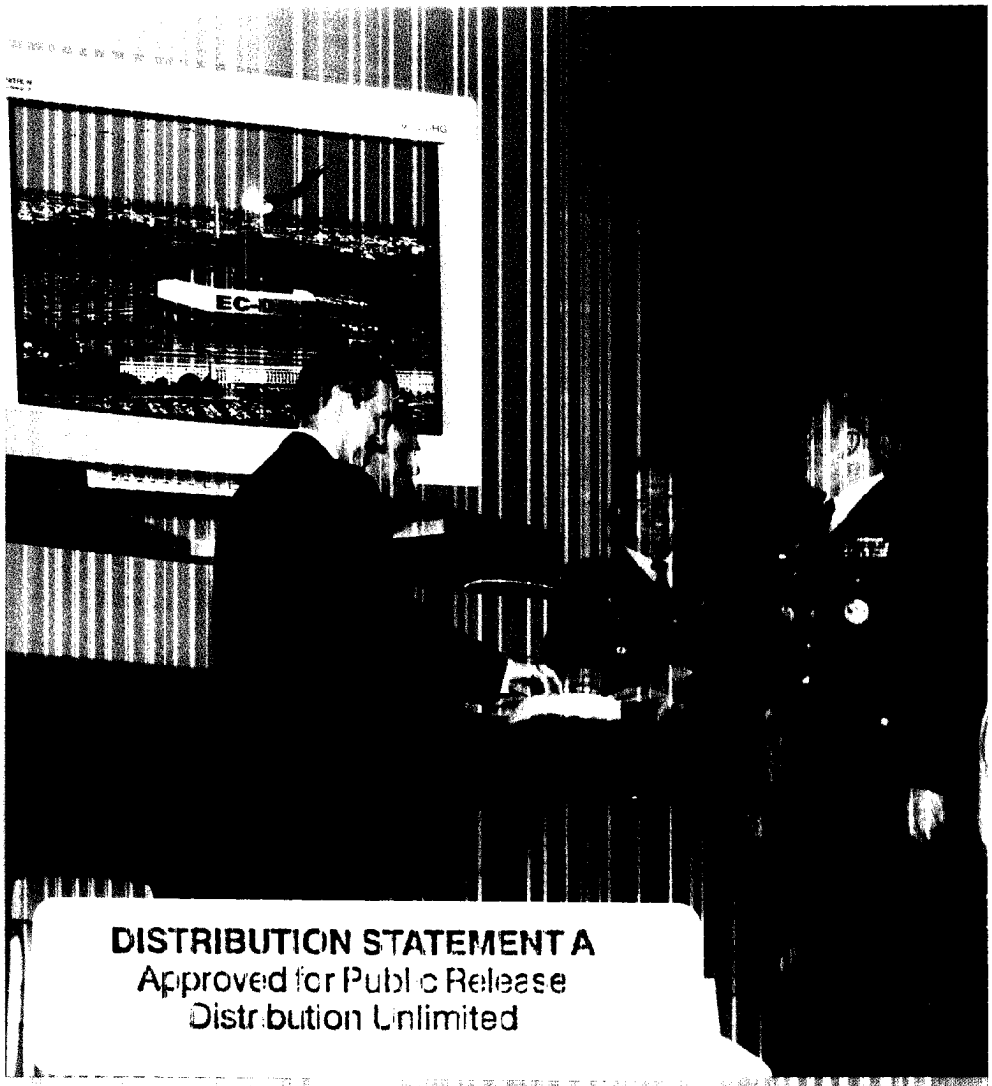
PROGRAM MANAGER

ACQUISITION & LOGISTICS REFORM WEEK/PACKARD AWARDS

## Secretary of Defense, DoD's Electronic Commerce Leaders "Launch" EC Day '99



*Arthur L. "Art" Money*
*Special Assistant to the Secretary of Defense for Command, Control, Communications & Intelligence (C3I) & DoD Chief Information Officer*

**ALSO IN THIS ISSUE:**



Reagan International Trade Center

A BIMONTHLY MAGAZINE OF THE DEFENSE

# PROGRAM MANAGER

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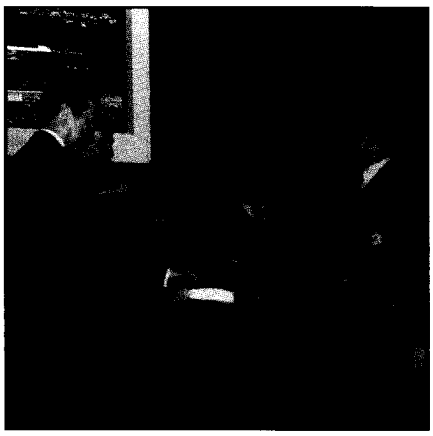



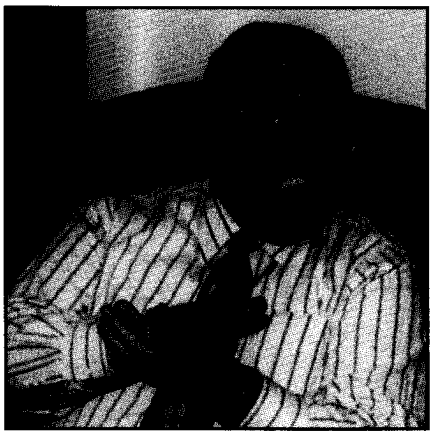





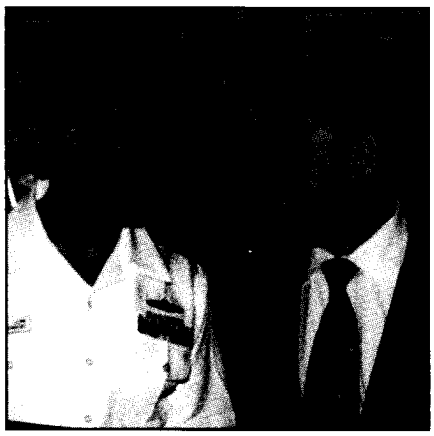





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**Cover:** Lighting a virtual birthday cake "launching" EC Day 99. From left: **Secretary of Defense William S. Cohen; Deputy Assistant Secretary of Defense for CIO Policy and Implementation and DoD Deputy CIO, Dr. Marvin J. Langston; Director, Defense Logistics Agency, Army Lt. Gen. Henry T. Glisson; and Director, Defense Information Systems Agency, Army Lt. Gen. David J. Kelley.**

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3-D Scanner Gives Troops Perfect-Fitting Uniforms • Technology Improves Warfighters' Logistics Lifeline • AFMC Staff Tackles Major Move Toward Less Paper • Army Experiment Explores "Adaptive Thinking" • Fiscal Year 98 Value Engineering Achievement Awards Presented • Joint STARS Trains All-Seeing Eyes on Battlefield • President Clinton Names Lawrence J. Delaney As Assistant Secretary of the Air Force for Acquisition at the Department Of Defense • ACC Pursuing Information on Chemical Agent Disposal Sites • Advanced Concept Technology Demos Serve the Warfighter in Operation Allied Force

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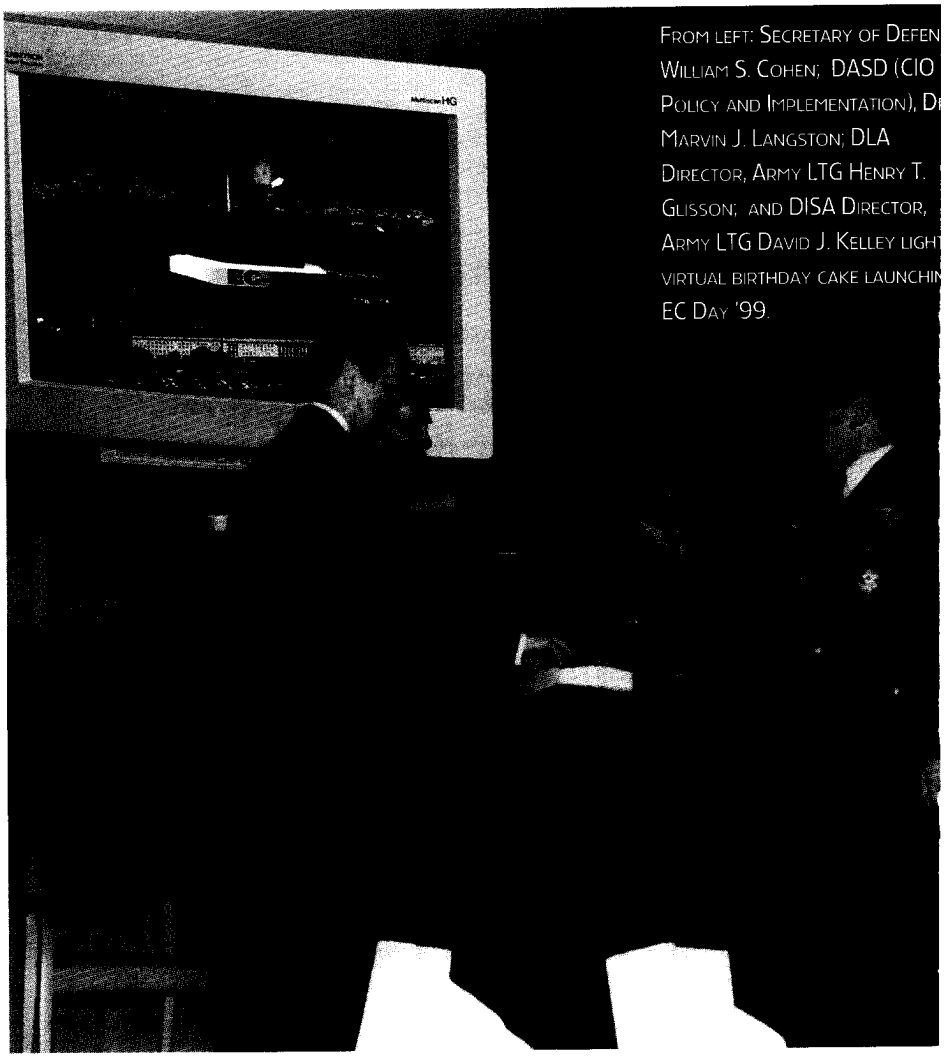
# Secretary of Defense, Electronic Commerce Leaders "Launch" EC Day '99

## Electronic Commerce Changing the Face of America

COLLIE J. JOHNSON

*"The pace of change in electronic commerce is the one stunning part of the revitalization of American business."*

*–David W. Beier*
*Chief Domestic Policy Advisor to The Vice President*



FROM LEFT: SECRETARY OF DEFEN WILLIAM S. COHEN; DASD (CIO POLICY AND IMPLEMENTATION), D MARVIN J. LANGSTON; DLA DIRECTOR, ARMY LTG HENRY T. GLISSON; AND DISA DIRECTOR, ARMY LTG DAVID J. KELLEY LIGH VIRTUAL BIRTHDAY CAKE LAUNCHIN EC DAY '99.

Electronic commerce has changed the United States in ways this nation could never have imagined. DoD's acquisition process, better known 10 years ago as a sinkhole for taxpayers' dollars, is now according to David W. Beier, Chief Domestic Policy Advisor to The Vice President, on the brink of becoming the best in the world.

"Within five years the Department of Defense will be a leader in electronic commerce and will be the most effective electronic commerce business in the world."

DoD's total revamping and revitalization of the way it purchases goods and services, particularly through electronic commerce, was cause for recognition and celebration. And celebrate they did, as Secretary of Defense William S. Cohen joined the Joint Electronic Commerce Program Office (JECPO) in marking EC Day 99, the second year the

*Johnson is managing editor,* Program Manager *magazine, Visual Arts and Press Department, Division of College Administration and Services, DSMC.*

JECPO has set aside a special day to highlight electronic commerce. This year's event was held June 10 at the Ronald Reagan International Trade Center, Washington, D.C.

## JECPO — From Idea to Action

Ever since Secretary of Defense William S. Cohen unveiled the Defense Reform Initiative in November 1997, which identified electronic commerce as one of the best business practices available to take industry expertise and apply it to the business of defense, it's been "Business in Action" for the JECPO. Initially formed in January 1998, the office is organized under both the Defense Logistics Agency (DLA) and the Defense Information Systems Agency (DISA), and receives policy guidance from the DoD Chief Information Officer. Claudia "Scottie" Knott, DLA, is the JECPO director and served as this year's EC Day '99 organizer.

EC Day was established last year as a way to publicize, promote, and celebrate electronic commerce and the partnerships created between industry, business areas, and the JECPO. Besides showcasing the JECPO's yearlong efforts with an Electronic Commerce Expo featuring exhibits and demos, Knott and the JECPO recruited top leaders from government, industry, and academia to communicate their message – how electronic commerce has been used to support the warfighter, streamline business processes, trading partner interface, and the DoD business infrastructure.

New to this year's celebration was an awards ceremony [pp. 4-5] that highlighted electronic commerce achievements within DoD. Business area breakout sessions featured seven Track Presentations geared to the DoD business areas. A special crowd pleaser was the ceremonial lighting of a "virtual birthday cake" by Cohen and three of DoD's top leaders in electronic commerce.

Knott welcomed Cohen and a cadre of military, government, and private-sector chief executive officers and senior government officials throughout the day. "We have several outstanding speakers from both government and industry, a dynamic panel of experts on information assurance, over 30 different breakout sessions in a variety of different business areas, and more than 35 exhibit booths in the Exhibit Hall," she told the overflow crowd. (By the close of early registration, over 450 registrants had signed up, with many more visiting throughout the day.)

*EC Day was established last year as a way to publicize, promote, and celebrate electronic commerce and the partnerships created between industry, business areas, and the JECPO.*

## A Powerful Presence

DoD's top leaders in electronic commerce played an active part in the day's events – Secretary of Defense William S. Cohen; Deputy Assistant Secretary of Defense (CIO Policy and Implementation), Dr. Marvin J. Langston; Deputy Under Secretary of Defense (Acquisition Reform) and Director, Defense Reform, Stan Z. Soloway; DLA Director, Army Lt. Gen. Henry T. Glisson; and DISA Director, Army Lt. Gen. David J. Kelley – all turned out to emphasize and underscore DoD's full commitment to integrating electronic commerce into every facet of the Department's business.

Secretary Cohen served as keynote speaker, sharing DoD's viewpoint on using electronic commerce to support the government's business processes. Citing DoD's E-Mall as a recent success story, he called it, "an amazing electronic mall that's now selling everything from socks to semiconductors with some $27 million in sales to date."

Because of electronic commerce, DoD has dramatically reduced its overhead costs, he said, as well as times for delivery for countless agencies, vendors, and customers, and is now using credit cards for the vast majority of small purchases.

"Perhaps most importantly," he continued, "we are now rapidly approaching the point where we can say we're going to have a virtually paper-free contracting system by next year."

## Harnessing Power of Microchip

These were once simply lofty hopes, Cohen told the audience. "But we are turning those into reality. And I wanted to be here today and take this time, to tell you how grateful I am for the kind of dedication that you have demonstrated for the past year.

"It's always been said that the toughest thing about success is you have to keep on being successful. And that's what we're here today to talk about, not only the celebrating of our past, but about your potential."

Cohen said DoD has to continue to harness the power of the microchip, "so that our men and women in uniform can get what they need, when they need it, faster, better, cheaper than ever before. Therein," he concluded, "lies your essential mission."

# FIRST EVER ELECTRONIC C

## 1999 Top Government-Indus

### Best DoD Electronic Business Web Site

**Web Invoicing System (WinS), Defense Finance and Accounting Center**

This award recognizes a DoD operational Web site conducting business transactions over the Internet, resulting in improved efficiency, decreased cycle time, or increased services. From left: Soloway; Langston; Diana Buttrey.

### DoD Electronic Commerce Pioneer

**Defense Medical Logistics Standard Support (DMLSS) Program**

**Office of the Secretary of Defense (Health Affairs), TRICARE Management Activity**

This award recognizes an electronic commerce initiative that pushes the current state of EC to reduce an antiquated paradigm and demonstrates a high level of innovation and government creativity. From left: Stan Soloway, DUSD(AR); Dr. Marvin J. Langston, DASD (CIO Policy & Implementation); Army Col. John Clarke.

### Best Electronic Commerce Partner Certified Small Business Partner

**DoD Electronic Mall XML Demonstration Project**

**Defense Logistics Support Command & Product Data Integration Technologies, Inc.**

This award recognizes a DoD industry Certified Small Business Partner who has made an outstanding contribution to a DoD EC effort, and has been nominated by a DoD organization. From left: Soloway; Peter Everitt; Langston.

### Best Electronic Commerce Team Large Business Team

**Cargo Movement Operations System (CMOS), U.S. Air Force Headquarters Standard Systems Group/Integrated Logistics Program Office, Federal Express, Emery Worldwide & United Parcel Service**

This award recognizes the teaming of a government agency and industry for outstanding achievement in the advancement of EC principles or applications within DoD. From left: Shaun Caulfield, United Parcel Service; Soloway; Langston; Michael McVeigh, Emery Worldwide; William Endres, Federal Express; Susan Kirkland, U.S. Air Force Headquarters Standard Systems Group.

Photos by C. Tyler Jones

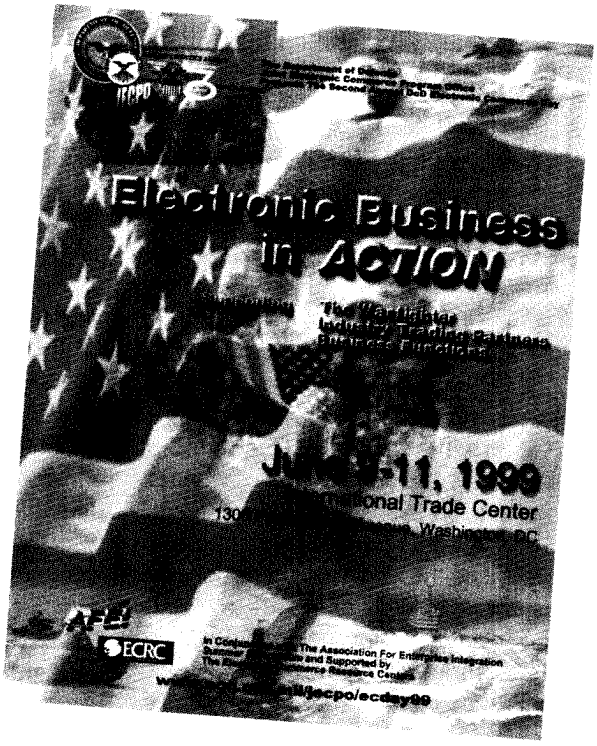
# MMERCE (EC) DAY AWARDS

## y EC Initiatives Recognized

**Best Electronic Commerce Partner**
**Large Business Partner**

**DoD Business Opportunities and Central Contractor Registration, Joint Electronic Commerce Program Office and PricewaterhouseCoopers**

This award recognizes a DoD industry large business partner who has made an outstanding contribution to a DoD EC effort, and has been nominated by a DoD organization. From left: Soloway; Langston; Wood Parker.




**Best Electronic Commerce Team**
**Certified Small Business Team**

**Defense Commissary Agency (DeCA) Interactive Business System (DIBS) Defense Commissary Agency & Bethel-Eckert Enterprises, Inc.**

This award recognizes the teaming of a government agency and industry for outstanding achievement in the advancement of EC principles or applications within DoD. **Below**: Soloway; Jeffrey Perry, DeCA; Langston. **Lower Right:** Soloway; Scott Laird, Bethel-Eckert Enterprises, Inc.; Langston.

## The Way "Business Does Business"

Glisson, representing the logistics community, predicts a future of commercial off-the-shelf technology and "doing business the way that business does business." To get a first-hand look at government actually doing business the way "business does business," he urged everyone to stop by the Electronic Commerce Expo for a demo of DLA's new whole-body scanner and 3-D scanning software [pp. 8-9]. This system, which will be tested on Marine recruits, accurately extracts measurements and automatically selects uniform sizes – a giant step forward in reducing ordering lead time and inventory levels.

Glisson reaffirmed DLA's commitment to, "stay the course and to continue to leverage the power of electronic commerce to transform our logistics systems into the best in the world."

Kelley, Glisson's partner in running the JECPO, shared a startling statistic. "Electronic commerce generated in this country over the last year $102 billion," he noted. "That is far more than anyone expected ... it is absolutely phenomenal, and I will tell you, that's just the beginning. And the work that's been done this past year – and I'm talking about the work done by the government as well as our industry partners – is really, I believe, leading the way."

Representing the Office of Defense Reform, Soloway said, "I would argue that the Department of Defense, in the last 12 months, was probably more changed by electronic commerce than in the last several decades combined."

Other leaders from government, industry, and academia speaking at the EC Day '99 General Session were David Beier, Chief Domestic Policy Advisor to the Vice President; Dr. Steve Kelman, John F. Kennedy School of Government, Harvard University (credited with starting electronic commerce within the Office of Management and Budget and the federal government); and Carl Alguire, Senior Vice President, Operations, Peapod, Inc., "America's Internet Grocer."

## World's Leader in Electronic Commerce

Beier represented Vice President Gore and the National Partnership for Reinventing Government. Electronic commerce, he believes, is changing the very face of America in terms of our level of prosperity, our level of understanding, and the level of opportunity to bring all Americans together in a more robust way in the future. In fact, Beier predicts that, "Within five years the Department of Defense will be a leader in electronic commerce and will be *the most effective electronic commerce business in the world.*

"You all have both the courage and the wisdom to be able to act," Beier told the audience, "by reducing the amount of paperwork, by listening to customers, by empowering the people within the defense establishment to make decisions – whether it's a smartcard or it's a procurement decision that's been guided by information obtained on the Web – all of those dramatic changes are things that you all can be very proud of."

Kelman, former Administrator for the Office of Federal Procurement Policy (referred to as "the godfather of reform" by Defense Reform Director, Stan Soloway) brought an academic perspective to EC Day '99.

"We obviously have had a number of early successes," he commented, "but we obviously still have a long way to go. We have learned from mistakes, said Kelman, "moved forward, and advanced in a way that we need to if we're going to bring about change. So those mistakes have been, in that sense, *good* mistakes.

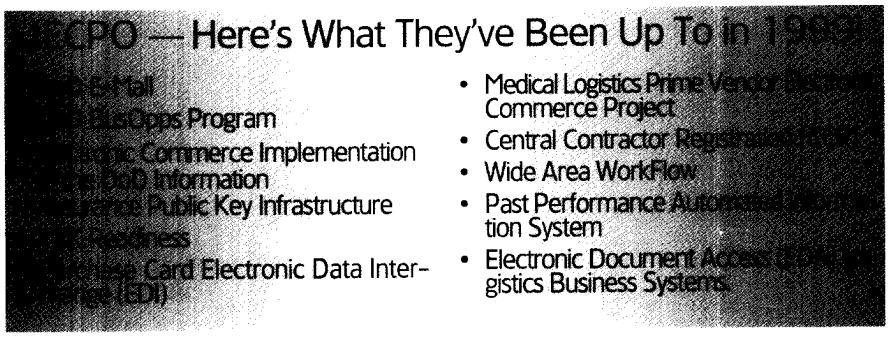
"I am convinced that electronic commerce is going to be part of the way or one of the techniques that we use to fulfill the promise of acquisition reform." And the promise of acquisition reform, Kelman said, "is to consistently deliver better value."

Alguire, an electronic commerce innovator in industry, spoke from his perspective as one of a growing number of electronic commerce entrepreneurs. Alguire's idea was to use electronic commerce to enhance the customer's shopping experience. In his words, he wanted to "continuously focus on servicing and improving our product, to create a better, faster, and cheaper alternative to standing in a long grocery line at the end of a long, hard day at work."

Peapod Inc., now does 98 percent of its sales over the Internet. "Over the years we have made a lot of mistakes," said Alguire, "and many more will be made. But each one has educated us and enhanced our experience. We must continue to take these risks if we are to continue to grow and develop."

Alguire said that today is the most exciting and important time in world history. Speaking for all electronic commerce innovators, anywhere, everywhere, Alguire commented, *"Whatever you can dream, whatever you can envision, and whatever you communicate, can today be done."*

**Editor's Note:** For further information about electronic commerce, refer to the JECPO Web site at **http://www.acq.osd/mil/jecpo** or contact the Joint Electronic Commerce Information Center Program Office, 8725 John J. Kingman Road, Stop 6205, Fort Belvoir, Va. 22060-6205; E-mail **dodedi@hq.dla.mil**; (800) EDI-3414 (Voice); (703) 275-5692 (Fax).



# Army Acquisition Corps Celebrates 10 Years!

In recognition of an exciting first decade, the U.S. Army Acquisition Corps (AAC) will commemorate its 10th anniversary during the week of the 1999 Association of the United States Army (AUSA) Annual Meeting Oct. 11-13. Since the inception of the AAC Oct. 13, 1989, when the Army Chief of Staff approved its creation as an organization of dedicated military and civilian acquisition specialists and leaders, it has had a tremendous impact on the Army's acquisition community.

**Events**

A series of events will precede the 10th anniversary celebration. These events will highlight the development of the AAC and showcase its progress in professionalizing the field of acquisition.

An AAC display commemorating the 10th anniversary will be on view at the AUSA meeting. In addition, career development guidance will be available at the AAC career development hospitality suite.

An AAC team will also participate in the *Army 10-Miler* Oct. 10.

**Creation of an Association**

The 10th anniversary commemoration will also serve to inaugurate the establishment of an association of acquisition professionals that will offer unique opportunities to its members. Initially, membership in the association will be open to all active duty military personnel, those individuals from the U.S. Army Reserve and National Guard serving in an Army Guard Reserve assignment, and all civilian federal employees. As a national association, it will be headquartered in Washington, D.C. It will also provide an opportunity to help preserve the heritage of the AAC. An important part of the association's role will be to publicize and reinforce Army acquisition goals and ensure that the lessons of history and the proud traditions of the Army Acquisition Workforce (AAW) are remembered by future generations.

Initially, Keith Charles, the Deputy Director for Acquisition Career Management, Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, will serve as president of the association. "I'm very excited that acquisition is finally being recognized as a profession with its own professional society. I'll do all I can to support it," said Charles. The AAC's Acquisition Career Management Advocates will sit on the inaugural board as well as serve as regional chapter presidents.

**Army Acquisition Corps Ball**

AAC 10th anniversary activities will include the AAC Ball Oct. 10 in the main ballroom of the Crystal Gateway Marriott in Crystal City, Va. It will be a black-tie affair and is expected to draw many senior leaders from the acquisition community. Those traveling to the Washington, D.C., area for the AUSA Annual Meeting are invited to attend.

The host of the AAC Ball will be Paul J. Hoeper, the Assistant Secretary of the Army for Acquisition, Logistics and Technology and Army Acquisition Executive. The Master of Ceremonies will be Keith Charles. George G. Williams, President of COLSA Corp., will be the keynote speaker. Williams, a former recipient of the Department of the Army Excellence in Acquisition Management Award, enjoyed a distinguished career in acquisition and will be sharing his positive experiences with the AAC. Organizers anticipate more than 700 people will attend the function. Invited guests include personnel from the Office of the Under Secretary of Defense for Acquisition and Technology; the Army Acquisition Executive; other Service Acquisition Executives; the Defense Acquisition Executive; personnel from the Army Secretariat and Army staff; senior program, project, and product managers; and program executive officers.

Entertainment will be provided by a U.S. Army field band, a musical group specifically formed for this type of event. The Military District of Washington will provide ceremonial support, and the U.S. Army Old Guard will present the colors. Special award presentations as well as charter memberships and chapter presentations are also planned for the evening.

**Process Action Team**

To help plan for the AAC's 10th anniversary commemoration, the Director for Acquisition Career Management, Army Lt. Gen. Paul J. Kern requested formation of a Process Action Team (PAT). Once organized, the PAT defined overall goals and objectives of the AAC's 10th anniversary, identified specific events, and recommended an implementation strategy.

A special Web site at **http://dacm.sarda.army.mil** was created specifically for the AAC's 10th anniversary. The new AAC Home Page provides the AAW information on the AAC 10th anniversary events and the acquisition professional association. For convenience, it also links to an online registration site for the AAC Ball.

To provide comments or recommendations to the PAT or to obtain additional information, contact Mary McHale in the Acquisition Career Management Office at (703) 604-7105, DSN 664-7105, E-mail: **mchalem@sarda.army.mil.**

AMERICAN FORCES PRESS SERVICE

# 3-D Scanner Gives Troops Perfect-Fitting Uniforms

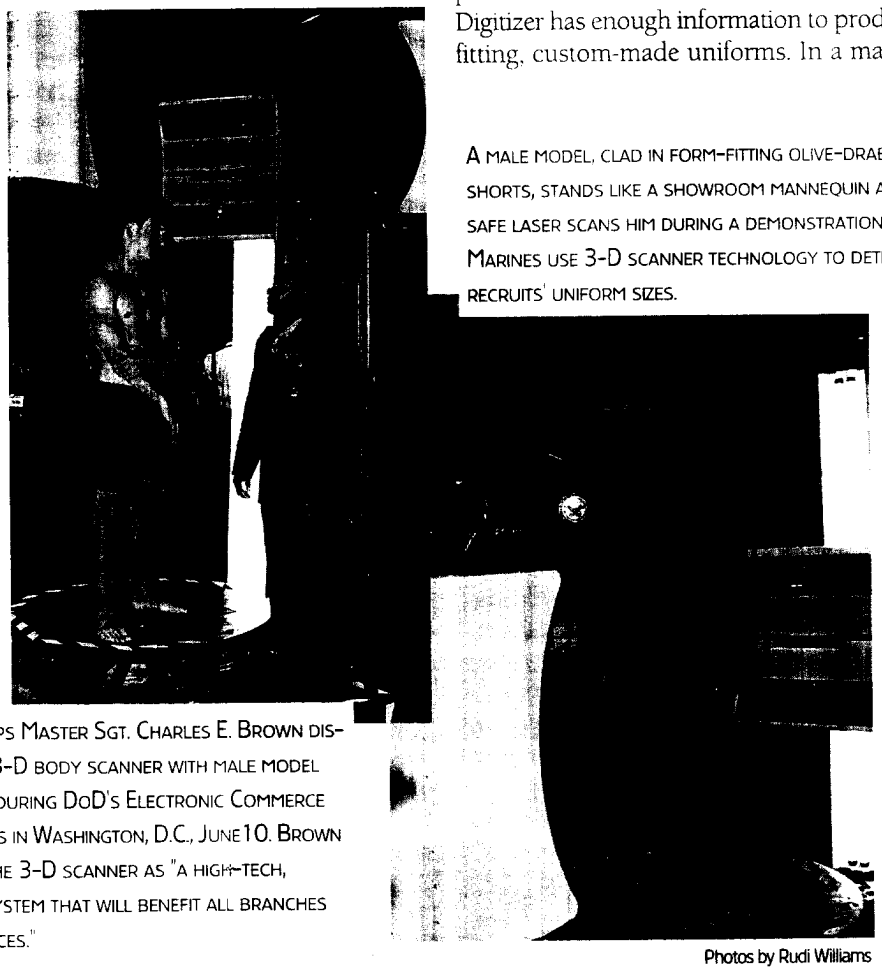
RUDI WILLIAMS

WASHINGTON – With the help of 3-D body scanner technology, scientists and engineers are preparing to step into the future with their clothing and equipment designs.

The 3-D, or Whole Body Digitizer technology was demonstrated here at the Ronald Reagan International Trade Center during DoD's June 9-11 Electronic Commerce Day activities. More than 600 attendees saw how the process determines uniform sizes of basic training recruits at the Marine Corps Recruit Depot in San Diego. The Marines have been testing the machine there for about a year.

Electronic Commerce Day attendees watched as a male model clad in form-fitting olive-drab bicycle shorts stood erect on a platform as a red eye-safe laser scanned him from head to toe. The machine has four scan heads mounted on a nine-foot frame. A laser beam projected around the model's body was reflected into cameras located in each of the scan heads.

Depot clothing officer Bob Padilla said all recruits have to do is wear exercise shorts and step onto a platform – after a 17-second scan, the Whole Body Digitizer has enough information to produce perfect-fitting, custom-made uniforms. In a matter of min-



A MALE MODEL, CLAD IN FORM-FITTING OLIVE-DRAB BICYCLE SHORTS, STANDS LIKE A SHOWROOM MANNEQUIN AS A RED EYE-SAFE LASER SCANS HIM DURING A DEMONSTRATION OF HOW THE MARINES USE 3-D SCANNER TECHNOLOGY TO DETERMINE RECRUITS' UNIFORM SIZES.

MARINE CORPS MASTER SGT. CHARLES E. BROWN DISCUSSES THE 3-D BODY SCANNER WITH MALE MODEL ERIC STROM DURING DOD'S ELECTRONIC COMMERCE DAY ACTIVITIES IN WASHINGTON, D.C., JUNE 10. BROWN DESCRIBED THE 3-D SCANNER AS "A HIGH-TECH, FUTURISTIC SYSTEM THAT WILL BENEFIT ALL BRANCHES OF THE SERVICES."

Photos by Rudi Williams

utes, the laser data are translated into a 3-D image that can be viewed on a computer screen. The data are printed out in 45 seconds and handed to the recruit to take to the uniform issue point.

"So far, we've scanned more than 1,000 recruits," Padilla noted. "The key is to limit the time it takes to manually tape measure the recruits and do tailored alterations so they can spend more time training." While manually measuring a recruit's sleeve length, waist, and chest takes less than a minute, the measurements are not as accurate as the 3-D scanner, he said.

Before the advent of the 3-D scanner, time and manpower were wasted because the fitting process began early in boot camp to ensure recruits' dress uniforms would be ready for graduation. Because diet and exercise changed recruits' body shapes, they would often need at least two subsequent fittings and alteration checks.

"The 3-D scanning technology makes it feasible to delay dress uniform issues until after most of the body changes have taken place," Padilla said. Recruits are now scanned a few days before the end of boot camp, and their dress uniforms are still ready for graduation day.

Scanning is not only faster, but more accurate, he said, and that eliminates the numerous fittings and saves tailoring costs. [Also, recruits] don't have to spend a lot of time standing in line. For example, he said, "If I have only one person available to measure shirt sizes, the line gets pretty long when you have 350 recruits waiting for service."

Depot money managers estimate the scanning test project has saved more than $5.3 million since it started in May 1998. With the scanner, researchers can collect thousands of human body measurements more quickly and comprehensively than with the manual method, Padilla noted. The data, integrated into the supply system, [have] allowed the depot to reduce its uniform inventory by more than 50 percent. That has freed thousands of feet of warehouse space for other uses and means fewer people are needed to measure recruits for uniform sizes, he added.

Padilla said depot employees displaced by the scanner are given other jobs or retrained to operate the scanning equipment.

Using the scanning technology to fit uniforms is just scratching the surface of its capabilities, according to Kathleen Robinette, director of the Computerized Anthropometric Research and Design Lab at the Air Force Research Laboratory, Wright-Patterson Air Force Base, Ohio. She said the scanner technology has incredible, far-reaching potential for military and industry applications.

In addition to the apparel industry, Robinette said, many uses for the technology will be found in the medical community, automobile industry, and the military. Medical applications include using scanner data to produce better artificial limbs, to create garments that promote healing in burn victims, to determine the progress of wound healing, and to study the relationship between body shapes and diseases.

The automobile industry can use scanner data to design better car seats and improve driver and passenger visibility and instrument panel layouts, she said.

Cyberware Inc., of Monterey, Calif., originally developed the scanner in the mid-1980s for the Air Force Research Laboratory for studies of body measurement variations in the general population worldwide. The results will be used to improve hundreds of goods and services – anything a person wears or uses, according to Robinette.

Scientists and engineers at the Army's Soldier Systems Center's laboratory in Natick, Mass., are using the technology to study ways to produce custom-made uniforms and to improve chemical protective equipment and body armor.

# DoD's CIO and SECDEF Special Assistant for C3I Matters, Speaks Out

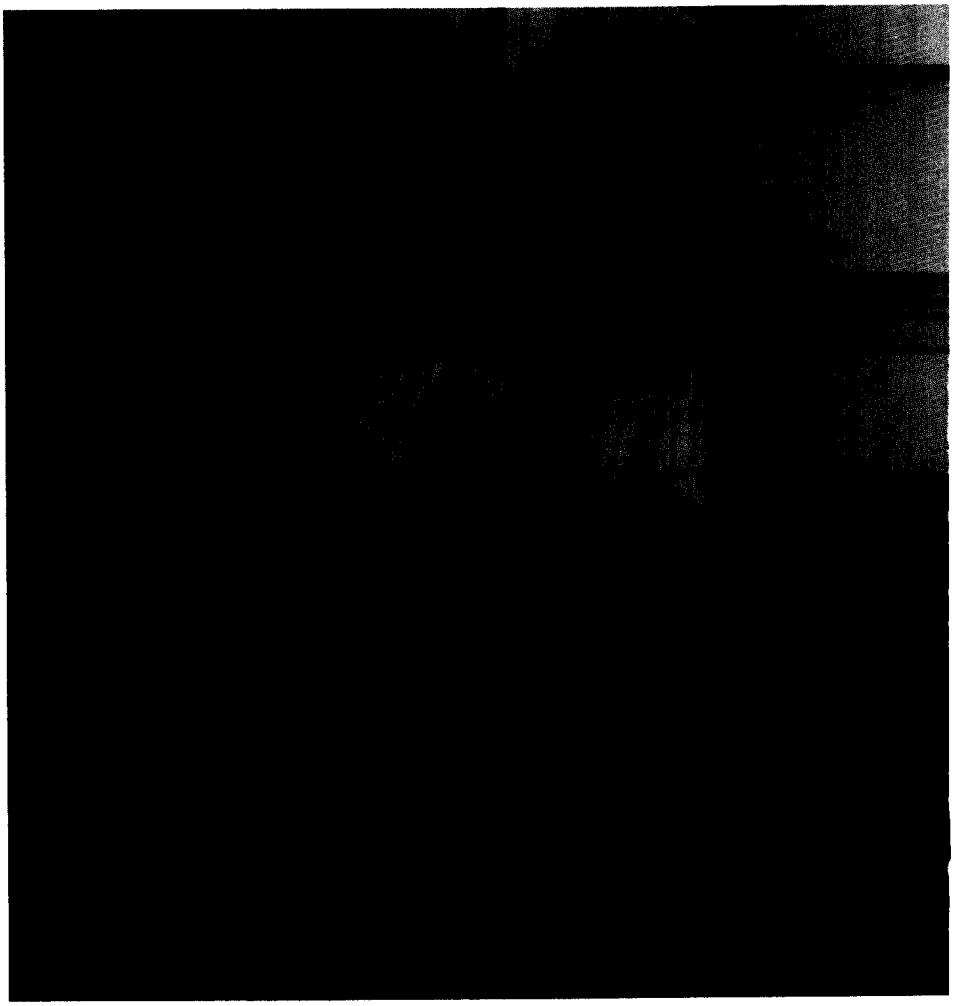
## Arthur L. Money Set to Help Lead DoD Into Y2K and Beyond

Technology is growing at an alarming rate. What is cutting edge today is often outdated tomorrow. The key to survival in this "cyber age" is the ability to adapt one's computer and information systems to ride the changing waves of technology instead of being swallowed up by them.

The man responsible for not only safeguarding, but improving DoD's information systems into the next millennium is the "new" Special Assistant to the Secretary of Defense for Command, Control, Communications, and Intelligence (C3I) Matters and DoD Chief Information Officer, Arthur L. "Art" Money.

The versatile Money took over his current position Feb. 20, 1998, and until very recently, continued to serve as the Assistant Secretary of the Air Force for Acquisition, a position he had held since January 1996.

With more than 33 years' experience, Money brings with him an impressive résumé as he works with other DoD leaders to improve the "flow of information" across the Services and revolutionize the way DoD does business with regard to acquisition. In this interview, *Program Manager* attempts to relay the challenges facing Money as DoD braces for Y2K and beyond.



DSMC's Air Force Chair Tony Kausal (right) interviews Money in his Pentagon office.

**Q**

*As the Air Force's former Chief Information Officer [CIO] and Assistant Secretary of the Air Force for Acquisition, how has your perspective changed now that you have been on the job for a little over a year?*

**A**

Since leaving the Air Force and joining OSD [Office of the Secretary of Defense], I have learned that the need for jointness and interoperability across the Department is even more important than I initially believed. The flow of information does not stop at organizational boundaries. Consequently, as DoD CIO I am working toward bringing everyone together to adopt common architectures, standards, and frameworks across all of DoD and ensuring an uninterrupted flow of information end-to-end.

**Q**

*Several Defense Reform Initiatives that received a fair amount of press dealt with extensive restructuring recommendations for the DoD's C3I office, including new missions. In response to that, in mid-1998 you*

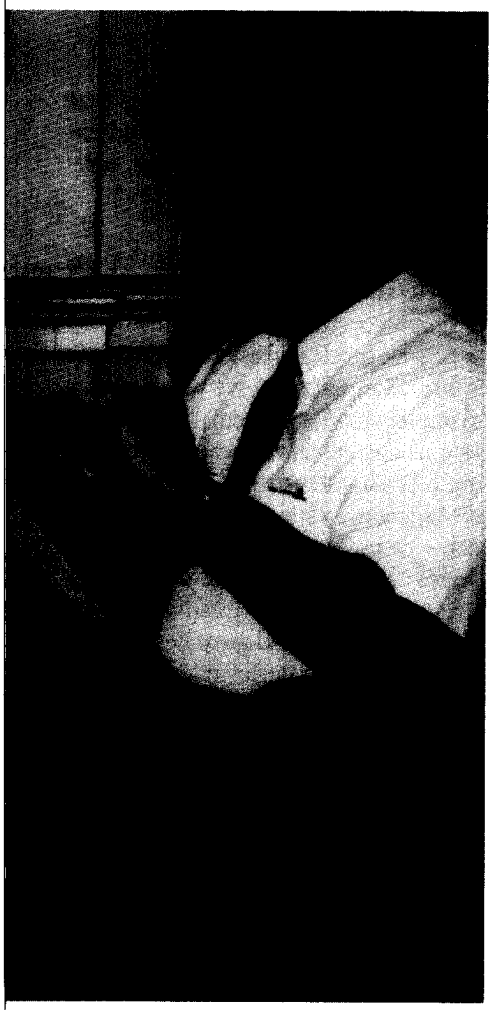
*A special thanks to DSMC professor, George Prosnik and DSMC Air Force Chair, Tony Kausal for their contributions to this article.*

Photos by Greg Caruth

*spearheaded just such a reorganization effort. Could you summarize the resultant key organizational changes for our readers? How is the new organization working?*

**A**

Indeed the Defense Reform Initiatives resulted in a great deal of change within C3I. Several of the existing C3I functions such as Year 2000, information protection and assurance, spectrum allocation, and electronic commerce were expanded, while at the same time, C3I received several new missions including critical infrastructure protection, space policy, and airborne reconnaissance oversight. A few of the major results of the changes in mission and the ensuing reorganization include greater attention and focus on the Year 2000 issue and the CIO function as a whole throughout the entire Department; the coupling of information assurance and critical infrastructure protection; and the alignment of all aspects of several functional areas (ISR [Intelligence, Surveillance, and Reconnaisance]; security; CIO; space and information). The restructuring of the organization and the development of our 10 goals have C3I as an organization moving in the right direction to lead the Department toward achieving Information Superiority.



**"Since leaving the Air Force and joining OSD, I have learned that the need for jointness and interoperability across the Department is even more important than I initially believed. The flow of information does not stop at organizational boundaries."**

**Q**

*What are your top Departmental priorities beyond Y2K?*

**A**

DoD has grown its networks from the ground up due to the strong institutional structure in place to support the 50-year-old military messaging system. Over the past five years we have seen an enormous growth in Commercial Off-the-Shelf [COTS]-based networks and computing capacity to the point that most primary functions ride this emerging infrastructure. Beyond Y2K, my highest priority is to put sufficient discipline into this global infrastructure to achieve Information Superiority and to provide a fully secure, reliable, interoperable computing and communications enabling capacity for everyone in DoD.

To aid in focusing our efforts to achieve information superiority, we have identified 10 goals within C3I. The first, of course, is ensure continuity of mission-essential DoD operations despite Y2K disruptions, and the remaining nine are:

- Implement effective programs for information assurance and critical infrastructure protection.
- Build a coherent global network based on efficient and effective DoD information architectures and procedures.
- Plan and implement a joint and combined end-to-end C3ISR and space integration.
- Establish a knowledge-based workforce within DoD.
- Establish policies and budget priorities that will lead to the reinvention of intelligence for the 21st century.
- Revise policies for information operations, security, and counterintelligence.
- Establish electronic commerce and business process change throughout the functional areas of DoD.
- Develop an advance technology plan for information superiority.
- Transform OASD(C3I) into a nurturing, caring organization that serves as a model team in attaining its goals.

**Q**

*Over the next three to five years, what do you view as the hottest IT [Information Technology] impacting DoD? How is your office "geared up" to assess and handle the increasing pace of technological change?*

**A**

Though the Department will be impacted by technological change, our focus is not so much on hot new technologies, but rather on the emerging operational requirements of the warfighter. There is no doubt, though, that we see

## ARTHUR L. MONEY

***Special Assistant to the Secretary of Defense for C3I Matters and DoD Chief Information Officer***

Arthur L. Money was appointed the Senior Civilian Official, Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) and Chief Information Officer of the Department of Defense February 20, 1998. May 24, 1999, his official title changed to Special Assistant to the Secretary of Defense for Command, Control, Communications, and Intelligence (C3I) Matters.

Money served as Assistant Secretary of the Air Force for Acquisition from January to May 1999.

He was President of ESL Inc., a subsidiary of TRW, before it was consolidated with TRW's Avionics and Surveillance Group, and Vice President and Deputy General Manager for the TRW Avionics and Surveillance Group. The group is internationally recognized for airborne electronic systems and technologies, including reconnaissance and intelligence systems and advanced integrated avionics.

Money has more than 33 years of management and engineering experience with the defense electronics and intelligence industry in the design and development of intelligence collection analysis capabilities and airborne tactical reconnaissance systems.

He is a graduate of San Jose State University, with a bachelor's degree in mechanical engineering. He received his master's degree in mechanical and electrical engineering from Santa Clara University.

As the Special Assistant to the Secretary of Defense for C3I Matters, Money is the principal staff assistant for Information Superiority. He provides overall policy and program guidance for DoD command, control, communications, computer, intelligence, surveillance, and reconnaissance activities; space and space systems; and information technology investments.

IT as a means to enhance the operational capabilities of DoD.

GNIE

For example, the Department has a major initiative underway to build a coherent Global Networked Information Enterprise [GNIE] based on efficient and effective DoD information architectures and procedures. The GNIE will provide the "information fabric" that brings the notion of a DoD enterprise and information superiority into reality, enabling the operational concepts of JV2010 [*Joint Vision 2010*]. GNIE policies, plans, and programs will embody the constructs that will create the computing model shift to information-centric operations/warfare. GNIE provides the means to structure the future of the Department's computing resources to achieve the reality of information superiority.

At the core of GNIE is the recognition of the pervasiveness and durability of distributed computing across DoD. Networked client/server (mid-tier) and Web-enabled architecture will define the core of the GNIE with the tenets of enterprise management, economies of scale, and information assurance governing its evolution. Thus the technologies in the following areas will play a large part in the success of the GNIE:

**Client/Server and Distributed Computing.** Though the technology may be considered "old hat stuff," it is clear that the new Web-enabled technologies are heavily dependent upon progress in the areas of distributed computing.

**Information Assurance/Public Key Infrastructure (PKI).** Public-key cryptography is fast becoming the foundation for online commerce and other applications that require security and authentication in an open network. The widespread use of public-key cryptography requires a public-key infrastructure to publish and manage public-key values. Without a functioning infrastructure, public-key cryptography is only marginally more useful than traditional, secret-key cryptography. Beyond PKI, the Department will pursue those technologies that provide a "Defense in depth" approach for mitigating risk.

**Web-enabled Services.** Services that allow the user to better locate and extract information "at any time, anywhere."

**Quality of Service (QoS).** The Department would prefer to avoid the solution of simply "overengineering the network" to achieve quick, consistent, and reliable information transfer –we would prefer to implement QoS systems features that give us cost-effective means of managing loss characteristics, avoiding and managing network congestion, shaping network traffic, and setting traffic priorities across the network. Though our strategies that take full advantage of COTS have provided great new opportunities, these strategies may not fill all the needs of the Department.

Current efforts have enabled the foundation for today's high-speed, secure information enterprise. Future information enterprise requirements will not be attainable unless we focus our research and development efforts. DoD must ensure that the sustaining R&D [Research & Development] base for the future information enterprise is a DDR&E/DARPA [Director, Defense Research & Engineering/Director, Advanced Research Projects Agency] priority – including enterprise control, intrusion detection, object-oriented databases, and other critical information technology areas.

One of the GNIE thrust areas will assist the Department in understanding the means to do so. One of the core products of this thrust area includes a report on critical technologies. The report will be available in the July 1999 timeframe.

Through the initiatives just discussed, we are striving to establish a foundation for the Joint Technical Architecture [JTA], DII Common Operating Environment [DII COE], system architectures, operational architectures, and ISR interoperability that will help enable the development of a knowledge-based workforce.

**Q**

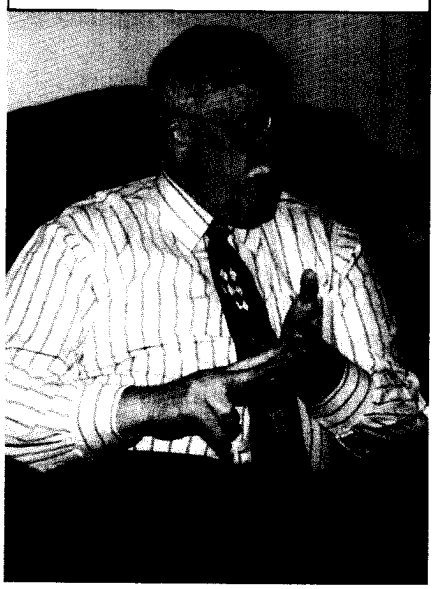
*Safeguarding the national infrastructure from cyber attack has become a recent high-visibility national priority. Your office plays a rather unique role dealing in this area, in coordinating DoD's efforts with activities such as the Commerce Department's Critical Infrastructure Assurance Office and the FBI's National Infrastructure Protection Center. Can you comment on how this relationship is working so far? What is the role of the recently formed Joint Task Force for Computer Network Defense?*

**A**

Exercises like Eligible Receiver and real-world events like Solar Sunrise have helped DoD recognize the necessity for a coordinated approach to defending its computer networks. One of the biggest questions left unanswered was "Who's in charge?" The Joint Task Force for Computer Network Defense [JTF-CND] was created to help answer that question and to ensure that DoD works and coordinates together as a unit, and not only as individual Services and agencies. The JTF-CND is the first DoD-wide organization that serves as the focal point for defense of computer networks and systems. It takes advantage of the existing intrusion detection capabilities of its four military service components, the DoD Computer Emergency Response Team, and the unified commands and agencies. The JTF receives intrusion data from these DoD sources and then fuses this critical information along with ongoing operational missions, intelligence, and technical data into a "big picture" synopsis of the incident. The JTF works at the global (strategic) level and is the Department's primary interface with the FBI's National Infrastructure Protection Center.

With respect to critical infrastructure protection, we have created within DoD a Critical Infrastructure Protection Office [CIPO] to interface and work very closely with the national-level Critical Infrastructure Assurance Office [CIAO]. For example, CIPO has been a key player in the development of the National Plan. We have provided DoD assets to help staff the office, e.g., we have a defense liaison person on the CIAO staff and a person to work on the Expert Review Team. Although these organizations and relationships are only in the infancy stage, we feel like we're headed in the right direction and have positive and productive activities ongoing.

**"I am working toward bringing everyone together to adopt common architectures, standards, and frameworks across all of DoD, and an uninterrupted flow of information end-to-end."**



**Q**

*Because of their obvious potential payoffs, COTS products are being emphasized for DoD software-intensive systems. But use of such products can have a downside, notably in integration, quality, and support risks. Additionally, COTS products, being readily available, can be exhaustively analyzed by a potential adversary and thus may increase susceptibility of systems to so-called cyber attacks. Do you have any guidance as to how acquisition offices can achieve some balance in this area?*

**A**

Exploiting COTS computer software products is one of the first software engineering principles listed in the DoD Acquisition Policy, 5000.2-R, and we do promote it in the oversight of major Automated Information Systems [AIS] acquisitions. It also gives us state-of-the-art capabilities quickly and allows us to move toward commercial best practices more easily than through the development of our own applications. Additionally, interoperability of business processes, e.g., Electronic Business/Electronic Commerce, is aided by the use of COTS products.

However, many programs encounter major problems when they try to modify their COTS products. Before starting a COTS software acquisition, program managers should do sufficient market research to determine whether a COTS package is available that can meet documented system requirements without modification. COTS software can be surrounded with functional layers that modify its inputs and outputs, but COTS software should rarely be modified.

Support, integration, and information assurance are also COTS issues that we are grappling with. There is guidance in the *Defense Acquisition Deskbook* and in various DoD-sponsored Web sites on these topics, and my office recently committed to the Department of Defense Inspector General to develop guidance in the next six to 12 months on the appropriate use of COTS software in major AIS acquisi-

tions. At a minimum, that guidance will address such issues as modification of COTS software, rights to modify and maintain the software and related documentation, ownership of source code, and other lessons learned from ongoing acquisitions of COTS for major AIS.

Regarding information assurance, we are engaged in several initiatives that address overall security concerns, including those associated with COTS software. The Vulnerability Assessment Program provides expert analysis and testing of systems and provides program managers detailed citations of areas of actual penetration by professionals, and identifies solutions to close that penetration path. The Department has also initiated the Defense Information Assurance Program, which can aid the program manager to help understand security methods in the dynamic global information environment. This program provides a common specification language, evaluation methodology, and understanding of results for information assurance issues.

We have also found that many of our weaknesses/vulnerabilities are more likely to be as a result of inconsistent and incorrect product implementation and operation rather than inherent product vulnerabilities. Also, generally speaking, COTS products enjoy a widespread and active user base that is quick to identify and report deficiencies, faults, or vulnerabilities to the vendor. Many vendors are quick to react to discovered vulnerabilities and provide rapid patches/fixes to the user base.

Currently, we have IT policy undergoing review with change in several areas in mind. Certainly addressing the COTS issue is but one of these. It is paramount that we provide guidance for all to follow in this shared risk world so that we may be able to adequately protect our DoD enterprise from vulnerabilities.

**Q**

*In one of DoD's streamlining initiatives, the venerable MAISRC [Major Automated Information Systems Review Council] was disestablished in July 1998 and replaced by the Information Technology OIPT [IT-OIPT]. How has this new IPT-based process been working?*

**A**

This question gives me an opportunity to address an apparent misperception about the demise of the MAISRC. Too many people apparently believe that disestablishing the MAISRC signaled a lessening in oversight of major AIS by the DoD CIO. That is not the case. The rules that applied previous to MAISRC elimination (i.e., DoD Directive 5000.1 and DoD 5000.2-R) continue to apply. My office continues to oversee the major systems almost exactly as we did in the past. I continue to be the Milestone Decision Authority for major AIS, and we have held as many IPT meetings and issued as many, if not more, Acquisition Decision Memoranda as we did before the MAISRC was disestablished.

The "new IPT-based process" is working well because it is the same process we have followed since 1995 when the Secretary of Defense directed that all acquisition and oversight activities be conducted through the IPT process. At that time, my office and the Office of the USD(A&T) collaborated on a guidance document called "Rules of the Road: A Guide to Conducting IPT Meetings," which the Department has been following since that time. The IT OIPT was essentially a name change from the previous MAISRC OIPT that had existed for a number of years. When the IT OIPT cannot resolve an issue, my Deputy CIO or I hold a CIO review to resolve the issue.

Having said that, we are in the process of changing the focus of our oversight process to better implement the Clinger-Cohen Act and related IT reform legislation. We are building on the success of the Y2K effort by replacing system-focused oversight with a process that will require each IT investment to be placed into a mission or functional thread or "portfolio."

Under this new process, the DoD Deputy CIO will evaluate IT investments based on their value to the mission or functional thread of which they are a part. This should allow us to delegate more acquisition authority for individual systems to Component CIOs.

**Q**

*In response to the National Research Council's Fall 1996 report on Ada, DoD is taking a "hands-off" position on mandating use of specific programming languages, including Ada. However, by some estimates, some 50 million lines of Ada code, primarily in weapons and C3I systems, still remain in the DoD inventory and need to be supported. What plans exist for sustaining this critical legacy code?*

**A**

On April 29, 1997, the Department issued policy that requires programming language selections to be made "... in the context of the system and software engineering factors that influence overall life cycle costs, risks, and potential for interoperability." The guidance explicitly states that Ada should be one of the languages considered in this decision process, but does not require that Ada be selected. Thus, DoD policy now places all programming languages on equal footing, where capability to provide the best support to the mission requirement will drive the solution selected, not a "one size fits all" mandate.

Ada is a proven software language for warfighting and battlefield management applications. It is excellent for safety-critical systems. DoD is confident that an engineering approach to the programming language selection process will result in continued use of Ada for those applications that require its unique strengths.

Past DoD investments in this technology have facilitated Ada development, standardization, and the creation of a self-sustaining infrastructure. Today, the Ada Resource Association, a consortium of Ada compiler and tool vendors, has assumed many of the functions performed in the past by DoD's Ada Joint Program. Therefore, Ada development and support tools and resources should continue to be available.

Thus, DoD believes that Ada as a technology is here to stay. But like almost every other technology, it must evolve,

and its long-term viability will be ultimately determined by the marketplace. In that context, future DoD decisions on building/maintaining/modernizing any code will continue to be made considering the marketplace, life cycle costs, system requirements, and other factors.

**Q**

*Press reports continue to note persistent shortages of IT workers in the commercial sector. DoD has a particularly difficult problem in today's economy of retaining skilled high-technology workers. What are DoD's plans or initiatives to address long-term retention of DoD employees with critical technical skills?*

**A**

The Department is pursuing a number of initiatives to acquire and retain technical personnel to effectively and efficiently carry out its diverse technology-based missions.

A DoD IPT was recently convened to examine issues pertaining to the training and retention of DoD Information Technology Management [ITM] personnel. The IPT's findings indicate the Department must create certain career management mechanisms to satisfy its training and retention goals.

Some of the team's recommended retention initiatives include:

- Establishing a central database of DoD ITM personnel.
- Identifying and maintaining a core ITM workforce capability within the Department.
- Creating a specialty skill tracking system with pay incentives, while allowing further professional development and career opportunities.

Other initiatives that are being reviewed for further study include:

- Establishing programs to acquire technical personnel with agreements to pay for civilian advanced education and technical training, with retention stipulations that would require the employee to stay within the Department of Defense for a set number of years.
- Establishing fellowship/cooperative programs with leading high-tech industry organizations.
- Creating special pay categories for hard-to-fill IT positions.

**"Though the Department will be impacted by technological change, our focus is not so much on hot new technologies, but rather on the emerging operational requirements of the warfighter. There is no doubt, though, that we see IT as a means to enhance the operational capabilities of DoD."**

An adequately trained and experienced ITM workforce is a critical component in carrying out the Department's daily operational and warfighting missions. Therefore, the Department will do whatever it takes to retain its ITM personnel. Some of the DoD Components currently are recruiting at local colleges and universities, using special pay incentives, and offering educational opportunities to attract and retain IT technical expertise.

**Q**

*In April 1998, Secretary Cohen, as part of his so called "912 Report to Congress," noted that, in order to address interoperability issues, you and the Under Secretary of Defense (Acquisition & Technology) would "examine ways to establish a joint command, control, and communications integrated system development process to guide design and achieve integrated systems development." What is the status of this effort? What changes can our readers expect to see in procurement and acquisition processes?*

**A**

Section 912 of the FY 1998 Defense Authorization Act included several requirements related to acquisition. As you cited, Secretary Cohen's report to Congress covered some of these requirements. Specifically, the Secretary noted that "joint operations have been hindered by the inability of forces to share critical information at the rate and at the locations demanded by modern warfare." To address this problem, a Joint Command and Control Acquisition Study Group [JC2ASG] was established by the Under Secretary of Defense (Acquisition & Technology) [USD(A&T)] and me, composed of the commanders of the Services' Command and Control [C2] systems development/acquisition centers.

The three commands are the Army's Communications-Electronics Command [CECOM], the Air Force's Electronic Systems Center [ESC], and the Navy's Space and Naval Warfare Systems Command [SPAWAR]. These commands, together with inputs from the staffs of USD(A&T), ASD(C3I), DISA, Joint Staff, and Service C4I Chiefs, examined processes, management structures, and forums to implement joint C2 Integration/Interoperability [I2] among the Services to ensure that:

- Future efforts will be "Joint First."
- Joint C2I2 will be advanced at every opportunity.
- I2 opportunities discovered through joint experimentation and innovation will be exploited to advance CINCs' [Commander in Chief] C2 capability.

Although the JC2ASG report out is still being finalized, efforts are already underway under a Memorandum of Agreement [MOA] signed by the three Commanders and me in October 1998 to establish the Joint C2I2 Group [JC2I2G]. Under the JC2I2G MOA, three CINC Integration Program Offices [CIPO] and a Joint Forces Program Office [JFPO] have been stood up and are expected to be fully staffed toward the late summer or early fall 1999. The CIPOs are staffed with personnel from each of the three commands, while the initial JFPO is being co-hosted by the CIPO at SPAWAR. Cognizance for the CINCs has been divided up among the CIPOs, with the JFPO to maximize common C2I2 solutions. DISA has agreed to support the efforts of the JC2I2G. Discussions are also underway with USACOM [U.S. Atlantic Command] under its new mission as CINC Integrator, and hence will be the focus for the JFPO. Initial visits to each of the CINCs have been done, and an initial set of problems is being examined.

The JC2I2G is a complement or supplement of existing capabilities from my organization, DISA, Joint Staff, or other organizations chartered to assist the CINCs. The reporting and issue resolution processes are being established. As a minimum, the JC2I2G will have quarterly IPRs [In-Process Review] with Dr. Gansler and me. The first of the IPRs was recently held with the next expected in the July timeframe. The funding for the CIPOs is initially being taken out of existing budgets and will capitalize on existing support staffs collocated at various CINC facilities. The JC2I2G will make use of the existing interconnection of their test beds, and in the future to both the Joint Interoperability Test Command, and eventually to the Joint Battle Center located at USACOM.

**"Before starting a COTS software acquisition, program managers should do sufficient market research to determine whether a COTS package is available that can meet documented system requirements without modification."**

The CIPOs will also make use of the Architecture products (e.g,. CINC Architectures, JTA, DII COE) being developed with assistance from, or under the direction of, my organization's Information Integration and Interoperability Directorate. The I3 Directorate is also determining how the JC2I2G will fit into the reengineering of the DoD process for information interoperability.

**Q**

*You earlier mentioned "GNIE." A steering group for this effort has now been formed. What's the relationship of GNIE on existing initiatives like the JTA and the COE?*

**A**

The GNIE will use and/or incorporate any and all initiatives that deal with the information enterprise within the Department. Though this incorporation of initiatives can only be accomplished in stages given the vast scope of the DoD enterprise, certain initiatives will be incorporated in the initial stage of GNIE. The JTA and the COE are examples. The policies and strategies of GNIE will incorporate the JTA and its concepts of compliance with standards. The JTA also forms one of the three architecture views of the DoD information enterprise architecture and thus of the GNIE. The other two are the Joint Operational Architecture and the Joint Systems Architecture. The concept of the COE will be incorporated into the physical/systems architecture of the GNIE. Though this concept of the GNIE COE may be somewhat different than the current COE concept and strategy, the COE will be an important construct in the overall structure of the information enterprise.

**Q**

*There is a short list of generic acquisition "best practices" in the current DoD 5000.2-R. Given the systemic problems DoD has encountered regarding acquisition of software-intensive systems, it seems a more specific listing of software acquisition best practices might indeed be warranted. What are your thoughts on this?*

**A**

On May 1, 1997, the USD(A&T), the USD(Comptroller) and the DoD CIO

jointly signed a memorandum that contains best practices for software-intensive systems, based on the requirements of the Clinger-Cohen Act and related IT reform legislation. Specific guidance on all aspects of the acquisition process is contained in the *Defense Acquisition Deskbook* [DAD]. Under the major rewrite of the DoD 5000 series a few years ago, it was decided that DoD Directive 5000.1 and DoD 5000.2-R would only contain high-level, mandatory policies and that more detailed, "how to," discretionary guidance and best practices would be contained in the DAD.

As I mentioned earlier, the DAD has numerous references to COTS and custom software acquisition, at the DoD-wide and Component-wide levels. The DoD Components, OSD offices, and the Software Executive Institute also make available on the Internet various tools and publications that contain best practices for mitigating the risks of software acquisitions. As I stated previously, we plan to issue more specific guidance on the acquisition of COTS software in the near future.

**Q**

*What is the best advice you were ever given? What is the worst?*

**A**

The best advice I was ever given was, "If it's worth doing – it is probably going to be difficult, but it is worth doing well; and if it is a challenge – I'll enjoy it." I have never received any bad (worst) advice – maybe some has been "out of context."

**Q**

*What mark do you want your leadership of C3I to leave? How do you want to be remembered when your title becomes, "former DoD CIO?"*

**A**

The mark I would like to leave is one of interoperability. I would like to be remembered for having achieved interoperability or at least having laid the foundation for achieving interoperability across the Department of Defense and across all combined (allies') operations.

**Editor's Note:** President Clinton nominated Money May 13 as Assistant Secretary of Defense for Command, Control, Communications and Intelligence (C3I). His nomination is now before the Senate for confirmation.

## DSMC Hosts Turkish Visitors

Three representatives from the Turkish Ministry of National Defense (MND) visited the Defense Systems Management College (DSMC) May 27 for a tour of the facilities and briefing/overview of the college's mission, capabilities, and academic offerings. Pictured from left: Army Col. Joseph Johnson, Dean, Division of College Administration and Services, DSMC; Col. Ersin Ozdil, Department Chief, MND; Rich Reed, Provost and Deputy Commandant, DSMC; Maj. Gen. Salih Cetinkaya, Turkish Air Force, Assistant Under Secretary for Economy and Technology, MND; Fehmi Kirkoglu, Engineer, MND; Tim Shannon, Dean, Faculty Division, DSMC.

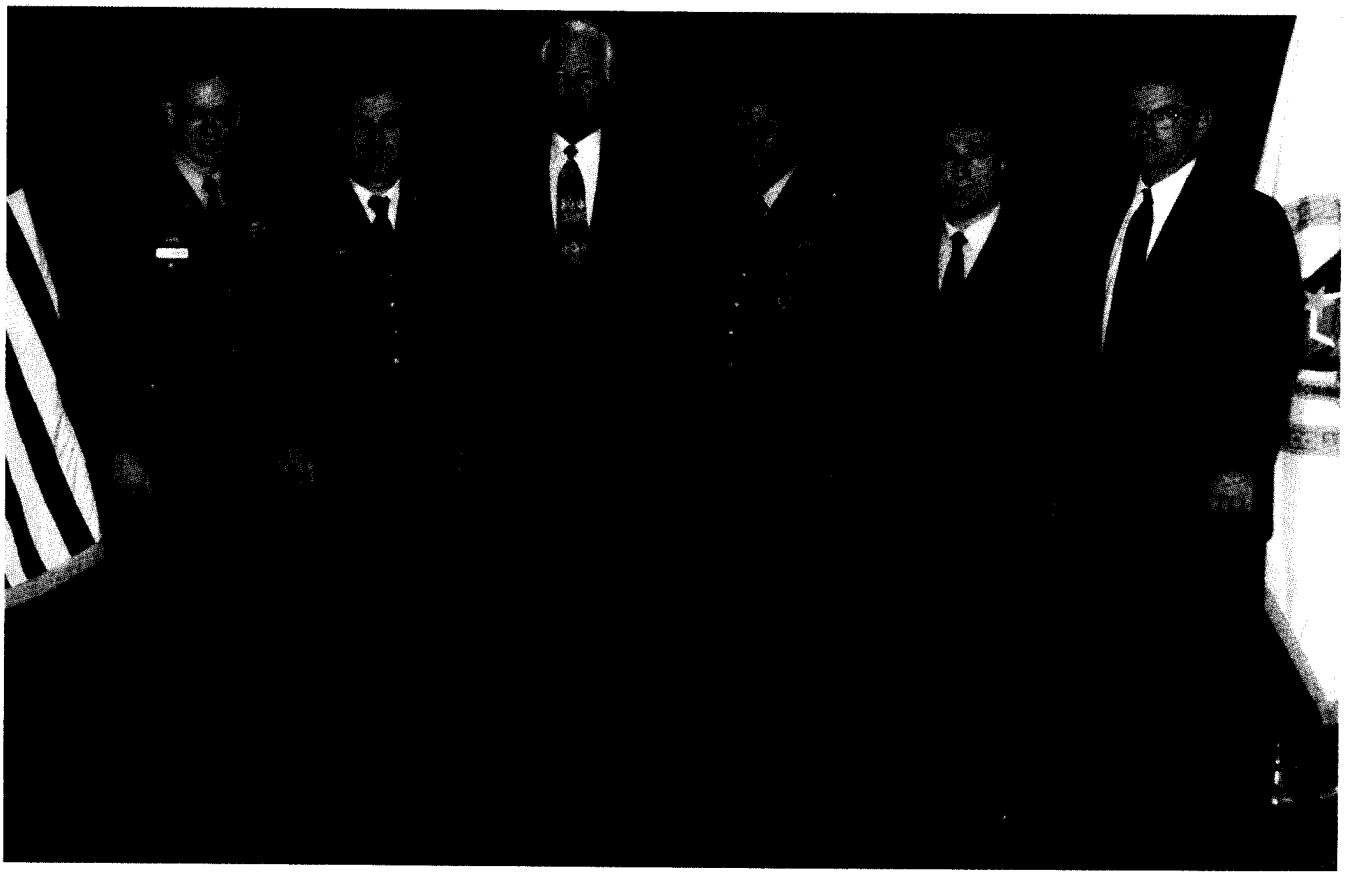


Photo by Richard Mattox

U.S. ARMY PUBLIC AFFAIRS NEWS RELEASE

# Technology Improves Warfighters' Logistics Lifeline

GERRY J. GILMORE

WASHINGTON – Napoleon Bonaparte was as much defeated by inadequate logistics as by the Czar's "scorched earth" policy during the French emperor's invasion of Russia in June 1812.

The 500,000-man French invasion force (half-composed of allied troops) wouldn't be able to live off the land as in past campaigns. The Russians removed most of the food and crops in advance of Napoleon's juggernaut. So, the invasion force ultimately depended on a hundreds-of-miles-long supply line of heavy wagons subject to breakdowns and immobilization due to bad weather and poor roads.

As Napoleon's troops tramped deeper into Russia, inclement weather caused the supply wagons to sink axle-deep in mud. There was scant feed for the beasts of burden that pulled the wagons. Horse and oxen died by the thousands. Sufficient quantities of food, clothing, and other supplies lay far in the rear of Napoleon's spearhead forces.

The man who had once said an army marches on its stomach soon couldn't feed – and properly clothe – his soldiers. Napoleon did reach Moscow in September, but he couldn't hold it – there were no supplies there for his emaciated forces. Reduced by more than half, the French army departed Moscow in October, and melted away during its retreat. The seemingly endless steppes and brutal Russian winter – and suffering and starvation caused by inadequate supplies – combined to defeat the French emperor's bid for continental domination.

Lessons learned from this 19th-century military logistics debacle still carry weight today, said Mark J. O'Konski, the executive director of the U.S. Army Logistics Integration Agency [LIA], who noted that military logistics is the art and science of equipping and supplying armies. Formed in 1995 as a field operating agency following an Office of the Deputy Chief of Staff for Logistics reorganization, LIA assesses logistics effectiveness; integrates logistics systems and practices; researches, develops, and tests new technology and business practices; manages strategic planning for Army logistics; and improves joint interoperability. LIA is located in Alexandria, Va., and New Cumberland, Pa.

During his Russian campaign, Napoleon forgot his own dictum about supply, said O'Konski.

"If military logistics is done well, it is a significant combat multiplier," he said. "If it is not done well, it can lead to disaster. There is an old saw: 'For want of the nail, a shoe was lost; for want of a shoe, the horse was lost ...'

"Ultimately, the war was lost, all for want of a nail. Logistics is that important to warfighting," he said.

Today's Army logisticians use technology to solve complex issues, according to O'Konski. During Operations Desert Shield and Storm, the Army sent tons of supplies to the desert, he said, but there was a problem. Way too much time was expended to open shipping containers to discover what was inside them.

Computerized electronic devices now enable logisticians to identify and "track" military shipments made the world over, said O'Konski.

"Things have changed significantly in military logistics [since Desert Storm], and a lot of that change is powered by the Information Revolution," he said. "Today the Army has 'total asset visibility.' That means, that for over 99 percent of all reportable inventory, we know, in real time, where it is and what condition it is in."

O'Konski said technology is helping military logisticians in other ways, too. Bulky technical manuals for military equipment, which once used "masses of paper," he said, are now contained on 130 lightweight,

portable compact disks for everything in the Army's inventory.

"Velocity management" logistics initiatives, led by the U.S. Army Combined Arms Support Command at Fort Lee, Va., greatly reduce resupply response times, order-ship times, and inventory levels, said O'Konski. One of the keys of velocity management, he said, is a distribution-based logistics system, where customers only order what they need, rather than stockpiling mountains of supplies.

"In a sense," he said, "the supply pipeline becomes the supply warehouse."

The Army "has done a tremendous amount to make logistics much more efficient, and hopefully, more effective than it was in the past," said O'Konski. However, he said, there is a caveat to that.

"We're becoming continually more efficient in garrison by using distribution-based logistics. But, when we go to war, we revert back to the old ways, [which is] a supply-based, 'iron mountain,' redundant (more than what is needed) stockage system, so warfighters can have assurance that adequate logistical support will be there."

Circumventing this logistical "old-think" requires enlightened self-discipline, said O'Konski.

"For two-hundred-some years, the Army has used a supply-based logistics concept," he said. "Warfighters are used to having redundant stock; logisticians are used to ensuring they can meet warfighters' requirements.

"Some of these behaviors are based on previous failures of the old supply system. If a soldier requisitioned a part and didn't receive it in a reasonable time, the habit became multiple requisitions of the same item. So, we are working through a lot of that."

Revolution in Military Logistics initiatives under development, to include single stock fund, National Maintenance Management, battlefield distribution doctrine, and the Global Combat Service Support Army system are programs [that] will take Army logistics into the 21st century, said O'Konski.

"These programs will ride on the 'bedrock' of total asset visibility [and] process redesign through velocity management ... making us much more comfortable ... [in relying] on distribution-based logistics during wartime," he said.

The "Little Corporal" would have been intrigued.

**Editor's Note:** Information about the Russian campaign of 1812 provided by George F. Nafziger's *Napoleon's Invasion of Russia*, and other sources. This information is in the public domain at **http: www.dtic.mil/armylink/news** on the Internet.

# Accelerating the Revolution — A Week Of Intense Activity

## Cohen Kicks Off ALR Week, Gansler Presents Top Teams with David Packard Awards

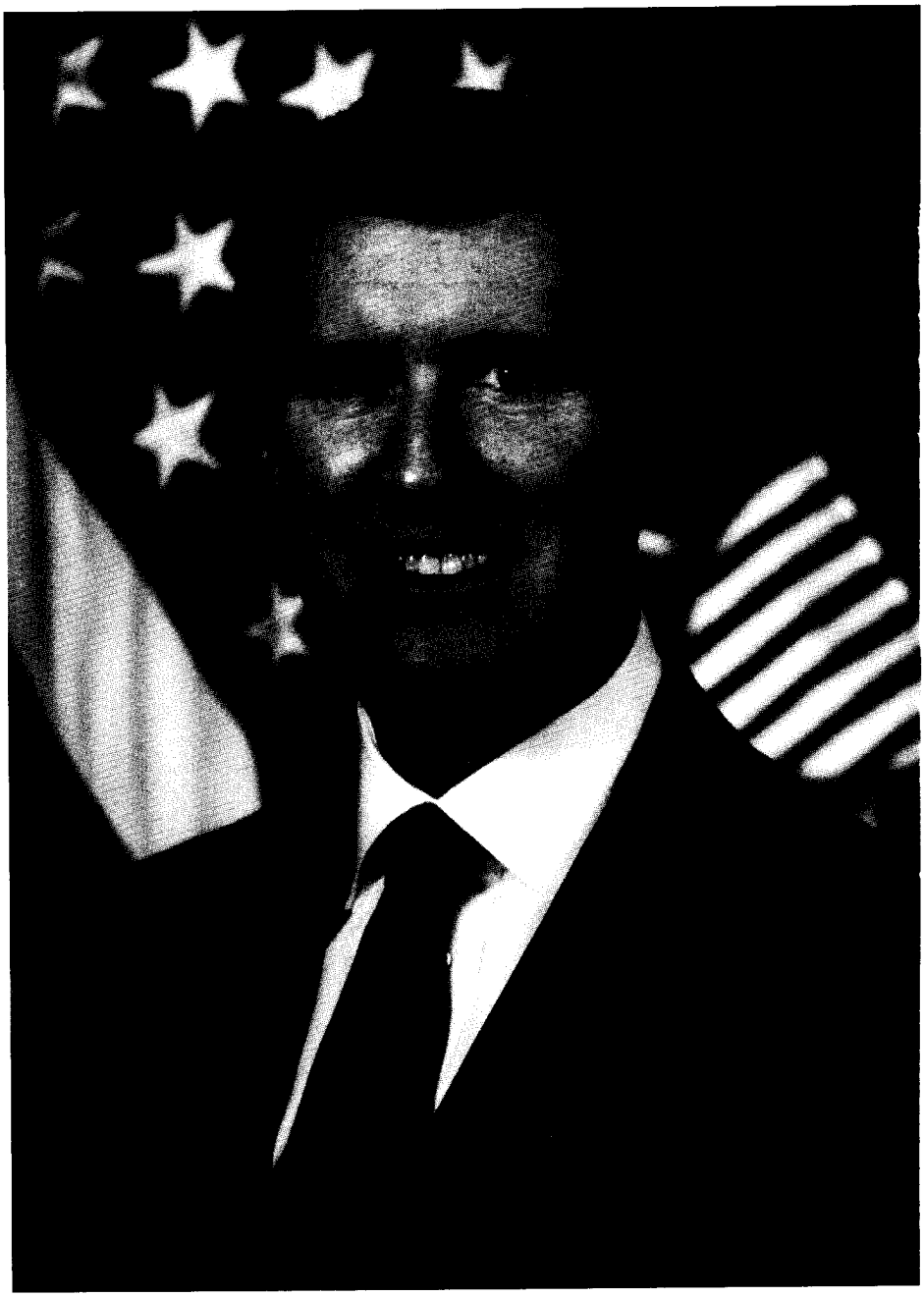
C. TYLER JONES

Defense Secretary William S. Cohen kicked off Acquisition & Logistics Reform (ALR) Week June 8 at the Pentagon by challenging the acquisition and logistics workforce to "be bold, innovative, and imaginative."

### Sustaining, Sharpening That Decisive Edge

Joined by Under Secretary of Defense (Acquisition & Technology), Dr. Jacques S. Gansler and Chairman of the Joint Chiefs of Staff, Army Gen. Henry H. Shelton, Cohen said this is a special week because, "We celebrate who you [the acquisition and logistics workforce] are and we celebrate what you do, sustaining and sharpening that decisive edge on behalf of the safety of our men and women in uniform — on behalf of the security of the nation."

This year's ALR Week, June 7-11, brought together acquisition and logistics professionals at all levels to assess ongoing reform initiatives and determine ways to accelerate the actual implementation of DoD's acquisition reform initiatives. Fittingly, the theme selected for ALR Week was "Accelerating the Revolution" — a theme that Gansler said he personally was involved in helping to select.



DoD photos

*Jones is editor,* Program Manager *magazine. He received a degree in Communications Studies from the University of North Carolina-Chapel Hill and was the 1997 Military District of Washington photojournalist of the year.*

**"We must stay ahead of the technological power curve ... We can no longer afford a 15-year acquisition cycle when the comparable commercial market can allow us to field equipment ... in less than half that time."**

**—Army Gen. Henry H. Shelton**
**Chairman, Joint Chiefs of Staff**

Announcing ALR Week in a Feb. 26 memorandum, Gansler said, "We must emphasize the day-to-day application of our initiatives while training as we work – as a *team*." All across the nation, the DoD acquisition workforce ceased their normal operations for one day and focused on acquisition and logistics reform initiatives. Commanders and managers at all levels planned and conducted a full day's activities, designed to be consistent with the needs of their individual organizations.

Activities ranged from case studies, discussions of lessons learned, panels and speeches, to classes, field trips, and simulations. The Acquisition Reform Communications Center (ARCC) provided a package of training materials via the Internet that could be used to supplement or add focus to each organization's training program.

During and after the Kick-Off Ceremony, an "OSD Acquisition and Logistics Reform Event" took place in the Pentagon courtyard, featuring a live Webcast and satellite broadcast of the June 8 ALR Week opening ceremony, as well as interactive video chat sessions with senior leaders in the acquisition and logistics community. An updated ALR Week Web site at **http://www.acq.osd.mil/alr-week** provided information on 41 government and industry exhibits, 30 scheduled presentations, training materials for ALR Week activities, and an archive featuring stored video events from last year's activities. Visitors to the site could also link to the Military Departments, Defense Agencies, and the Office of the Secretary of Defense for information on each Service or Agency's planned ALR Week activities.

An Executive Panel rounded out the day's activities with Lee Buchanan, Assistant Secretary of the Navy for Research, Development and Acquisition; Air Force Gen. George T. Babbitt, Commanding General, U.S. Air Force Materiel Command; Army Gen. John G. Coburn, Commanding General, U.S. Army Materiel Command; Stan Z. Soloway, Deputy Under Secretary of Defense for Acquisition Reform and Director, Defense Reform; and Roger Kallock, Deputy Under Secretary of Defense for Logistics.

**"We look to you, the proven professionals, to dedicate yourselves anew, to continue to build acquisition and logistics communities that are as flexible and agile as the forces you're supporting ..."**

**—William S. Cohen**
**Secretary of Defense**

## David Packard Award for Acquisition Excellence

Gansler presented the David Packard Award for Acquisition Excellence to five highly deserving teams. The Packard award recognizes the efforts of Department of Defense civilian and military members, organizations, groups, or teams who have made highly significant contributions that demonstrate exemplary innovation and best acquisition practices.

The 1999 recipients (pp. 22-23) are:

- U.S. Marine Corps Amphibious Assault Vehicle Reliability and Maintainability/Rebuild to Standard Team
- U.S. Army Joint Program Office for Biological Defense Portal Shield Team

# 1999 DAVID PACKARD EXCELLENC

## Gansler Honors Five Teams a

**Defense Logistics Agency**
**Defense Contract Management Command**
**St. Louis Plant Clearance Team**

THE DEFENSE CONTRACT MANAGEMENT COMMAND ST. LOUIS PLANT CLEARANCE TEAM REENGINEERED DEMILITARIZATION PROCESSES, DISPOSED OF $55M OF GOVERNMENT PROPERTY, AND IMPLEMENTED PAPERLESS TRANSACTIONS WITH DEFENSE CONTRACTORS IN SUPPORT OF MANAGEMENT REFORM MEMORANDA TWO AND FIVE.

**▼ United States Air Force**
**437th Airlift Wing (AMC)**
**Charleston AFB, S.C.**
**Hunley Park Housing Renovation Team**

THE HUNLEY PARK TEAM COMBINED AN ACCELERATED, BEST VALUE APPROACH WITH THE INNOVATIVE USE OF MODEL UNITS AND OCCUPANT SURVEYS TO ACHIEVE USER-ORIENTED QUALITY IMPROVEMENTS TO HOUSING AT CHARLESTON AIR FORCE BASE.

**▲ United States Marine Corps**
**Amphibious Assault Vehicle (AAV)**
**Reliability and Maintainability/Rebuild to Standard Team**

THE AMPHIBIOUS ASSAULT VEHICLE RELIABILITY AND MAINTAINABILITY/REBUILD TO STANDARD TEAM REDUCED TOTAL OWNERSHIP COST BY $550M USING CONCURRENT ENGINEERING, INTEGRATED PRODUCT TEAMS, COMMERCIAL QUALITY ASSURANCE TECHNIQUES, AND EARNED VALUE MANAGEMENT AT UNITED STATES MARINE CORPS DEPOT ACTIVITIES.

Photos by Richard Mattox and Army Sgt. Richard Vigue

# IN ACQUISITION AWARD WINNERS

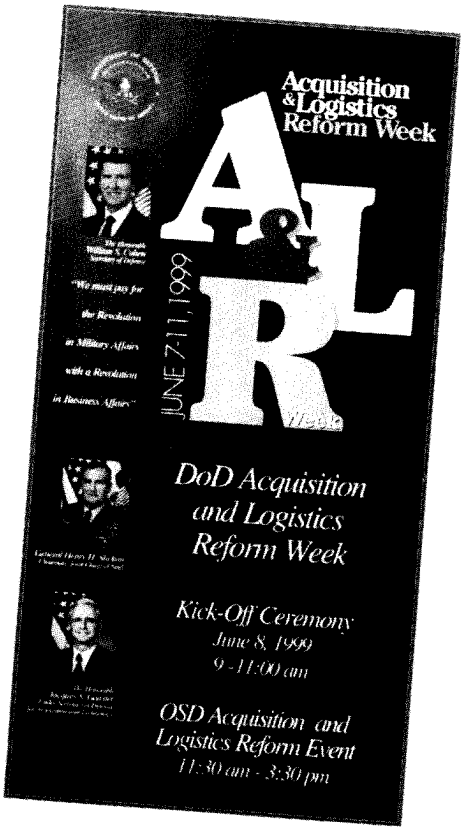
## June 8 Pentagon Ceremony

**United States Air Force**
**Evolved Expendable Launch Vehicle (EELV)**
**Program Team**

THE TEAM UTILIZED EARLY INDUSTRY INVOLVEMENT, PARTNERING AGREEMENTS, PROACTIVE USE OF COST AS AN INDEPENDENT VARIABLE, AN "INSIGHT VS. OVERSIGHT" APPROACH, AND COMMERCIAL INDUSTRY'S BEST BUSINESS PRACTICES TO ACHIEVE A 30-PERCENT LIFE CYCLE COST REDUCTION OVER CURRENT SYSTEMS.

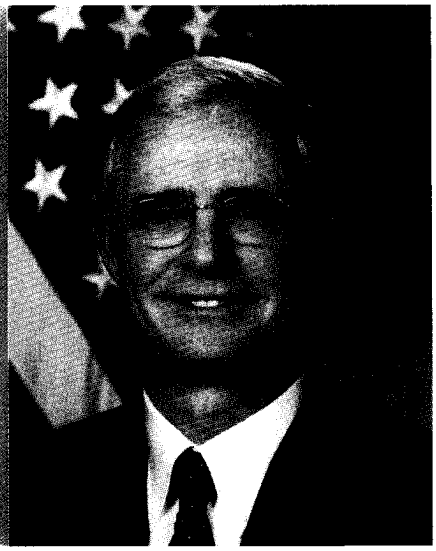
**United States Army**
**Joint Program Office for Biological Defense**
**Portal Shield Team**

USING MODULAR DESIGN AND A COMMERCIAL OFF-THE-SHELF APPROACH, THE TEAM IMPROVED SYSTEM SUPPORTABILITY AND REDUCED OWNERSHIP COSTS.



**"We have to focus on the modernization of our logistics system itself, to cut the cost, the infrastructure, and the cycle time ..."**

**—Dr. Jacques S. Gansler USD(A&T)**



- U.S. Air Force 437th Airlift Wing (AMC), Charleston AFB, S.C., Hunley Park Housing Renovation Team

- Defense Logistics Agency, Defense Contract Management Command, St. Louis, Mo., Plant Clearance Team

- U.S. Air Force Evolved Expendable Launch Vehicle (EELV) Program Team

Of the winning teams, Shelton said, "I am very proud to be a part of a Department that recognizes the fact that we have to make some changes, that we've got to reform some of the systems that we have, both in terms of logistics, as well as in acquisition, and, in fact, not only recognizes it, but is in the process of aggressively pursuing that reform.

"I think the Packard award exemplifies the best of these efforts, recognizing those that have made significant contributions to the Department, which demonstrated the outstanding innovations in acquisition practices. My congratulations this morning to each of the winners who have set an enviable standard for all of us to follow."

### Focus On the Warfighter

Shelton said, "We must never lose sight of the fact that the focus of acquisition and logistics reform must be on supporting the warfighter, as Dr. Gansler has said, and that is to put advanced technology into the hands of the greatest sailors, airmen, Marines, soldiers, and Coast Guardsmen that the world has ever seen ... We must stay ahead of the technological power curve ... we can no longer afford a 15-year acquisition cycle when the comparable commercial market can allow us to field equipment of this nature in less than half that time."

Calling the acquisition and logistics workforce "the force behind the force," Cohen said, "We look to you, the proven professionals, to dedicate yourselves anew, to continue to build acquisition and logistic communities that are as flexible and agile as the forces you're supporting; to continue to put in the hands of our military the latest technologies at the greatest speed and the lowest cost; to continue to build a workforce trained and educated to embrace the change and challenges of a world that's rushing at us with astonishing velocity."

**"We must never lose sight of the fact that the focus of acquisition and logistics reform must be on supporting the warfighter ..."**

**—Army Gen. Henry H. Shelton Chairman, Joint Chiefs of Staff**

Following Cohen, Gansler spoke of the importance of events like the ALR Week activities. "To ensure our reform efforts are successful ... it is vitally important that we take time to discuss ... ongoing acquisition and logistics reform initiatives." He also named three urgent priorities for DoD's acquisition community over the next few years.

- First and foremost, he said, is to recognize "that what we're doing is for the warfighter."

- The second, "and clearly the one that affects all of us, is to accelerate, broaden, and institutionalize our acquisition and logistics reform efforts in order to optimize our limited resources in providing those weapons."

- The third of these "major initiatives" that "we have to focus on is the modernization of our logistics system itself, to cut the cost, the infrastructure, and the cycle time in support of our 21st century forces.

"To achieve all three of these," Gansler said, "we have to transform our defense industrial base in order to support them. Perhaps the most essential for the transformation of our defense acquisition practices and our industrial structures is to rapidly capture state-of-the-art technology and to significantly reduce our weapon systems cost."

Gansler said he has developed a sincere and deep appreciation for the competence, dedication, and hard work of DoD's acquisition and logistics work force. "We still have a long way to go," he concluded, "and [it] will require all of us making that extra effort. I am confident that we will succeed, and I thank you for your efforts."

AIR FORCE NEWS SERVICE

# AFMC Staff Tackles Major Move Toward Less Paper

SHANNON MEYER

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFPN) – The opportunity to leverage technology to reduce the amount of paper circulating through the staff is a major initiative taking off at Air Force Materiel Command headquarters here.

AFMC's command information management section, along with the directorates of operations and communications and information, are participating in a program to pilot a commercial-off-the-shelf-software, or COTS, package at AFMC.

E-mail and electronic commerce have helped reduce the amount of paper, but a big opportunity lies in cradle-to-grave movement of documents electronically. The electronic office environment requires a complete cultural change in the way the command views document management.

The new environment calls for one process with three basic steps. Step one is the basic action item and tracking mechanism; step two is the associated workflow; and three is the records management element.

Prior initiatives to implement an electronic office environment weren't successful because of inconsistent computer system architecture and the limitations of existing software. Now, technology has alleviated these problems, and the time is right for a "less paper" headquarters.

"We continually waste numerous manhours as well as resources suspensing, tracking, reproducing, and quality-controlling documents," said Col. Mark Johnson, executive officer to Gen. George Babbitt, AFMC commander. "To become more efficient, we must move into the electronic office environment."

Reengineering and manpower reductions in the headquarters relied heavily on technology to keep pace with the mission. With fewer people to work projects, it is more important than ever that technology is used to fill the space and make passing information more efficient.

The biggest hurdle to implementing an electronic solution is the culture change, according to Master Sgt. Delmer Smith, chief of the director's staff office in AFMC's operations directorate.

"We have become so accustomed to holding paper, and to take that away is very unsettling to a large percentage of our people," Smith said. "The key to transitioning to a 'less paper' environment is securing support from the highest level in the organization. Without that support, a change to this degree is doomed to fail. We are discovering more benefits every day, but if people aren't willing to change, they'll miss out on a great opportunity."

The pilot program is in its early stages, but Smith is confident it will improve work processes.

"This program is no different than any others when it comes to the learning curve," Smith said. "Once you're over that threshold of understanding the program, the light comes on and the willingness to be open-minded and learn more becomes automatic."

A key feature of the COTS package is the complete mobility via a Web-based environment. This feature allows users to access work from any location with a desktop personal computer or a laptop.

"No matter where you are, the electronic office system lets you work through the process the same way you would work sitting at your desktop," Smith said.

"In our personal lives, technology made it possible for us to have more free time – microwave dinners are ready in half the time, leaving us time that has been filled with even more activities. The same principle affects office work," he said. "The use of the computer has allowed us to become more efficient, thus raising expectations from higher authorities for us to do more, quicker."

With already-programmed manpower reductions a stark reality, the need to exploit technology to its fullest extent is critical, Smith said.

"The electronic office will enable us to meet these demands and hopefully leave time to start working other issues," Smith said.

"We must embrace technology to work smarter, not harder."

**Editor's Note:** Meyer works for AFMC Public Affairs. This information is in the public domain at **http://www.af.mil/news** on the Internet.

# Ed Hirsch Retires After Half Century Of Military, Government Service

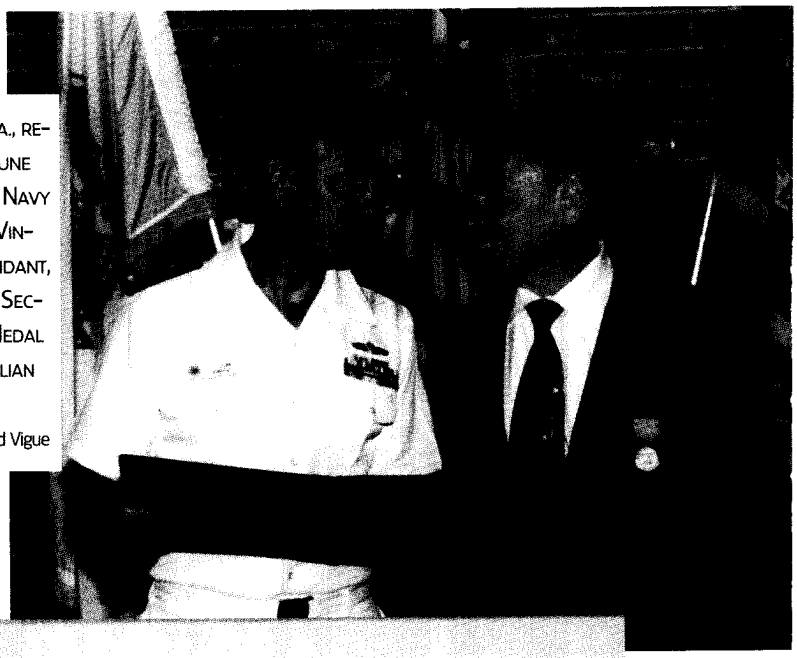
## Veteran of Three Wars, Spanning 35-Year Army Career • Defense Industry PM • DSMC Executive • Served Seven DSMC Commandants

GREG CARUTH

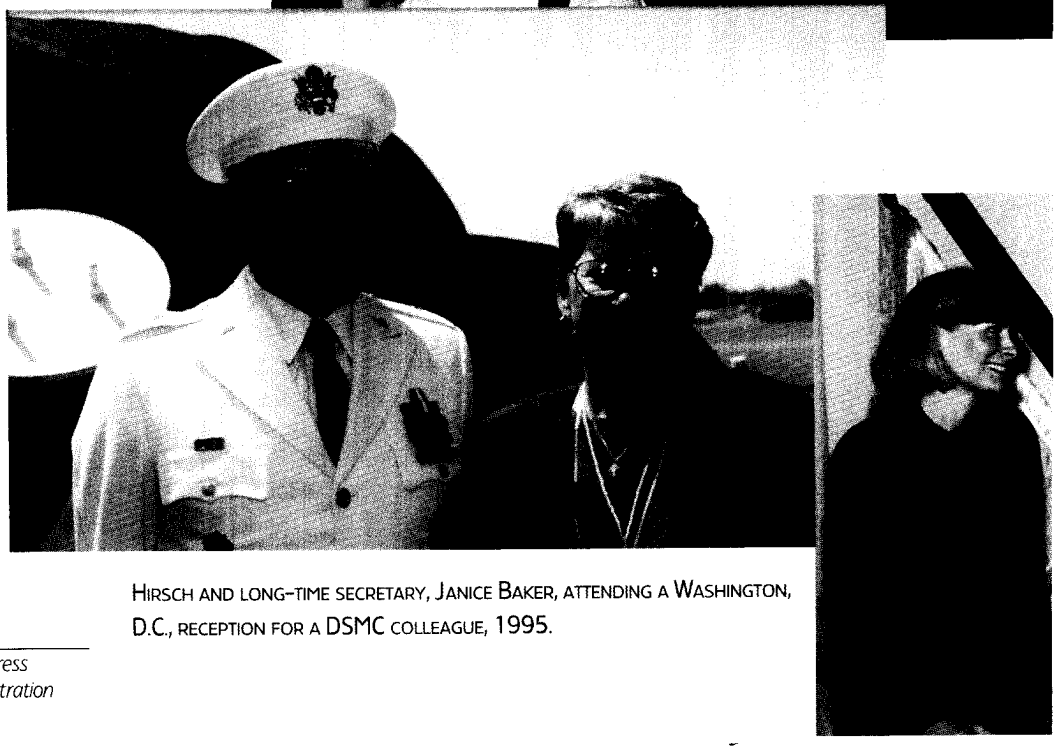
Ed Hirsch has a favorite story about himself. At his swearing-in ceremony as a second lieutenant in February 1942, he was told to raise his right hand and "Repeat after me: I and my name in full." He dutifully raised his hand and said, "I and my name in full."

To say his military career got off to a dubious start is an understatement. One month after his swearing-in debacle, while en route to his first duty station, Hirsch was given his first assignment as an officer. He was tasked with removing a lady of ill repute from a train where she had been plying her profession among several soldiers. Hirsch knew his career could only go uphill from there – and did it ever soar.

Whether in military or civilian service, Hirsch has always found a way to rise to the top of his profession. During his 15 years at the Defense Systems Management College, he served in the Research Division, the Executive Institute twice, and as Provost and Deputy Commandant for five years. His most recent assignment has been as advisor to the Acquisition Management Curriculum Enhancement Program.



AT A FORT BELVOIR, VA., RETIREMENT CEREMONY JUNE 24 IN PACKARD HALL, NAVY REAR ADM. LEONARD VINCENT, DSMC COMMANDANT, AWARDED HIRSCH THE SECRETARY OF DEFENSE MEDAL FOR MERITORIOUS CIVILIAN SERVICE.
Photo by Army Sgt. Richard Vigue



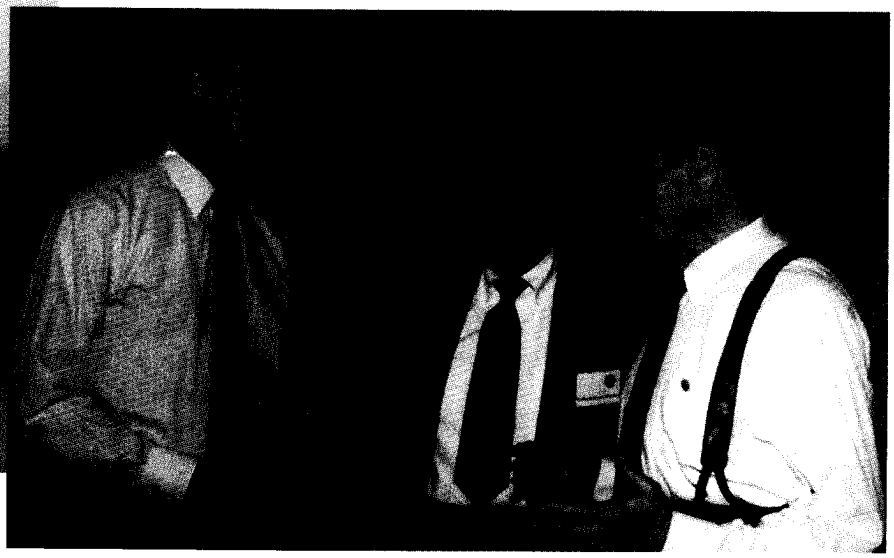
HIRSCH AND LONG-TIME SECRETARY, JANICE BAKER, ATTENDING A WASHINGTON, D.C., RECEPTION FOR A DSMC COLLEAGUE, 1995.

*Caruth is the director, Visual Arts and Press Department, Division of College Administration and Services, DSMC.*

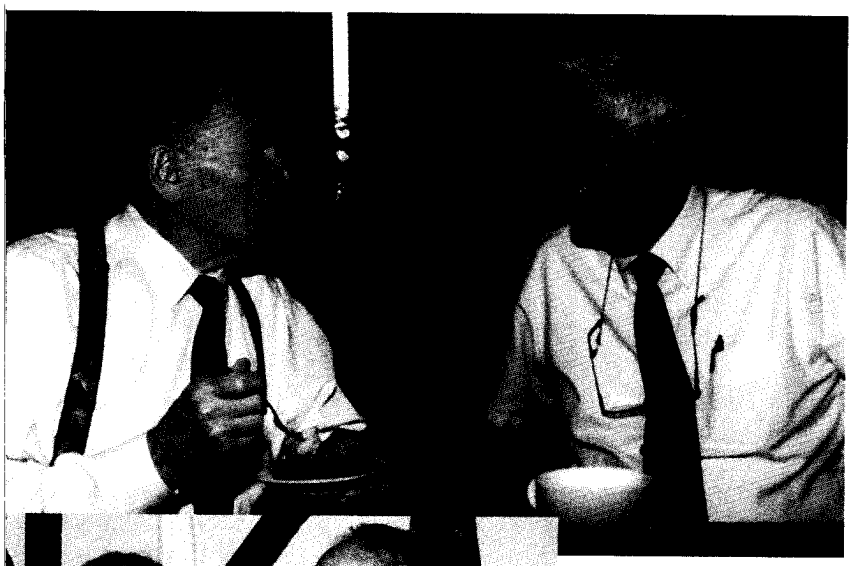


Photos courtesy Marciene Hirsch unless noted

1970 — A VETERAN OF THREE WARS, COL. HIRSCH IS PICTURED HERE IN THE HIGHLANDS OF SOUTH VIETNAM.



HIRSCH WELCOMES BACK TWO FORMER COMMANDANTS AT DSMC'S 25TH ANNIVERSARY CELEBRATION, JUNE 25, 1996. FROM LEFT: RETIRED AIR FORCE LT. GEN. WILLIAM E. THURMAN; RETIRED NAVY REAR ADM. ROLAND G. FREEMAN II; HIRSCH.



HIRSCH ENJOYS THE COMPANY OF HIS FRIEND AND LONG-TIME COLLEAGUE, WALTER "WALT" LABERGE, SENIOR RESEARCH SCIENTIST, UNIVERSITY OF TEXAS AT AUSTIN. OF LABERGE, HIRSCH SAID, "HE BRINGS A PERSPECTIVE TO A SITUATION OR PROBLEM THAT IS TWO PLATEAUS ABOVE EVERYONE ELSE."

HIRSCH MEETS WITH DSMC BOARD OF VISITORS MEMBER, DR. JACQUES S. GANSLER, PRIOR TO HIS APPOINTMENT AS UNDER SECRETARY OF DEFENSE (ACQUISITION & TECHNOLOGY), 1997. FROM LEFT: DONNA RICHBOURG, [THEN] ACTING DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM); GANSLER; HIRSCH.

During his tenure, he initiated the Program Managers Notebook; was the lead author of the DSMC publication on Evolutionary Acquisition; was the Director of the Acquisition Career Enhancement (ACE) Program – the forerunner to the Defense Acquisition University; and authored a number of articles published in Program Manager magazine, Signal magazine, Defense Review, and the Federal Management Review.

He said it was a distinct and unique pleasure serving with seven DSMC commandants. "Each one was a distinguished, honorable, and dedicated leader. Each one brought his own unique experience and talent to the job. Each one was determined to make the products and services offered by the college

## A Lesson in Great Leadership
## "I Was Wrong"

*15 April 70*

*Dear Colonel Hirsh,*

*I am indebted to you for letting me see your research efforts on the views of the late Vice Admiral Turner Joy on the POW problem in the pre-Armistice negotiations in Korea.*

*You were absolutely right and I equally wrong.*

*I appreciate your considerate forbearance in not having quoted chapter and verse, as you might have done, to prove me wrong. I can only say my memory was faulty.*

*I would be grateful if you would kindly report to those same officers, if practicable, what I have written here — not for any interests of mine, but in the interests of historical accuracy, as clearly and unequivocally stated in Admiral Joy's book, exactly as you have it stated.*

*Cordially,*
*M.B. Ridgway*

the best possible to enable the acquisition workforce to perform its difficult and complex mission." The same can be said of Hirsch.

He will be remembered in his retirement as a consummate officer and a gentleman, a caring and thoughtful leader, and a firm negotiator with strong opinions based on his wide experience, great integrity, and his fierce love of the military he so proudly served.

Hirsch, who spent 35 years in the Army and retired as a brigadier general, commanded at every level from platoon to brigade; served in the Infantry, Armored Force, Coast Artillery, Field Artillery, and Air Defense Artillery. He also served on the Army General Staff and Staff of the Office of the Secretary of Defense. His overseas service includes 27 months in the Aleutian Islands during World War II; three years in the Far East during the Korean conflict; one year on the Arctic Ice Cap in Thule, Greenland; three years in Germany; and one year in Vietnam. Following his retirement from the Army, Hirsch spent eight years working in defense industry as a deputy program manager.

Hirsch, whose favorite quote – "Blessed are the control freaks for they shall inhibit the earth" – from the comic strip Kudzu, has sometimes been misclassified as a control freak. In actuality, he is much the opposite, and has enjoyed the happy accidents that life has offered him. He recognized early that life was full of serendipity, luck, and coincidence – to include events that led him to the rank of brigadier general at, what now seems to him, the young age of 50.

However, the most significant event in his life was meeting his wife Marciene on a blind date, followed eight days later by her accepting his marriage proposal. She was 19 and he was 26. They both confessed, after their first date, to their families that they had met the person they were going to marry. Three months later they were joined in matrimony. Fifty years and 28 moves later, they have finally settled down in a showcase house designed and built on the Potomac River by their youngest son, Larry. Their eldest son, Ken, is a commander in the Navy, and holds a Ph.D. in Psychology and, in addition, is a psychiatrist.

Hirsch insists that he never would have progressed beyond the rank of captain without the support he received from Marciene. As a captain in 1949, he applied for a regular Army commission, but was denied. Feeling discouraged, Hirsch considered leaving the Army, but his wife encouraged him and gave him the confidence to continue. Three years later, when he was not selected for major, Hirsch almost called it quits again, but Marciene was there by his side urging him to keep going. It paid off, because the following year he made major. Another stepping stone occurred in 1958, when Hirsch realized his dream of being selected as a regular Army officer.

In 1960, as a lieutenant colonel, Hirsch was assigned to his first of four tours in the Pentagon. At this time, he had only three credit hours toward a bachelor's degree. Realizing the importance of education and despite a heavy workload, Hirsch started attending classes three to five nights a week – with Marciene's support. After four tough years, with her constant encouragement, Hirsch earned not only a bachelor's but also a master's degree.

That same year, 1964, Hirsch was selected to be the military attaché to Switzerland – an extremely desirable assignment that demanded the spouse as well as the military member be acceptable to the host country, which they were. But, as Hirsch was preparing for his assignment, an opportunity to command a HAWK battalion in Germany arose. Hirsch and his wife sat down and thought it would be better for his career to go the command route.

That decision required giving up a plush, diplomatic assignment for a high-risk, extremely challenging "muddy boots" job. Again, Marciene was willing to support her husband, forego the opportunity to live in a mansion in Bern, and instead live in a small apartment in a tenament-like structure in Germany.

Hirsch insists that these are just a few examples of why he knows that Marciene was key, if not the key to his achieving the level of success he has enjoyed throughout his entire career.

Looking back, Hirsch said the person who left the biggest impression on him was Army Gen. Matthew B. Ridgway. While a student at the Naval War College, Hirsch co-wrote a volume of work with other students that required research involving Ridgway. Seeking an audience with Ridgway, Hirsch was pleased when the retired general not only agreed to an interview, but consented to come to the Naval War College for two days to confer with the students.

During a forum, Ridgway related a story that was in his book. Hirsch had recently studied that book and knew Ridgway had misquoted his own excerpt. Hirsch commented on it but did not press the issue during the forum. Ridgway assured Hirsch in front of his classmates that Hirsch was wrong, but later after reviewing his own book, he realized Hirsch was correct.

Ridgway later made a full apology to Hirsch and his peers, and emphasized that he wanted everyone to know that Hirsch had been right, and that he appreciated Hirsch not pressing the issue when he could have.

Hirsch considered this public and full apology, by a superior, to be an inspiration and the very epitome of integrity, humility, and honesty. Hirsch has used that episode as an inspiration in his own career.

As an aside, Ridgway led the 82nd Airborne Division when it jumped into France on D-Day, replaced Gen. Douglas MacArthur in Korea, and personally prevented U.S. military intervention in the use of nuclear weapons in Vietnam when the Joint Chiefs wanted to assist the French during the siege of Dien Bien Phu in 1954.

When asked to summarize his feelings for, and about the college, Hirsch was quick to say, "The Defense Systems Management College has become this country's premier educational entity dedicated to systems acquisition because of its outstanding professional staff and faculty. College leadership, including myself, has come and gone; we are transients. What has made the college great, and will continue to do so in the future, is the one, unchanging constant – the excellence of the staff and faculty."

## A Distinguished Military Career

From March 1942 until his retirement from active military service Jan. 31, 1977, Army Brig. Gen. Edward Hirsch served in a variety of assignments worldwide. From January 1974 until his retirement, he was Director of the Air Defense Directorate and Deputy Director of the Requirements Directorate on the Department of the Army (DA) Staff. He was the Chief of Staff's advisor and spokesman for all air defense matters and represented him during presentations to congressional committees; directed actions required to establish priorities for the research, development, and acquisition of Army materiel, and planned for the prioritization of the budget and the allocation of resources; and was responsible for the development of the Army electronic warfare long-range plan and its coordination with the Navy and the Air Force. He was the representative of the user community during deliberations of the Army Systems Acquisition Review Council.

As Deputy Chief of Personnel Operations on the DA Staff in 1972, he directed the study group whose efforts resulted in the establishment of the Army Military Personnel Center. In 1971, he was the Deputy Plans, Programs and Budget Officer responsible for support to the development and execution of the rehabilitation effort countrywide in Vietnam.

In 1970, he attended and was a distinguished graduate of the Naval War College, Newport, R.I., where he headed a study group that produced a report on civil-military relations, which was selected for dissemination to the Joint Chiefs of Staff, military services, and senior service colleges. As staff planning officer with the Army Staff and Weapon System Evaluation Group, Hirsch worked with all military services, DoD, major civilian contractors, and research organizations to develop an improved command and control simulation capability. He prepared plans and procurement programs for equipment for Army forces worldwide, and served as DA staff project manager for the forerunner of the PATRIOT program as well as the REDEYE program. Hirsch also headed the study effort that resulted in the development and employment of the CHAPARRAL/VULCAN air defense weapon systems.

During his military service, which included World War II, the Korean conflict, and Vietnam, he commanded organizations from small unit to brigade level in armor, field artillery, and air defense artillery assignments. Earlier active military service also included command and staff planning responsibilities with the Army, Navy, Air Force, and civilian organizations in the United States; Aleutian Islands; Japan; Thule, Greenland; and the North Atlantic Treaty Organization.

# An Officer and a Gentleman

Being the managing editor of *Program Manager* has its good moments. Sometimes when I editorialize, my senior managers look the other way. In this case, I think they'll let me get away with it.

What can I say about retired Army Brig. Gen. Ed Hirsch that you haven't already read in the preceding pages? I could start by telling you up front that besides being one of the finest acquisition professionals in the business, he's also "quite a guy."

I could tell you how he always makes time for people – "Come on in, I'm so glad you stopped by ..." (and you know he means it); I could tell you about the razor-sharp memory of a career soldier who fought in three wars, and makes history come alive for those who take the time to mine his memories; I could tell you about the man who works behind the scenes to advance the careers and quality of life for others, never asking for or expecting thanks or recognition; or I could tell you about his honesty, his wit, his keen mind, and his lack of pretension that endear him to me and many others at DSMC.

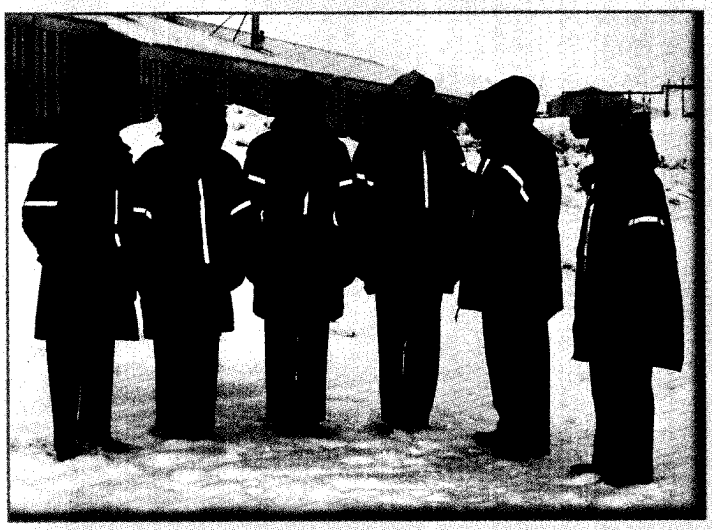
In previous pages, you read about Ed Hirsch, the acquisition professional. In this photo spread, we feature the young man, the soldier, and the woman who, according to Hirsch, "was the biggest influence behind any success I may have enjoyed. In every sense of the word, she has always been a full partner in my life and military career."

In my office, we call him "Mr. Hirsch"; others at the college call him "Ed"; but there's one thing we all call him *– friend.*

**–Collie Johnson**
**Managing Editor**

1935 — Entering Middle School, Philadelphia, Pa.

1943 — 1st Lt. Hirsch, displaying 3" anti-aircraft shell, Aleutian Islands.



1959 — Maj. Hirsch (3rd from right) receives the Army Commendation Medal on a "warm" spring day in Thule, Greenland.

1960 — Maj. Hirsch is promoted to Lt. Col. at the U.S. Army Command and General Staff College, Fort Leavenworth, Kan. From left: wife, Marciene; Hirsch; Army Maj. Gen. Harold K. Johnson (who later became Army Chief of Staff).

Photos courtesy Marciene Hirsch


1938 — Pvt. Hirsch, age 16 (left) and best buddy, Pvt. Jack Oritt (right) with "Cookie," the camp cook, at a Civilian Military Training Camp. Notice Hirsch's wrap legging.

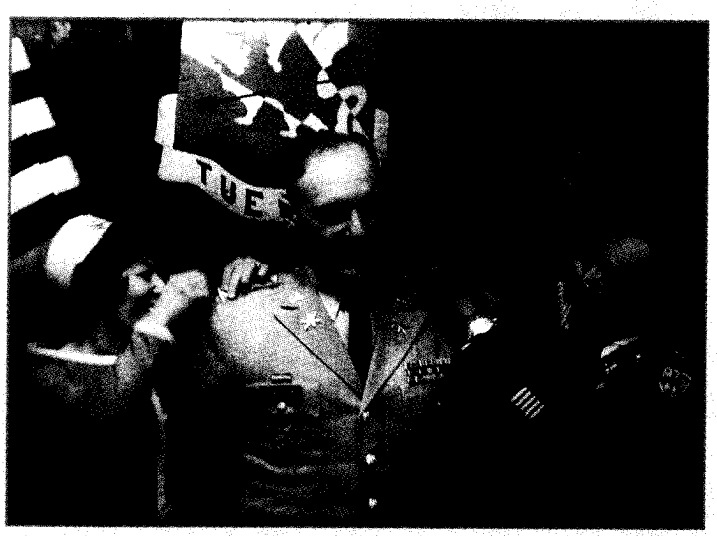
1940 — High School Graduation

1942 — 2nd Lt. Hirsch, age 19, Cold Bay, Aleutian Islands. Hirsch is wearing brown shoes and canvas leggings.

1947 — Capt. Hirsch (left) reunites with buddy, Jack Oritt, after the end of WWII.

1950 — Capt. Hirsch, 37th Coast Artillery (Anti-Aircraft) Battalion, Japan.

1965 — Lt. Col. Hirsch (facing left), Commander, 6/562nd Hawk Battalion, briefs Army Maj. Gen. Underwood (facing right) during field training maneuvers, Butzbach, Germany.



1966 — Lt. Col. Hirsch (center) is promoted to Col. Hirsch.

1967 — Col. Hirsch (right) "Trooping the Line" after assuming command of the 548th Artillery Group (NATO), Frankfurt, Germany.

1972 — Brig. Gen. Hirsch (right) assumes his first flag officer assignment as Commander, 31st AD Brigade, Homestead AFB, Fla.

1972 — Col. Hirsch (right) is "frocked" to Brig. Gen. and awarded the Legion of Merit (3rd Award) by Army Maj. Gen. Sidney Berry, Chief of Personnel Operations, in a ceremony at the Pentagon, Washington, D.C.

1972 — Brig. Gen. Hirsch and wife, Marciene attending one of many social occasions throughout his career.

Jan. 31, 1977 — Brig. Gen. Hirsch retires from active duty following an assignment at Army DCSOPS, Pentagon. From left: Army Lt. Gen. "Shy" Meyer; Hirsch; wife, Marciene; mother-in-law, Cecilia Older.

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THE DEFENSE SYSTEMS MANAGEMENT COLLEGE
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# GE Corporate Contract Reflects Real Change in Traditional Logistics Process

## Streamlining Spare Parts Delivery

LARRY TABOR

Ho, hum. Another story on acquisition reform. Spare parts no less. But if you need parts, read on – this a story of real change to the traditional Air Force logistics process.

The process to get a military-peculiar part in the hands of the mechanic is a lengthy one. Almost three years can pass from the time the Item Manager starts the process to determine the requirement until the part arrives. Four major phases are involved in the process: requirements determination, purchase request processing, contract award, and production (Figure 1).

Under a new contract awarded by Oklahoma City Air Logistics Center (OC-ALC) to General Electric Aircraft Engines (GEAE) and General Electric Support Services (GESS), the second and third phases of this process will be virtually eliminated, saving a year's worth of administrative leadtime. A number of other benefits, which translate to better customer support, are also expected.

The contract will cover parts that are sole source to GEAE. It combines Air Force, Defense Logistics Agency (DLA), and Navy requirements for the F110 engine family (F101, F108, F110, and F118). Covering a 10-year period, it is a "Corporate Contract" that is estimated at about $2 billion.

The contract builds on a prior long-term contract between OC-ALC and GE and incorporates the innovations of Phillip

FIGURE 1. **Acquisition Cycle**

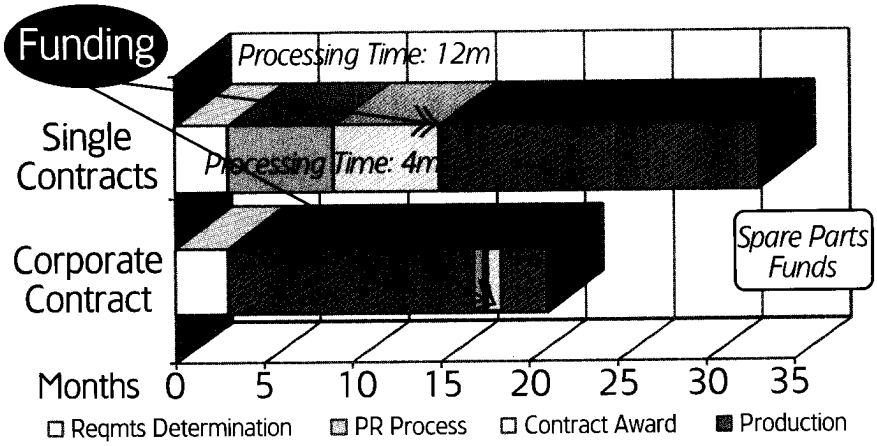
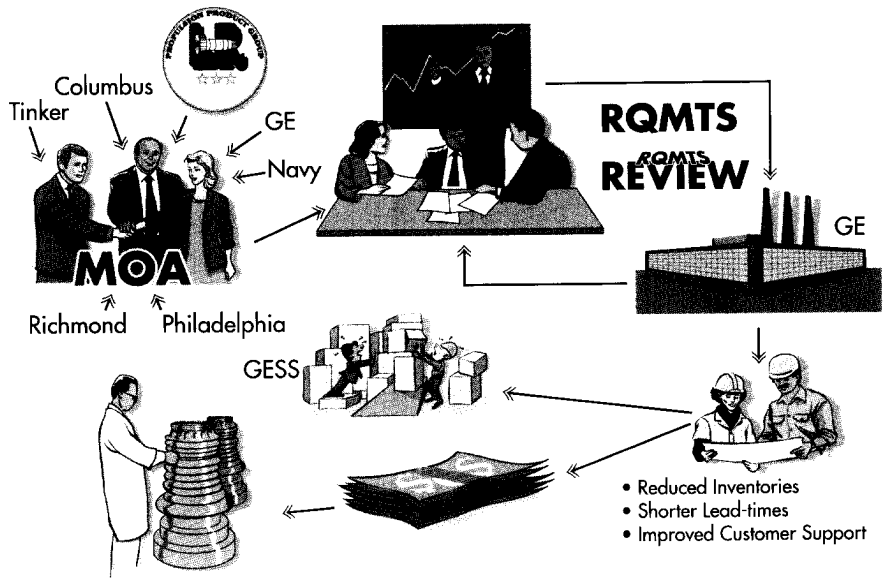



FIGURE 2. **The Process**




*Tabor is the Chief of the General Electric Contracting Section, Directorate of Propulsion, Oklahoma City Air Logistics Center.*

Hughes of GE and James Whittern of OC-ALC, both now retired. Their combined ideas provided the framework for the new initiative. Their plan was to implement Quarterly Requirements Reviews between all parties, for GE to "risk release" parts to production, and for the government to delay issuing its orders for spare parts until the end of production (Figure 2).

During the Quarterly Requirements Reviews, all parties will come together and project DoD's requirements. GE will take the identified requirements and commence production. Ninety days prior to completion of production, DoD will make a decision to buy or not to buy specific parts. If the decision is to buy, an order will be issued and the part delivered within 90 days. If the decision is not to buy, GEAE will transfer the item to GESS for storage and resale to any potential customer; the government will not be obligated to buy the parts.

Current logistics practices have evolved over many years. Even small changes to these practices can have a number of unforeseen consequences. This contract represents a significant change, moving the traditional ordering point from "lead-time-away," closer to "just-in-time." Working through the details of this change has been the task of the OC-ALC Contracting and Item Management Team. The buying team included Mary Wade, Georgette Strub, and Mark Jackson. Analysts Joyce Cobb and Sherri Barker performed cost and price analysis of the parts. Teresa Cobb and Vince Howie represented Item Management. The team worked for over a year with representatives from GE, GESS, DLA, and the Navy to bring the initiative to fruition. Interface with other functional areas – Headquarters Air Force Materiel Command and Office of the Assistant Secretary of the Air Force (Acquisition) – was required.

The contract should go a long way toward resembling a commercial logistics situation. For commercial items, we expect parts to be sitting on the shelf, on demand. The plan for this contract is to have the parts available when needed, but not require the manufacturer to carry shelf stock. "Off the shelf" usually means substantially higher prices because of the inventory costs.

Further, we used Federal Acquisition Regulation procedures for commercial acquisitions to make the contract easier to award and reduce oversight of the contractor during production.

Frequent sharing of information between the government and the contractor should improve the likelihood that parts will be available "just in time," when they are actually needed. The government's requirements for pipeline inventory will be substantially reduced. Moreover, the government will benefit from a large, up-front cost deferral since items will not go on-contract until a short time before delivery. For the same reason, terminations will be reduced. In the final analysis, the contract will provide better spare parts support for the F110 family of engines.

**Editor's Note:** The author welcomes questions or comments. Contact him at **larry.g.tabor@tinker.af.mil.**

## SOLOWAY RELEASES *A GUIDE TO COLLECTION AND USE OF PAST PERFORMANCE INFORMATION*

Deputy Under Secretary of Defense (Acquisition Reform), Stan Z. Soloway has released for on-line publication *A Guide to Collection and Use of Past Performance Information*. Dated May 1999, the guide was a joint team effort of members from the Past Performance Integrated Product Team, and the Federal Acquisition Regulation (FAR) 15 Rewrite Team.

This guide is designed to articulate the key techniques and practices for the use and collection of past performance information. Consistent with the spirit of acquisition reform, it provides guidance to encourage the use of innovative techniques in acquiring the best value goods and services. Its purpose is to provide you with a practical reference tool regarding DoD past performance policy. The guide is also designed for use by the entire acquisition workforce – government and industry – to promote the goal of achieving "best value". It explains best practices for the use of past performance information during source selection, ongoing performance, and during collection of the information.

Commenting on the joint team's efforts, Soloway said, "I commend the Rewrite and IPT teams for a job well done, and want to thank those members of industry for their comments on the guide as well."

Soloway encourages the acquisition workforce, "to read and use this guide in your efforts to obtain the best value for the Department of Defense and the American taxpayer."

**Editor's Note:** To download the entire guide, go to **http://www.acq.osd.mil/ar/#sat1** on the DUSD(AR) Web site.

U.S. ARMY PUBLIC AFFAIRS NEWS RELEASE

# Army Experiment Explores "Adaptive Thinking"

SGT. 1ST CLASS PATRICK BUFFETT, U.S. ARMY

FORT MONROE, Va. (Army News Service) – The Army is a step closer to its goal of building future leaders [who] can think "outside the box."

As they near the end of Army Experiment 6, staff members of Training and Doctrine Command's Deputy Chief of Staff for Training [DCST] at Fort Monroe, Va., believe they were successful in developing "adaptive" training programs which stress how to think in addition to what to think.

"I have a very good feeling about where we're at right now," said Col. David Prewitt, director of AE-6. "My gut tells me we're onto something, that further development of [battle staff] digital training is the smart move."

Culminating with May's "Adaptive Thinking Experiment" – a computer-assisted warfighting drill conducted at the Command and General Staff College, Fort Leavenworth, Kan. – AE-6 is now amid the data collection phase.

Led by Prewitt and Lt. Col. Charles Allen III, AE-6 deputy director, staff members of the DCST will scrub after action reports, computer data, and exercise evaluations to determine the successes of the recent experiment.

Particular attention will be paid to AE-6's key objectives and whether they were fully and effectively met. Those objectives include:

- Training leaders in a digitized environment.
- Developing a training methodology for "how to think" training.
- Enhancing training support systems, like the Staff Digital Leaders Reaction Course and Mission Planning Rehearsal Tool [MPRT], used to train and sustain leaders and staffs in digitized units. AE-6 was also driven by a basic premise: "In order to effectively and efficiently train adaptive and multidimensional leaders and soldiers, new training methodologies must be developed to teach leaders 'how to think' when faced with difficult challenges."

Advances in technology and an increase in complexities and types of missions are two "difficult challenges" current and future leaders will have to face.

Commanders and senior NCOs must be able to operate in digitized tactical operations centers. They must be prepared for increased situational awareness through new technologies being fielded across the forces. And they should be trained and ready for extremely fluid operations – battles that change from a decisive engagement into peacekeeping operations overnight.

Both Prewitt and Allen said they were impressed by the complex, high "optempo" of AE-6's Adaptive Thinking Experiment. Participants were repeatedly "thrown curve balls" – or "probes" as the AE-6 team officially refers to them – as souped-up simulations continuously changed event scenarios.

"At any given point, a [participant] mobilizing for battle would be told the enemy was surrendering and the mission would now become humanitarian in nature. And, oh, by the way, you also have a line of tanks moving toward the border," Allen said. "So, what are you going to do about that?"

Diversity was also a plus realized during the Army experiment, Allen said. Participants could be provided any combination of support units, and the simulation systems offered immediate feedback concerning the commander's use of those assets.

"The overall result is increased situational understanding," Prewitt said. "Horizons are expanded. That leader can better associate with the wide variety of options available for completing current and 21st century missions, and he is far more capable of reacting quickly and decisively if the unexpected happens."

Prewitt said he witnessed very favorable reaction to the AE-6-driven events. Participants appeared "totally immersed," he said. "And, based on what I've seen in the after-action reviews, the level of understanding was up remarkably. Participants were thinking on several levels, rather than just one action and one expected result."

Further development of the Army's "Mission Planning Rehearsal Tool" is also on the list of AE-6 accomplishments. In its earlier form, the MPRT consisted of five desktop computers equipped to run mission simulations in areas like Bosnia or the National Training Center, located at Fort Irwin, Calif. Several commanders have already used the MPRT to prepare for upcoming deployments to Bosnia.

"One drawback was its size," said Maj. Mark Miskovic, AE-6 information officer. "Hauling the PCs out to the field to run a mission rehearsal exercise was a real chore."

During AE-6, the system was scaled down to five laptops, Miskovic said. Commanders from the 10th Mountain Division, the Army Reserve, and the Army National Guard tested the new system during an early-May exercise at Fort Polk, La., and Fort Rucker, Ala.

"This new version opens up a lot of possibilities," Miskovic said. "A command group could even carry it on the plane and conduct mission rehearsal drills on the way (to the deployment area). When you think in terms of Strike Force and rapid response scenarios, the benefits are pretty obvious."

The ultimate goal, Prewitt said, is to have MPRTs "embedded" into the Army Tactical Command and Control System.

A presentation of findings will be the final step of the AE-6 journey. Prewitt and his team are well on their way toward piecing together highly visual and very sophisticated displays for the Association of the U.S. Army annual meeting in October.

"This is a dynamic story, and we want to be sure we're telling it right," Prewitt said. "Our soldiers and leaders need to know we're on track with defining the developing ways to train the future Army."

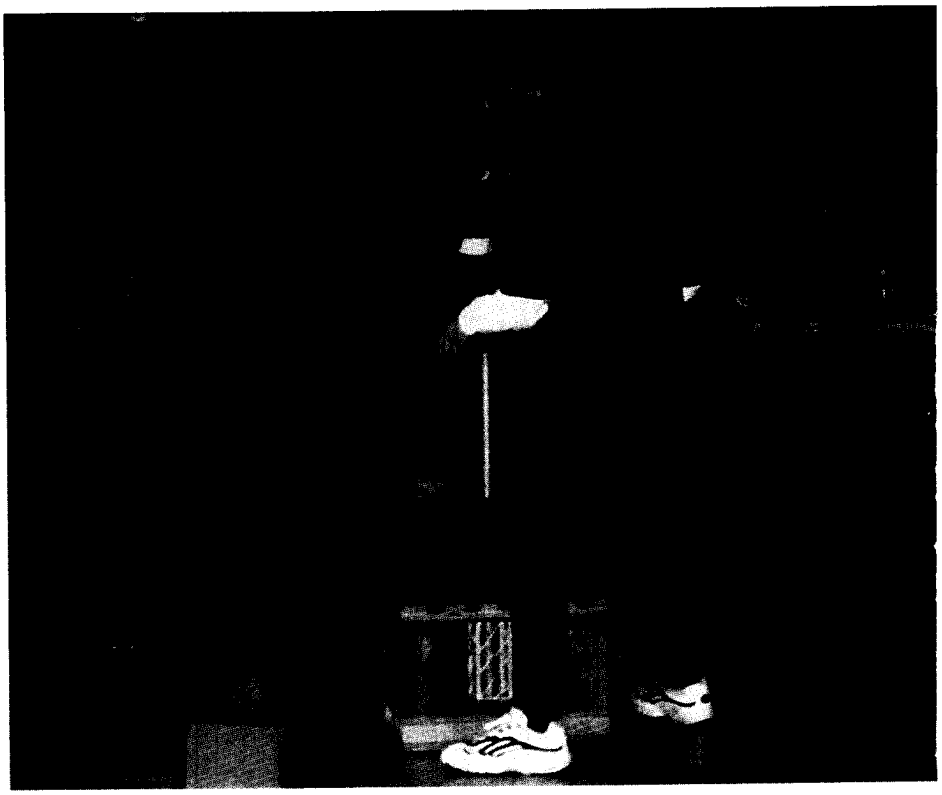
**Editor's Note:** Buffett is a writer in the Public Affairs Office, Training and Doctrine Command, Fort Monroe, Va. This information is in the public domain at **http://www.dtic.mil/armylink/news/** on the Internet.

# Odyssey of the Mind — Turning What Adults Might Call Work Into Play

## Making Systems Engineering Soup at hOMe

LT. COL. DAVE SCHMITZ, U.S. AIR FORCE

My daughter Kyle put another 10 pounds on the test stand, bringing her total to 267, when the structure broke. Not bad for an eight-inch-tall, composite truss-style structure consisting only of balsa wood and glue that tipped the scales at 22 grams. She quickly joined her sister and three other buddies performing "Adventure at Granny's," the team's Fine Arts Element. What were they doing, and how does it pertain to the systems engineering process?



KYLE SCHMITZ (RIGHT) ADDS ANOTHER 10 POUNDS ON THE TEST STAND, BRINGING HER TOTAL TO 267, WHEN THE STRUCTURE BROKE. KYLE AND HER TEAM WERE PARTICIPATING IN A LOCAL-LEVEL ODYSSEY OF THE MIND COMPETITION. WINNERS GO ON TO COMPETE AT STATE, NATIONAL, AND WORLD FINALS.

### Odyssey of the Mind (OM)

As one **OM** official said, "Trying to explain Odyssey of the Mind to someone who's never seen it ... is like trying to explain how to tie your shoes over the telephone."[1]

According to their Web site (**http://www.odyssey.org/**), **O**dyssey of the **M**ind is a worldwide program that promotes creative team-based problem solving for kids from kindergarten through college. The program helps them learn divergent thinking and problem-solving skills while participating in a series of challenging and motivating activities, both inside and outside their regular classroom curriculum.

Participation is broad, with students from all 50 states, the District of Columbia, and more than 36 nations. For those who win at the local level and go on to win at state or national competitions, the reward is the chance to compete at the World Finals. This year's Finals were held in May at the University of Tennessee.

*Schmitz is a professor of Manufacturing Management, Faculty Division, DSMC.*

In winter 1998, I was privileged to take on the job of coaching two fourth graders and five fifth graders (of those seven, two were boys) in preparation for the March 1999 competition. My team had been meeting since November 1998.

There were five Long-Term Problems **OM**'ers could solve this year, and ours was the Rati**OM**etric Structure. The requirements for this problem included creation of an "efficient" structure, defined as weight held in pounds divided by structure weight in grams, and problem presentation with style (also called the Fine Arts Element, or FAE). The team also had to be ready to tackle a Spontaneous Problem, which is an unannounced time-critical verbal (name things that are red) or hands-on (build a bridge out of spaghetti, gumdrops, and sticky labels) problem.

Only five team members can participate in either the Long-Term Problem presentation or the Spontaneous Problem. All work in designing, developing, and presenting the solutions must be done by the children. Coaches (and the kids' parents) cannot give design ideas, help

Photo courtesy Holly Schmitz

Odyssey of the Mind is a worldwide program that promotes creative team-based problem solving for kids from kindergarten through college. The program helps them learn divergent thinking and problem-solving skills while participating in a series of challenging and motivating activities, both inside and outside their regular classroom curriculum.

KYLE SCHMITZ SHOWS OFF HER TEAM'S TEST STAND, AN 8" COMPOSITE TRUSS-STYLE STRUCTURE OF BALSA WOOD AND GLUE THAT TIPPED THE SCALES AT 22 GRAMS.. THE TEAM FINISHED SECOND OVERALL OUT OF 14 TEAMS IN THEIR PROBLEM AND AGE GROUP. NOT BAD FOR A BUNCH OF OM NOVICES! ACCORDING TO HER DAD, AIR FORCE LT. COL. DAVE SCHMITZ, "THESE CHILDREN ARE ALL WINNERS."

KYLE (LEFT) EXPLAINS CONSTRUCTION TECHNIQUES TO HER TEAMMATE (AND SISTER), HALEY.

build anything, write a line of script, or even place a single drop of glue. The coaches' role then, is fairly well constrained to: providing a place for the team to meet, asking lots of questions, and giving them tools to help improve their processes. One of the tools I taught my team was the Systems Engineering Process (SEP).

## The Systems Engineering Process

According to the Defense Systems Management College (DSMC) *Systems Engineering Management Guide*, systems engineering is both a technical and management process designed to effectively transform an operational need into a total system through an optimum balance of all system elements. The SEP "soup" is an iterative process that includes requirements analysis, functional analysis/allocation, and synthesis.

Simplifying somewhat, requirements analysis defines what and how well the system must perform its mission within given constraints. Functional analysis/allocation decomposes top-level functionality (requirements) to lower levels to understand what subtasks must be performed to satisfy system requirements. Synthesis defines the resource (hardware, software, facilities, people, and data) architecture to satisfy the subtasks.

These three iterative steps are guided by the last piece of the SEP, systems analysis and control, which is a set of "tools" used to assure balance is achieved during development. A final aspect of the SEP is verification, to ensure that the final solution does indeed meet requirements.

## Systems Engineering Soup at hOMe

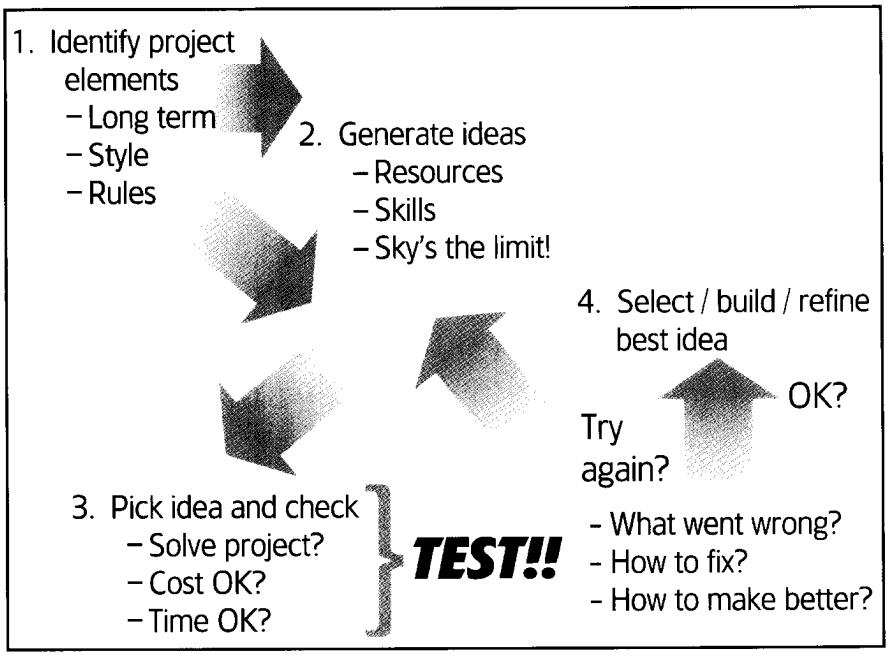
Figure 1 shows what the team and I developed for our design process – our SEP.

### STEP 1

Step 1 is clearly requirements analysis, based on the problem requirements as detailed in the **OM**-provided problem statement.

Our analysis is detailed in Figure 2, which shows that the **OM** folks are fully acquisition reform-compliant by stating requirements in performance terms with

FIGURE 1. **OM Systems Engineering Process**




as few technical constraints to creativity as possible, all within a Cost As an Independent Variable environment.

STEP 2

Step 2 in Figure 1 is our functional analysis/allocation. What I hoped to do in this step was to have the kids brainstorm structure and FAE ideas, prodded by potential resources available to them. For the structure, the team researched bridge construction, scaffolding, animal skeletons, furniture, woodworking, bonding agents, etc. For the FAE, potential solutions included music, mime, acting, sculpture, painting, dance, etc.

This bounded the problem for them somewhat, but I also highly encouraged (sometimes without effect) no prejudging of ideas based on perceived goodness or technical possibility. Also, we did a skills and interests survey to understand their strengths, and to break the teams into sub-teams.

STEPS 3 & 4

Figure 1, Steps 3 and 4, represent our synthesis activity and verification. For example, in structure development the team started out with a basic truss design that weighed 28 grams and held 190 pounds. This was the first data point, with an efficiency of 6.8. By analyzing each structure's failure modes during and after test, the team achieved significant technical parameter improvement over time as shown in Figure 3.

The FAE team followed the same methodology with their "Adventure at Granny's" play, in which they communicated the overall theme of efficiency by focusing on efficient use of the world's resources through recycling. As a side note, there was no requirement for integration of the structure and FAE portions of the Long-Term Problem solution. During the competition, our team did not integrate structure testing into the FAE. At least one team did, which may have had an influence on why we finished where we did in the competition.

Systems analysis and control is clearly (at least for this age group) the responsibility of the coach. My assistant coach and I did analysis and control primarily by asking questions. Is this play humorous or serious? What will the scenery be made of? How many actors are needed? How long should the play be, considering setup time is included in performance time? What type of glue should we use? What does it mean when a structure cross member doesn't break or come unglued during test? What are our competition-day risks, and how do we address them?

## A Note on Management

In *Leadership and the New Science,* Margaret Wheatley implies that in order to thrive in a chaotic world characterized by rapidly evolving technologies and competitive pressures, organizations must be equally chaotic. "The potent force that shapes behavior in these

FIGURE 2. **RatiOMetric Problem Requirements Analysis**

**Requirements/Restrictions**

- Structure must be made out of glue and balsa wood (1/8" x 1/8" strips)
- Laminated wood is allowed
- Efficiency is: $\frac{\text{weight held in pounds (up to 500 lbs.)}}{\text{structure weight in grams}}$
- Weight must be held for 3 seconds
- Structure must be no less than 8" tall, no more than 8–fi"
- Structure must have 2" opening running entire length
- Balsa strips can be soaked or steamed in water only
- Weight placement portion ends when structure breaks or at 8–minute time limit
- Adult assistant helps with weights over 20 lbs.
- Decide order of weights in advance
- Any team member or adult assistant needs safety goggles in safety zone
- Membership sign (name and number) legible from 25 feet
- Two additional scoring elements:
  — Fine Arts Element (FEA) performance (cost of items used in the performance must be less than $100)
  — Balsa wood creation

[chaotic] organizations, as in all natural systems, is the combination of simply expressed expectations of acceptable behavior and the freedom available to individuals to assert themselves in nondeterministic ways."[2] These "simply expressed expectations" are often referred to in modern literature as vision.

**OM**'ers might define chaos as a group of kids with super glue, razor blades, and paint, constantly creating and evolving ideas, turning what adults might call work into play. A la Wheatley, early establishment and constant reinforcement of a vision helped the team harness their energy and stay focused on a program defined by a stingy budget and an initial operational capability that would not slip. Our vision was:

- **Know the customer.** The **OM** folks bury requirements to keep teams attentive! Cost forms, membership forms, membership signs, FAE descriptions, and other requirements are all needed to compete above showing up with a solution. Like any successful organization, the team spent a lot of time understanding customer requirements.

- **There are no bad ideas. OM** values and rewards creativity, even if the solution does not solve the problem or the performance goes awry because a high-risk aspect fails. My mantra was, always, "Decide what you want to do, and then worry about how to do it."

**OM**'ers might define chaos as a group of kids with super glue, razor blades, and paint, constantly creating and evolving ideas, turning what adults might call work into play.

- **Talk a lot.** Since the team formed subteams early, we made a point to close each meeting with a short description of what happened in each sub-team that day.

- **Play as we practice.** Every meeting we practiced solving Spontaneous Problems using terminology the judges use during the competition. The team used the **OM**-approved structure testing apparatus for developmental tests. They used all of their props and scenery when practicing the play, except where a damaged piece meant excessive rework.

FIGURE 3. **Design Version Technical Performance**

| Design Version | Design Characteristics (all trusses, same glue type) | Efficiency |
|---|---|---|
| 1 | 2x2 laminated posts, double cross members near top and bottom | 6.8 |
| 2 | 1x2 laminated posts, double cross members near top and bottom | 7.4 |
| 3 | 1x2 laminated posts, single cross members in middle/corners | 8.5 |
| 4 | 1x3 laminated posts, single cross members in middle, single at corners | 10.8 |
| 5 | 1x3 laminated posts, double cross members in middle, single at corners | 13.2 |
| 6 (Final) | 1x3 laminated posts, double cross members in middle, single at corners, selected wood | 12.1 |

## Today's Children Best Our Country Has Ever Seen

The team was very calm on competition day, in marked contrast to their parents (their coach was a complete basket case). The team had Spontaneous first, and although the rules prevent discussion of the problem, they were obviously happy with the job they did.

The Long-Term Problem presentation went very well also, and the judges gave it glowing remarks. The structure had an efficiency of 12.13, which was very close to the most efficient design the team had ever built. The team finished second overall out of 14 teams in their problem and age group. Not bad for a bunch of **OM** novices!

*Today's children are the best our country has ever seen.* I was very proud of our Rati**OM**etric Structure team and the faith of their parents in this learning adventure. The version of the SEP we used effectively translated user requirements into a design solution. The vision we created kept the team focused without limiting creativity. The children learned about the power of teaming, learned and practiced several quality tools, and practiced being good team members. And finally, the team really impressed the judges when it counted.

Bring acquisition reform and the SEP home to your children. Sign up for **O**dyssey of the **M**ind at your local school, and coach a winning team next year. Why? Because, all things considered, when given the opportunity, *these children are all winners!*

## References

1. Schwartz, David M., "Everyone's a winner when it comes to sports for the brain."
2. Wheatley, Margaret J., *Leadership and the New Science.* Berrett-Koehler Publishers Inc., San Francisco, 1992, p. 132.

OASD PUBLIC AFFAIRS NEWS RELEASE

# Fiscal Year 98 Value Engineering Achievement Awards Presented

Under Secretary of Defense for Acquisition and Technology Jacques S. Gansler presented the annual Department of Defense Value Engineering Achievement Awards during a ceremony held today at the Pentagon.

Value engineering is a systematic functional analysis leading to actions or recommendations to improve the value of systems, equipment, facilities, services and supplies. The objectives are to improve quality and to reduce cost. The awards are intended to recognize significant achievements in value engineering during the past fiscal year and to further the use of value engineering by DoD personnel and [their] contractors.

During the last fiscal year, 4,229 in-house value engineering proposals were accepted with reported savings of $914 million. Another 167 contractor-initiated value engineering change proposals were accepted with additional savings of $109 million.

The value engineering award program is a highly visible acknowledgment of exemplary achievements and encourages additional projects to improve in-house and contractor productivity. An award winner from each DoD component was eligible for selection in the following seven categories: (1) program management, (2) individual/team, (3) procurement/contract administration, (4) value engineering professional, (5) field command, (6) installation, and (7) contractor. Additional "special" awards were given to recognize innovative applications or approaches that expanded the traditional scope of value engineering use.

The awardees during today's ceremony were:

## ARMY

| | |
|---|---|
| Program Management | Army Tactical Missile System Brilliant Anti-Armor Submunitions |
| Individual/Team | Fred Pozzuto, U.S. Army Corps of Engineers, Pittsburgh District |
| Professional | Frank Vicidomina, U.S. Army Corps of Engineers, New Orleans District |
| Procurement/Contract Administration | Michael Gallagher and Nabeel Attia, U.S. Army Communications-Electronics Command Acquisition Center |
| Field Command | U.S. Army Aviation and Missile Command |
| Installation | Tobyhanna Army Depot |
| Contractor | Mine Safety Appliances Co. |
| Special | Earl C. Wilson, U.S. Army Corps of Engineers, Fort Worth District |

## NAVY

| | |
|---|---|
| Program Management | V-22 Value Engineering Change Proposal Integrated Product Team |
| Individual/Team | Aircraft Fire Protection Team, Naval Air Warfare Center, Patuxent River |
| Installation | Resident Officer in Charge of Contracts, Sewell's Point |
| Contractor | Pacific Environmental Services Inc. |
| | Cederquist, Rodriguez, Ripley, Maddux P.C. |
| Special | U.S. Cost Inc. |
| Special | Universal Battery Charger Analyzer Team |

## AIR FORCE

| | |
|---|---|
| Program Management | F-22 System Program Office, Aeronautical Systems Center |
| Individual/Team | DSP Launch and On-Orbit Operations Team, Space and Missile Systems Center |
| Professional | Terry L. Miller, Aeronautical Systems Center |
| Procurement/Contract Administration | Space Test and Evaluation Contract Source Selection Team, Space and Missile Systems Center |
| Field Command | U-2 Management Directorate, Warner Robins Air Logistics Center |
| Special | Evolved Expendable Launch Vehicle Program Office, Space and Missile Systems Center |
| Program Management | Thrust Assembly Team |
| Professional | Lilibeth de los Santos, Defense Supply Center, Richmond |
| Procurement/Contract Administration | Defense Contract Management Command - Dayton |
| Field Command | Defense Supply Center, Richmond |
| Contractor | Anchor Industries Inc. |
| Special | Joseph Seborowski, Value Engineering Program Manager Defense Industrial Supply Center |

## BALLISTIC MISSILE DEFENSE ORGANIZATION

| | |
|---|---|
| Program Management | Theater High Altitude Area Defense Program Management Office |
| Individual/Team | Sidney Gaddy, PATRIOT Project Office |

## DEFENSE FINANCE & ACCOUNTING SERVICE

| | |
|---|---|
| Program Management | Electronic Document Management/Access Program Management Office |

**Editor's Note**: This information is in the public domain at **http://www.defenselink.mil/news** on the Internet.

# Open Systems Joint Task Force Gets the Word Out

## PMs Now Expected to Consider Using Open Systems

MATT GILLIS

Department of Defense Regulation 5000-2R, Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System Acquisition, states that DoD program managers must give more consideration to Open Systems during program planning and system engineering. The Open Systems Joint Task Force, which falls under the Office of the Under Secretary of Defense for Acquisition and Technology, faces the daunting challenge of relaying this message to DoD program managers.

One avenue the Task Force used to spread the message was a recent seminar entitled: "Open Systems Acquisition of Weapon Systems – A How-To Workshop." The three-day seminar covered a variety of topics related to Open Systems. This article addresses many of the questions that were raised at the seminar.

### Defining Open System

Before getting into a discussion of the seminar, understanding the definition of an Open System is important. Many people believe that Open Systems pertain only to electronics, computers, or communications. While used extensively in these areas, the intent of DoD's policy is to apply Open Systems to all types of weapon systems. Open Systems rely upon widely used, currently available and economical components and subsystems to keep procurement and support costs low. At the same time, an Open Systems approach shortens development time and integrates available technology, without developing new or unique interfaces among components. Open Systems focus on interfaces used in programs. To be called "Fully Open," the interfaces, the standards that define the interfaces, and the components that implement the interface standards must meet the criteria listed in Figure 1.

Open Systems employ fully defined, available-for-public-use interfaces that are maintained by consensus. An Open Systems approach also considers the business implications of different open interfaces – such as the relative market acceptance of products that use the open interface. This marketplace emphasis helps lower the cost and increase the availability of replacement parts to sustain the Open System throughout its life cycle.

Open interfaces permit industry to build products that meet standard accepted form, and fit parameters. When we employ standardized interfaces, modules become "portable" for wide use in a variety of systems. This aspect of Open Systems further reduces costs by leveraging the advantages of mass production.

Modularity allows the internal design details of a system's physical components – hardware and software – to change with time. New technology still fits into the system by conforming to the standard interfaces. Changes can occur without significant redesign effort, high costs, or long timelines that we tend to see in unique, optimized systems.

### The Automobile Tire — A Simple Example

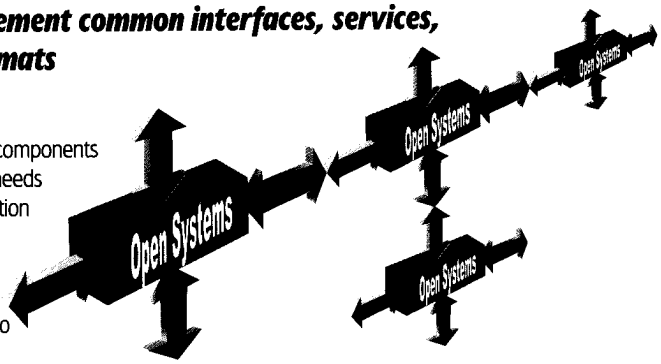
Let's take an automobile tire as an example. A variety of tire sizes are in the market today, but only a few sizes will fit your vehicle. Let's assume your current tires are P205/55ZR16. When you

FIGURE 1. **Open Systems Definition**

***Open Systems implement common interfaces, services, and supporting formats***

**Open System**

- A collection of interacting components designed to satisfy stated needs with the interface specification of components --
  - Fully defined
  - Available to the public
  - Maintained according to group consensus
- In which the interactions of components depend on the interface specifications, and the components conform to the interface specifications.




**An Open System Approach ...**

- Is an integrated technical and business strategy,
- Uses modular hardware and software design,
- To buy, rather than build.

*Gillis is a principal analyst with BRTRC Technology Research Corporation, Fairfax, Va. He developed and conducted the Open Systems Workshops for the Open Systems Joint Task Force (OS-JTF). He is a former Air Force lieutenant colonel and served as the Program Management Course Director at DSMC.*

"Our strength lies not only in our common areas, the ways in which we are alike, but also in our differences and the ways in which government and industry complement each other."

—Dr. Patricia Sanders
Director, Test, Systems Engineering and Evaluation
Keynote Speaker

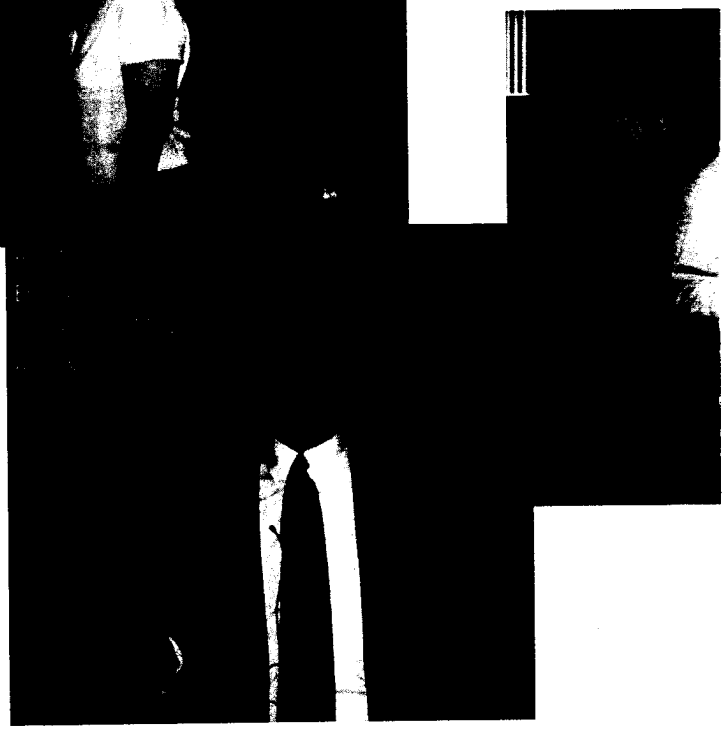
1999-2000 DSMCAA Board of Advisors. Seated from left: Colleen Preston, former DUSD(AR); retired Army Gen. Donald Keith; Navy Rear Adm. Leonard Vincent, DSMC Commandant; retired Navy Vice Adm. William C. Bowes. Standing from left: Wayne Glass, DSMCAA Vice President (Operations); Dr. David S. Chu, Vice President, RAND Corporation, Army Research Division, & Director, Arroyo Center; Frank Varacalli, DSMCAA President; Tel Charland, DSMCAA Director at Large.

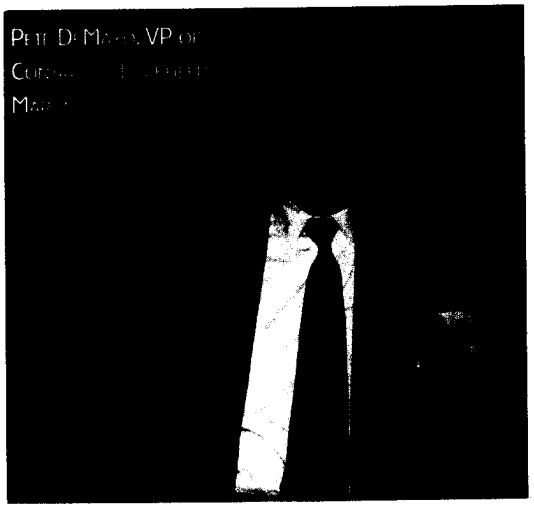
From left: Retired Navy Vice Adm. William C. Bowes; Linda Rusk, Senior VP, Contracts, Raytheon Systems Company; Sallie Flavin, Assistant Deputy Chief of Staff, Army RDA; Thomas Brunk, Deputy Commander, DCMC; Tim Beyland, Associate Deputy Assistant Secretary of the Air Force for Contracting.

# DSMC Hosts Sixteenth A
# "Acquisition S

## May 18-20 Symposium Focuse

From left: Navy Rear Adm. Leonard Vincent, DSMC Commandant; John Douglass, President and CEO of Aerospace Industries Association (AIA); Melissa Houghton, SRA; Frank Varacalli, DSMCAA President.





Bernie Ruidwick, former DSMC professor

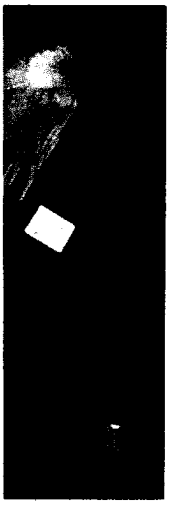

Photos by Richard Mattox

# I NUAL ALUMNI ASSOCIATION
# YMPOSIUM '99"
## on Government-Industry Collaboration

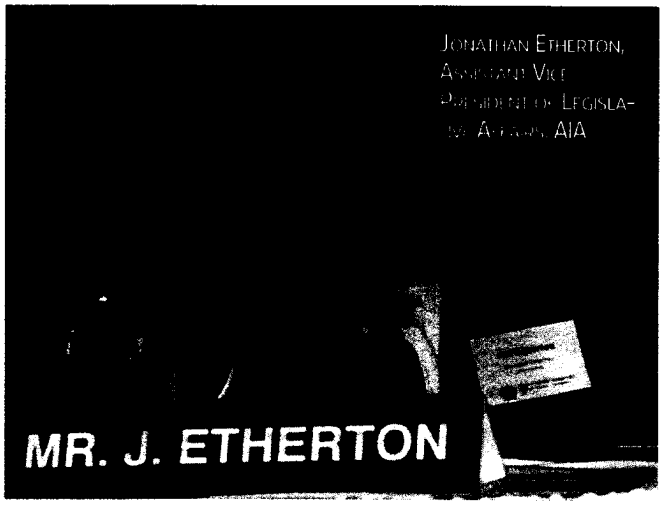

FROM LEFT: DONALD ERVINE, CEO, VSE INC.; ELLIOTT BRANCH, NAVY EXECUTIVE DIRECTOR, ACQUISITION AND BUSINESS MANAGEMENT, OFFICE OF THE ASN(RDA); DR. KEN OSCAR, DEPUTY ASSISTANT SECRETARY OF THE ARMY (PROCUREMENT); STAN SOLOWAY, DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM); MELISSA HOUGHTON, DSMCAA VP, SYMPOSIUM; NANCY ARCHULETA, CEO, MEVATEC.

I LEFT: WAYNE GLASS, VICE PRESIDENT (OPERATIONS), DSMCAA; FRANK CALLI, DSMCAA PRESIDENT; DR. PATRICIA SANDERS, DIRECTOR OF TEST, SYS- ENGINEERING AND EVALUATION, OFFICE OF THE SECRETARY OF DEFENSE; ISA HOUGHTON, SRA; ARMY COL. JOSEPH JOHNSON, DEAN, DIVISION OF EGE ADMINISTRATION & SERVICES, DSMC; ARMY LT. COL. MARK SALESKY, CAA ARMY SERVICE REPRESENTATIVE.

SYMPOSIUM PARTICIPANTS DURING A WORKSHOP SESSION.



FROM LEFT: DR. MARVIN LANGSTON, DEPUTY ASSISTANT SECRETARY OF DEFENSE (CIO POLICY & IMPLEMENTATION); DR. WILLIAM MULARIE, DIRECTOR OF INFORMATION SYSTEMS, DEFENSE ADVANCED RESEARCH PROJECTS AGENCY; MELISSA HOUGHTON, SRA; RETIRED NAVY VICE ADM. WILLIAM HANCOCK, PRINCIPAL, TECH STRATEGIES AND ALLIANCES; GIBSON LEBOEUF, DEPUTY DIRECTOR, NAVY INTERNATIONAL PROGRAMS OFFICE; RICHARD CAIME, VP OF STRIKE WEAPON SYSTEMS, LOCKHEED MARTIN ELECTRONICS AND MISSILES.




JONATHAN ETHERTON, ASSISTANT VICE PRESIDENT OF LEGISLATIVE AFFAIRS, AIA

ASN(RDA) [Assistant Secretary of the Navy for Research, Development & Acquisition].

"I started in 1959," Douglass began. "There has been enormous change since then." Back then, members of the acquisition workforce were considered second-class soldiers. "Acquisition," he observed, "has gotten more professional."

Douglass noted that not only has the professionalism of the workforce improved, but relationships between the military and contractors have also improved. Government-industry relationships, he said, were adversarial at first.

"In the Civil War, there was no logistics support in the unit. If you were going to use it; it went on your back. Private individuals known as 'Sutlers' supplied the federal side. This was the beginning of bad feelings of collaboration.

"World War II," he continued, "brought fresh rules. President Roosevelt placed public funds in the hands of private industry so they could quickly build the military." This, he explained, was the beginning of Government Furnished Equipment (GFE). With GFE came new oversight of defense companies by the military. Contractors were discouraged to even have a commercial side to their business. Douglass recounted the time a military officer at a shipyard proudly told him that he had successfully chased all commercial work out of the shipyard.

Even up to the 1980s, hard feelings continued. Former Secretary of Defense Caspar Weinberger, Douglass said, was proud of the fact that he would not meet with the CEOs of defense companies.

Douglass stated that if the military is going to integrate to a commercial way of doing business, the corporations that contract with the military must [be allowed to] build up a commercial business.

DoD, he suggested, should look at implementing Price Based Acquisition, eliminating Cost Accounting Standards and Cost and Pricing Data, and repealing the Truth in Negotiations Act. "That," he emphasized, "is Dr. Gansler's dream, and it is a good one!"

### State of the College

DSMC Commandant, Navy Rear Adm. Leonard Vincent spoke on the state of the Defense Systems Management College. He noted that even though 99 percent of graduates approve of their time spent at DSMC, "We are still chasing that 1 percent.

"We want to take advantage of technology," he reassured the attendees. "DSMC is in a transition toward distance learning. We did not make Dr. Gansler's goal of 25 percent of courses online, but DSMC does have five courses that are taught solely online including ACQ-101. DSMC expects to have three more courses online by October, 2000: BCF-102, TST-101, and ACQ-201 online by October 1999, June 2000, and October 2000 respectively," he said.

DSMC has also made improvements to the Advanced Program Management Course (APMC). According to Vincent, the new APMC course includes, "more critical-thinking skills." It also addresses the problems students want solved.

To speak about the recently revamped APMC, Vincent introduced Dr. J. Robert Ainsley, program manager of the Acquisition Management Curriculum Enhancement Program (AMCEP).1 Ainsley and his group recently enhanced PMT-302 to include more real-world situations.2

The enhanced course includes information management skills and focuses on problem-based learning. "The faculty becomes more like facilitators and less problem solvers," Ainsley explained. "We will augment the case studies with problem-based learning."

### Capitol Hill Perspective

Following Ainsley's presentation, luncheon speaker, Jonathan Etherton, Assistant Vice President of Legislative Affairs at the AIA, gave a quick overview of acquisition reform issues on Capitol Hill. "Legislative changes," he said, "are made one member at a time. The Congress is focusing on access to communication technology and contract formulation.

"Acquisition reform," Etherton said, "has for the past five to six years come from the Senate."

On the positive side, the Congress will soon have formal discussions on Total Ownership Cost issues. The [Section] 912 process is considered very big, he added, and the Congress is also working on defining Price Based Acquisition (PBA).

On the negative side, with the distractions of Kosovo and the state of readiness issue, and the Congressional desire to finish DoD bills as quickly as possible, Etherton told the attendees that the Civil-Military Integration package did not make it into the FY2000 authorization. However, he expects to see CMI in the FY2001 authorization.

In closing, Etherton said he believes, "We need new visions and new attitudes for long-term change."

### Panel

Thomas Brunk, Deputy Commander, Defense Contract Management Command, moderated the first panel session, "Cooperation in Contracting for Acquisition Managers." Panelists included retired Navy Vice Adm. William Bowes, VP Strategic Planning, Litton Industries; Tim Beyland, Associate Deputy Assistant Secretary of the Air Force for Contracting; Linda Rusk, Senior VP, Contracts, Raytheon Systems Company; and Sallie Flavin, Assistant Deputy Chief of Staff for RDA Army Materiel Command.

Bowes, who retired in 1996, said of acquisition reform, "A lot has been done, but much more needs to be done." He believes DoD has "torn down the adversarial relationships."

Rusk suggested the "increased use of Integrated Process Teams." Contractors, she said, "must be free to talk to the government. IPTs achieve that openness." Beyland agreed. "We need the support of industry," he said.

Flavin promoted requirements flexibility. "We are learning to have flexibility in contracts. We need to understand what they [requirements] are and then sit down and work out the contract."

Rusk, answering a question about Alpha Contracts, said Raytheon has "had a lot of success with this. It's not adversarial and we can create the requirements together."

WORKSHOPS

Day 1 workshops included, "Contracting for Contractor Logistics Support," "Using Collaboration Tools in Acquisition Management," and "A Business Case for Reducing DoD Product Development Time."

## Day 2

Wednesday's highlights included a panel discussion on "Cooperation in Civil-Military Integration (CMI)."

CMI - A NATURAL LEVEL OF ACQUISITION REFORM

Panel moderator Stan Soloway, Deputy Under Secretary of Defense (Acquisition Reform) and Director, Defense Reform, said, "One of the top priorities is to achieve CMI. CMI is a natural level of acquisition reform. We must begin adapting our practices to what happens in the commercial sector."

Panelists included Nancy Archuleta, CEO, MEVATEC; Donald Ervine, CEO, VSE Inc.; Elliott Branch, Navy Executive Director, Acquisition and Business Management, Office of the ASN(RDA); and Dr. Ken Oscar, Deputy Assistant Secretary of the Army (Procurement).

INDUSTRY PERSPECTIVE

At Wednesday's lunch, Pete DeMayo, VP of Contracts, Lockheed Martin, spoke on collaboration and the successes of military/industry partnerships. He said that IPTs are not exactly partnering but they are good successes. The acquisition process is long and costly. "We need the help of industry to do our job differently and better." Trust is the biggest inhibitor, according to DeMayo. "There are three points that are the basis for establishing a trusting relationship: one, making and

# Letter From the DSMC Alumni Association President

The DSMC Alumni Association, founded in 1983 by graduates of the Defense Systems Management College Program Management Course, has two organizational objectives. The first is to provide a member's forum for the continuing professional growth of the defense acquisition community. Our second objective is to provide a source of defense acquisition management expertise for the Defense Systems Management College (DSMC) and the association. If you're not yet a member, let's talk about getting you on board. You can find us at **www.dsmcaa.org**. I encourage you to explore our Web site and talk to the directors to learn about what we have to offer.

We offer two categories of membership. Regular Members include graduates of the program management courses, executive courses, and short courses given by DSMC; and present and past faculty and professional staff members assigned to DSMC. In a recent change to our constitution, the Associate Member category has been expanded to include all individuals in government and industry who are currently serving, or who have previously served, in defense acquisition program management positions, who do not qualify for Regular Membership.

The association is managed by a volunteer board of directors comprised of 12 elected members and four appointed Service representatives. The Service representatives provide a two-way link between the Services and the association to help us serve our members and to ensure that the views of the Service acquisition communities are well represented. The 1999-2000 directors are:

President - Frank Varacalli; Director at Large (June 01) - Melissa Houghton; Vice President (Operations) - Wayne Glass; Director at Large (June 00) - Gary Wimberly; Vice President, Membership - Norm McDaniel; Director at Large (June 00) - Tel Charland; Vice President, Symposium - Meredith Murphy; Director at Large (June 00) - Matt Gillis; Vice President, Publications - Paul McMahon; Army Representative - Lt. Col. Mark Salesky; Secretary - Chip Linnemeier; Navy Representative - Dona Lee; Treasurer - Tony Munera; Marine Corps Representative - Vacant; Director at Large (June 01) - Jim Ledbetter; Air Force Representative - Maj. Tom Brown.

We've recently rolled out an Internet Bulletin Board, which provides a forum for defense acquisition professionals and their industry counterparts (members only) to comment on and discuss topics relevant to our business in a threaded discussion forum setting.

The annual Acquisition Symposium, open to all members of the defense community, is the highlight of our operating year. The Sixteenth Annual Symposium, held at the DSMC main campus, May 18-20, Fort Belvoir, Va., represented a break from tradition. From a casual dress code to fewer formal sessions and a greater focus on workshops, this year's symposium was a huge success as we took on the topic of "Government/Industry Collaboration – How Far Can We Go?" The symposium had three central domains: Cooperation in Contracting, Cooperation in Civil-Military Integration, and Cooperation in International Sales/Manufacturing.

We're already starting to think about the June 2000 Symposium, and we'd like to hear your thoughts on themes, discussion panel topics, and workshops. Contact us at **dsmcaa@erols.com**. I look forward to hearing from you.

**–Frank Varacalli**

keeping agreements; two, credibility; and three, openness."

### Special Award

Before the evening dinner banquet, Dr. Oscar received the David D. Acker "Skill In Communication" Award. The award is presented annually in memory of former DSMC professor David Acker, to one distinctive individual who has promoted and communicated acquisition management excellence to the acquisition workforce. Of those awards sponsored by the DSMCAA, the David Acker award ranks as the most prestigious.

The dinner speaker, Bob Mylott, Enterprise Logistics Systems Manager at Caterpillar, spoke on how Caterpillar revamped their logistics supply system and how their strategy might be applied to DoD. More than 90 percent of Caterpillar orders are filled within two business days; those remaining are filled within three. Mylott challenged the audience to think carefully about their individual roles in acquisition and how they might take advantage of industry best practices.

## Day 3

Thursday's activities began with a panel discussion, "Cooperation in Technology," moderated by Dr. Marvin Langston, Deputy Assistant Secretary of Defense (CIO Policy & Implementation). Panelists included retired Navy Vice Adm. William Hancock, Principal, Tech Strategies and Alliances; Richard Caime, VP of Strike Weapon Systems, Lockheed Martin Electronics and Missiles; Dr. William Mularie, Director of Information Systems, Defense Advanced Research Projects Agency; and Gibson LeBoeuf, Deputy Director, Navy International Programs Office.

### A Word From Dr. Sanders

The day's keynote speech was by Dr. Patricia Sanders, Director of Test, Systems Engineering and Evaluation, Office of the Secretary of Defense. Sanders asked the audience to focus their thoughts on some aspects of partnerships that she believes to be applicable to collaboration between government and industry.

"Challenges facing us today are sufficiently large that we must cooperate if we hope to successfully meet them. Our strength lies not only in our common areas, the ways in which we are alike, but also in our differences and the ways in which government and industry complement each other. And a partnership that is not based on mutual benefit is doomed from the beginning."

So what will the future look like as we go into the next century, Sanders asked? Forces in the field will likely face a wide range of threats from terrorists to rogue states equipped with a wide range of weapons. And beyond that period, Sanders said, "We may even face a peer competitor, another power with the resources to challenge us on a global scale.

"So, whatever our individual challenges, if we join our talents and work together —reach across the boundaries that would tend to separate us, if you will —and form true partnerships, we can and will meet those challenges. After all, none of us is as smart as all of us."

### A Challenge

After three days of workshops, question-and-answer panels and speakers, the participants were ready to take their knowledge back home.

In closing the symposium, Rich Reed, Provost and Deputy Commandant, DSMC, challenged the audience to consider opportunities for collaboration in their professional lives and be at the forefront of exploring just how far we can go in this business of acquisition reform.

## References


1. For more information on AMCEP, see p. 80, this issue.

2. *AR Today*, March/April 1999 edition, at **http://www.acq.osd.mil/ar/artoday.htm** on the DUSD(AR) Web site, also includes information on AMCEP.

OASD PUBLIC AFFAIRS NEWS RELEASE

# DoD Executes PKI License Option

The Department of Defense has acquired a capability to provide public key infrastructure (PKI) services, as part of its near-term efforts to go "paperless" and enhance the security of its information systems.

The Defense Information Systems Agency, through the Integrated-Computer Aided Software Engineering contract, has executed the final option of a DoD-wide license with Netscape Communications Corporation. The Netscape license provides the Department of Defense and the Intelligence Community with a site license for a number of Netscape server products as well as the professional version of the Netscape client software.

The Netscape software, specifically the Certificate Management System (CMS) 4.1, will be a part of the pilot DoD public key infrastructure. The CMS 4.1 product provides functions such as issuing and managing digital certificates, encryption key recovery, support for Federal Information Processing Standard-compliant hardware cryptography, and support for the Digital Signature Standard.

The deployment of this product is part of the Department's efforts to transition to a paperless environment. With PKI technology, DoD will be able to ensure the authenticity of digital signatures on contracting documents, travel vouchers, and other forms that obligate taxpayer funds, to authenticate users of information systems, and protect the privacy of transactions over networks. DoD plans pilot programs in electronic commerce, as well as in the Global Command and Control and Combat Support Systems. PKI technology is also employed in the Defense Travel System to assure the authenticity of electronic travel transactions.

Details on the products and license can be found on the Internet at **http://dii-sw.ncr.disa.mil/Del/netlic.html.** Details on downloading the products can be found at **http://netscape.intdec.com/disa/.**

**Editor's Note:** This information is in the public domain at **http://www.defenselink.mil/news/jul1999** on the Defenselink Web site.

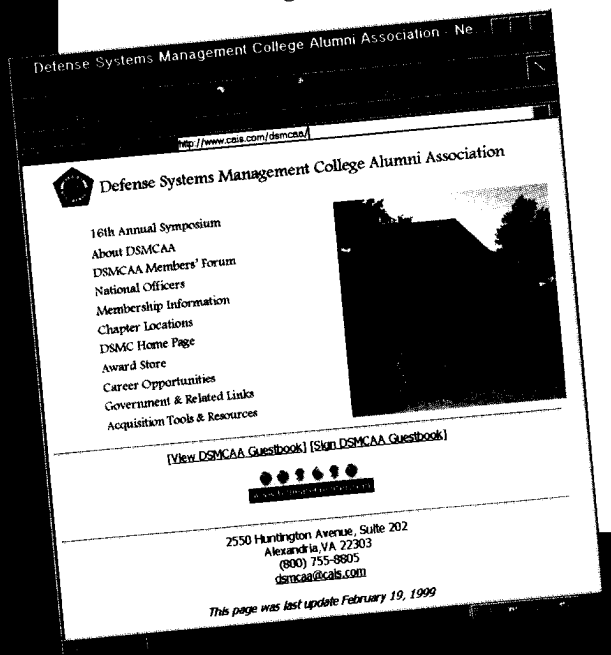
# JOIN DSMCAA!

## ATTENTION

## Defense Systems Management College Course Graduates, Faculty, and Staff!

Take advantage of the great benefits of being a Defense Systems Management College Alumni Association member! As a graduate of any DSMC course, you are eligible to join a select group of acquisition workforce professionals and receive DSMCAA benefits. Your benefits as a DSMCAA member, to name a few, include:

- Addition of DSMCAA membership to your résumé.
- Increased professional networking opportunities within the aquisition workforce community.
- More links to other professional and social organizations.
- Credit toward acquisition workforce continuing education requirements by attending DSMC Annual Symposium.
- Satisfaction of supporting a value-added organization.
- Current information on other selected acquisition subjects and issues provided in the *DSMCAA Newsletter*.
- Opportunities to demonstrate professional expertise through publication of articles in the *DSMCAA Newsletter* or presentation of papers at the Annual Symposium.




Join this select group of professionals who are proud of their achievements as DSMC graduates, thankful for the skills and expertise they possess, and ready to make additional contributions to the security and progress of our nation.

Take advantage of this opportunity to help yourself and others. Call (703) 960-6802 to join DSMCAA or complete one of the forms (opposite page). Mail it to the address shown. To learn more about DSMCAA or register online using a credit card, visit **http://www.dsmcaa.org**.

THE RULES HAVE CHANGED!

# DSMC Alumni Association News!

## DSMC Short Course Graduates Gain Full Membership Status!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**Short course graduates gain full membership status!**

The benefits of DSMC Alumni Association membership have increased. Graduates of all short courses are now eligible for full membership status. Take advantage of this new opportunity to join the DSMC Alumni Association today!

❑ **1 yr $25$^{00}$** ❑ **3 yr $60$^{00}$**

**Fill out this card and mail with a check to:**
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ALEXANDRIA VA 22307
Register Online at: http://www.dsmcaa.org

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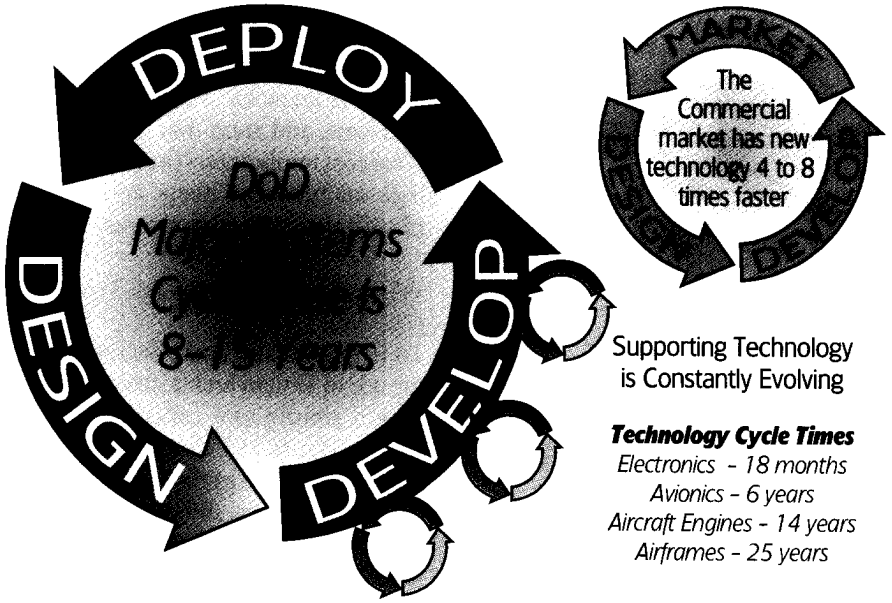
FIGURE 2. **Technology Turnover Rates**




**Open Systems reduce the probability of fielding obsolete equipment, or having to redesign your system for upgrades and modifications in the future.**

need replacement tires, we know that buying the exact same type and brand from the same manufacturer is not necessary to make your car run properly.

Using the P205/55ZR16 size designator (the open interface specification), you can select from a number of different brands that will fit on your car's existing wheel rims. If you do not need high-speed performance, you might choose a less-costly tire with a lower top speed rating. You have the option to select tires with a different tread pattern for lower noise or smoother ride. You might want a tire that gives more traction in the rain or snow. As new materials transition into tire manufacturing, you do not have to reengineer the car; you simply buy a new set of tires that fits. The message here is that open interfaces and the marketplace give us a variety of choices as we maintain our car over time.

### How Do Open Systems Affect Cost As an Independent Variable (CAIV)?

Open Systems' use of standard interfaces, similar to size designations in the area of tire technology, allows us to make trade-offs from multiple sources. When alternative products are available that fit properly, we can consider performance against cost among the candidates that satisfy the standard interface. This is how Open Systems facilitate the application of CAIV.

Open Systems take advantage of the evolution of products that use a slowly changing or constant interface. So as time goes on, ingenuity, efficiency, and new processes applied to modules will improve their performance, longevity, or reliability. These modules, when using a standard open interface, still fit into the older systems, providing continued, economical sustainment support and a potential for improved performance. Think of the implications this concept might have on a power supply for a missile; a filter for an armored vehicle; a brake pad for an aircraft; software; or other components in Defense programs.

### How Do We Manage Changing Technology?

In the past, good configuration management meant that the exact same part, subsystem, or software was maintained over the system's life cycle. Changes were difficult and costly. Today, our weapon systems must last for extended life cycles, and one challenge is dealing with obsolescence and changing technology during the sustainment phase.

Figure 2 illustrates that technology is always changing. Some product lines, called "Domains" in Open Systems terminology, change more often than others. In some domains, we face obsolescence of technology even before our system can complete one part of the design or production phase of its life cycle.

How do we buy spare parts 30 years from now, if the technology changes every 18 months? This is a real issue that confronts configuration managers and logisticians – it is also an area where an Open Systems approach can help.

The answer is to use Open Systems to standardize the interface, not the detailed design of each module. When we need replacement parts, we carefully select solutions that meet the interface. The new modules must also provide the minimum level of functionality required in our systems. Even in the high-turnover electronics domain, the interfaces tend to be long-lived. By using configuration management only on the interfaces and not on the modules, we can take advantage of changing technology.

An added benefit is that the business aspects of Open Systems – market acceptance of the interfaces – will help ensure that multiple sources (each having their own "implementation," or point design) will fit the interface in the system. Availability of competitive sources is the direct connection between Open Systems and CAIV.

A well-designed Open System also allows easy future insertion of new technology, avoiding obsolescence and lack of sources. It also provides the opportunity for component intra-operability, using the same interface among multiple systems for further economy and supportability advantages.

### What is an Architecture?

A central concept to Open Systems design is use of an "Architecture." Developing the architecture is only one of a series of steps in our process, but the term "Architecture" is widely used. Let's look at what this means in Open Systems' terminology.

FIGURE 3. **Architectures**

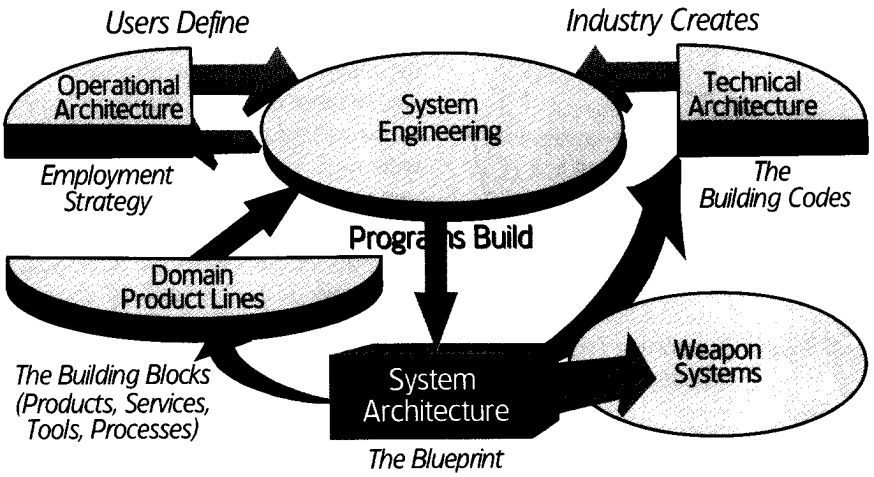



Figure 3 shows several types of architectures in the design of weapon systems. The operational architecture contains the interoperability requirements of the weapon system with all external activities. Much of the operational architecture is described in requirements documents, such as command and control interfaces, interaction with other weapon systems for joint operations, and Service-wide or DoD logistics constraints.

The technical architecture, a set of general interfaces that can be applied to the system, typically contains a set of interfaces that are approved for broad use. Examples within DoD are the Joint Technical Architecture (JTA) and Technical Architecture for Information Management (TAFIM).

Domain product lines add very specific types of interfaces relevant only to the type of system being built, i.e., interfaces for aviation applications when the system is an aircraft.

With an Open Systems approach, the systems engineering process takes the defined operational architecture, selects appropriate interfaces from the technical architecture, and tailors interfaces from the domain-specific product lines to build a unique system architecture. Think of the system architecture as a skeleton of interaction and interfaces. When modules (comprising the subsystems and components) are integrated into the architecture, they add functionality, making the system complete.

The architecture may be "Fully Open" or be somewhat less than open by using unique or proprietary interfaces in the design. We should focus on maximizing the degree of openness to achieve the benefits covered earlier.

Building a system architecture is a complex proposition. One of the important parts in our seminar was to prioritize Open System design efforts to help achieve the highest payoff for the constraints of limited development time or limited design costs.

Figure 4 illustrates our prioritizing process for Open Systems design efforts. When you perform analysis and interface selection activities as your first priority, you work on areas that receive the most benefit. These include domains with rapidly changing technology, areas where we know the system must change over time, and areas that have high life cycle cost implications (high cost items, high maintenance items, and high replenishment rate components).

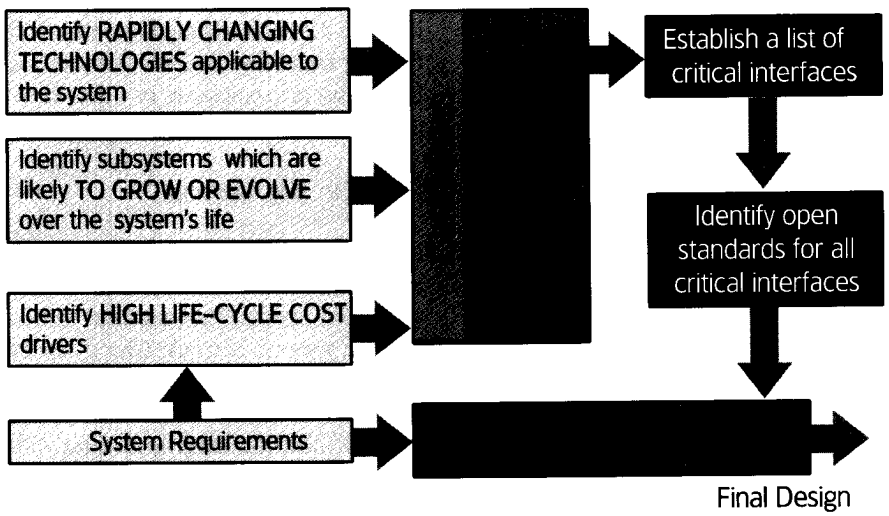
### What Sort of Decision Tools Can We Use?

To help compare and select interfaces for use in system architectures, we employ a simple tool called the "Quad Chart" (Figure 5). This tool helps us analyze and compare relative merits of important interfaces. Although the tool is very basic, the information needed to use it requires some research as well as an understanding of all possible types of interfaces in the situation. The technical architecture and domain product lines are sources for this information.

The Quad Chart uses two measures to compare alternatives — openness of the interface standard and the extent that the interface is accepted in the marketplace. Remember, an Open Systems approach is an integrated technical and business strategy.

The horizontal axis ranges from standards that are "closed," or proprietary on the left side, to fully open standards on the right side. In between is a gray area that covers interface standards

FIGURE 4. **Prioritizing Analysis Activities**



controlled by military, federal, standardization agreement (NATO), informal commercial partnerships, informal groups, domestic formal technical societies, and international organizations' standards activities. Each of the possible interfaces is controlled by the entity with some degree of openness that we plot on the horizontal axis. When using this tool, we first determine how "open" a candidate interface is; the next step is a bit harder.

We can measure the market acceptance in several ways: current sales of products that use the interface, volume produced, market share, or total-installed base are all good indicators. These data are not easy to find, but making the best choice is essential. This type of market analysis is necessary for each and every candidate interface that we plot on the chart. If there are a dozen candidates, this can take time to research. This time-consuming step is one reason we first prioritize where to apply the Open Systems design process (Figure 4).

The Quad Chart helps narrow a field of potential interfaces. Obviously, a candidate in Quad 4 is a better choice than one in Quad 1. But when we compare critical system interface alternatives, several other considerations apply. Before selecting the interface to incorporate into the architecture, we need to investigate the maturity of the interface standards, available testing, verification and certification levels, and external constraints such as mandated commonality with other military systems.

## Some Words of Advice and Caution

One essential element that we did not address here is the system's threshold performance and how its functionality results from implementation of system modules. System-level, subsystem-level, and component performance is defined in the specification process, along with the interfaces that we discussed. Open Systems assure that alternatives are available that will fit! However, you must be aware that an Open Systems approach is only one part of an overall process that determines how well the system works.

Open Systems consider business and technical trade-offs. This means that highly optimized, unique (and possibly proprietary) interfaces are not part of a true, 100-percent pure, Open System. In some military weapon systems, highly optimized and unique interfaces are necessary. Accepting anything less will not satisfy the users' needs.

Open Systems may not be the best choice for every interface in all weapon systems. However, a pragmatic Open Systems employment strategy will identify the few areas where specific, highly optimized interfaces are absolutely necessary. In most situations, the reduction in development and the life cycle benefits of an Open Systems approach are worth the effort.

An Open Systems approach takes time and effort during the system design stages. But experience shows that with faster system development cycles, lower total ownership costs, increased performance over time with new technology, and minimal impacts of parts obsolescence, "Open" weapon system management is easier in the long run.

## Open Systems Approach Here to Stay

In this article, we described the basics of an Open Systems approach to weapon system acquisition. Open Systems focus on the interfaces, which are one part of the technical description of a system.

## OS–JTF

The Open Systems Joint Task Force (OS-JTF) was formed in September 1994 to sponsor and accelerate the adoption of Open Systems in weapons systems and subsystems electronics to reduce life cycle cost and facilitate effective weapon system intra- and interoperability.

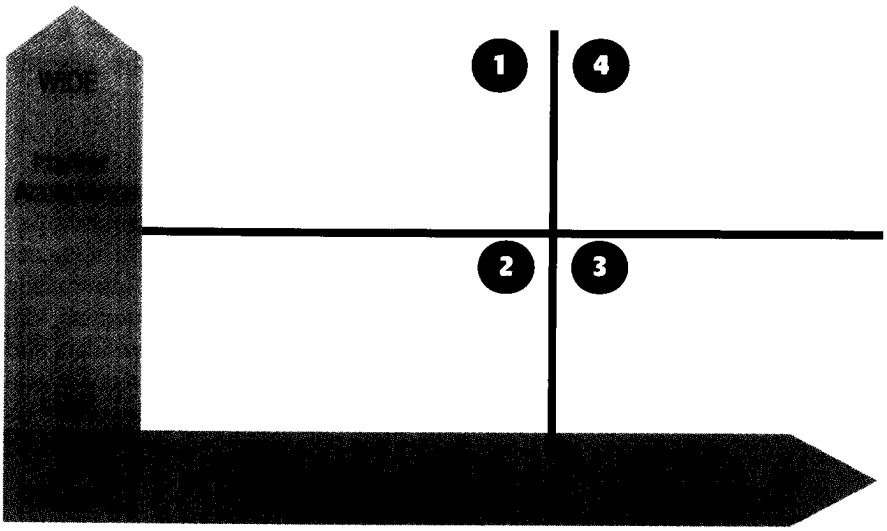
The OS-JTF is chartered as a cooperative effort of the Department of the Army, the Department of the Navy, the Department of the Air Force, and the Office of the Under Secretary of Defense (Acquisition and Technology).

See the OS-JTF Web site at **http://www.acq.osd.mil/osjtf.**

Central to an Open Systems approach is the use of architectures that define standard interfaces that change very slowly. Modular designs, when applied in concert with an open architecture, result in lower development costs and timelines, while also establishing an evolutionary path for easier life cycle support.

**Editor's Note:** The author welcomes questions or comments concerning this article. Contact him at **mgillis@brtrc.com.**

FIGURE 5. **The Quad Chart**



# Acquisition Symposium '99

## Government-Industry Collaboration — How Far Can We Go?

TODD WILLIAMSON

Acquisition professionals from across the nation joined their colleagues May 18-20 at the Sixteenth Annual Defense Systems Management College Alumni Association (DSMCAA) "Acquisition Symposium '99." Designed as a forum to exchange ideas on current acquisition issues, this year's symposium was held at the DSMC main campus, Fort Belvoir, Va.

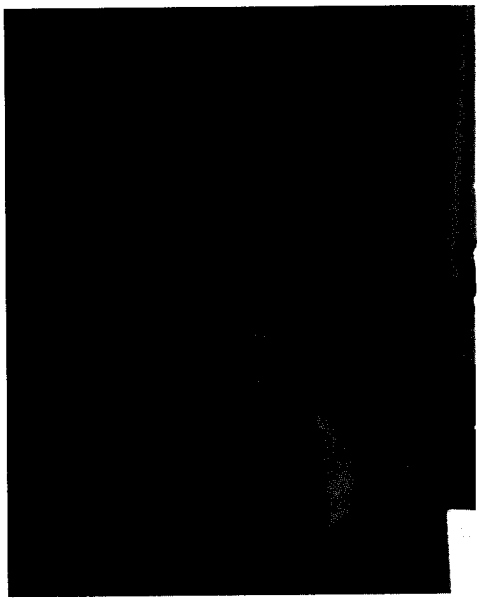
Participants took the opportunity to learn more about the college, delve into current issues, and network with other Service, agency, and industry professionals. This year's theme, "Government & Industry Collaboration: How Far Can We Go?" highlighted the imperative for collaboration between industry and government.

### Institutionalizing Collaboration

The theme was selected because in order to, as Dr. Jacques S. Gansler, Under Secretary of Defense (Acquisition & Technology), would say, "accelerate the revolution," collaboration will have to be institutionalized. To foster that attitude, this conference, unlike others that have addressed the same issue, focused on industry and government working together to jointly accelerate the revolution and produce an awareness of the need for cultural change instead of focusing on any one particular functional issue.

Throughout the three-day event, participants had the opportunity to select from more than 30 discrete workshops tied to the symposium theme. As symposium attendees know, the workshops are where the real idea exchanges take place.

FRANK VARACALLI, DSMCAA PRESIDENT (LEFT), PRESENTS THE DAVID D. ACKER AWARD FOR SKILL IN COMMUNICATION TO DR. KEN OSCAR, DEPUTY ASSISTANT SECRETARY OF THE ARMY (PROCUREMENT).



RICH REED, DSMC PROVOST AND DEPUTY COMMANDANT, CHALLENGED THE AUDIENCE TO CONSIDER OPPORTUNITIES FOR COLLABORATION IN THEIR PROFESSIONAL LIVES AND BE AT THE FOREFRONT OF EXPLORING "JUST HOW FAR WE CAN GO IN THIS BUSINESS OF ACQUISITION REFORM."

### Day 1

Tuesday's activities began with a morning welcome from the DSMC Commandant followed by the keynote speech.

A WORD FROM JOHN DOUGLASS

Navy Rear Adm. Leonard Vincent, DSMC Commandant, welcomed the participants and encouraged the audience to "think and be different." Introducing the keynote speaker of the morning, Vincent said John Douglass, President and CEO of Aerospace Industries Association (AIA), "has probably done every job in acquisition," including serving as the

*Williamson is the managing editor,* AR Today, *DUSD(AR)'s bimonthly, printed newsletter.*

Photos by Richard Mattox

THE WHITE HOUSE

Office of the Press Secretary
(Tucson, Arizona)

# PRESIDENT CLINTON NAMES LAWRENCE J. DELANEY AS ASSISTANT SECRETARY OF THE AIR FORCE FOR ACQUISITION AT THE DEPARTMENT OF DEFENSE

The President today announced his intent to nominate Lawrence J. Delaney as Assistant Secretary of the Air Force for Acquisition at the Department of Defense. Dr. Lawrence J. Delaney, of Potomac, Maryland is currently a private consultant. In 1997, Delaney completed a three-year contract as Managing Director, BDM Europe, the European holding company for BDM International, Inc. From 1989 to 1994, he was Managing Partner, Member of the Board of Directors, and Director, Washington Operations, of Montgomery & Associates, a technical and business consulting firm. From 1981 to 1989, Delaney was with SAIC, where he was Deputy Sector manager of the SAIC Military Sciences/Information Systems Sector and manager of the 500-person Information Systems Group. From 1975 to 1981, he was with R&D Associates, culminating with his appointment in 1978 as the head of Washington operations.

Delaney received his bachelor's degree in 1957 and his master's degree in 1958, both in Chemical Engineering from Clarkson University. He went on to receive his Ph.D. in Chemical Engineering from the University of Pennsylvania in 1961.

The Assistant Secretary of the Air Force (Acquisition) is directly responsible to the Secretary of the Air Force for the overall supervision of the Air Force acquisition system.

**Editor's Note:** Delaney's nomination was confirmed by the Senate April 29. This information is in the public domain at **http://www.pub.whitehouse.gov** on the Internet.

FOR IMMEDIATE RELEASE Feb. 25, 199

# Army TACMS-BAT Production Decision for Block II/BAT Missile

## First-Time PM Shares Insights, Observations on Getting a Production Decision — A Tough, Time-Consuming, Never Easy Process

COL. R. KELLEY GRISWOLD, U.S. ARMY

The Army Tactical Missile System/Brilliant Anti-armor (TACMS-BAT) Project Office recently completed the long and arduous task of getting a production decision for the Block II/BAT missile at the Defense Acquisition Board (DAB) level. As a relatively new project manager, I walked into the process while it was still at the Integrating Integrated Product Team (IIPT) coordinating level. I participated in and observed the process as it worked its way through the Department of the Army and Office of the Secretary of Defense (OSD). This article attempts to assemble observations and lessons learned that may benefit other program managers (PM) as they go through the process.

BAT SUBMUNITION ATTACKING MOVING T-72 TANK.
Photos courtesy Army TACMS-BAT Project Office

### Tools of the Trade

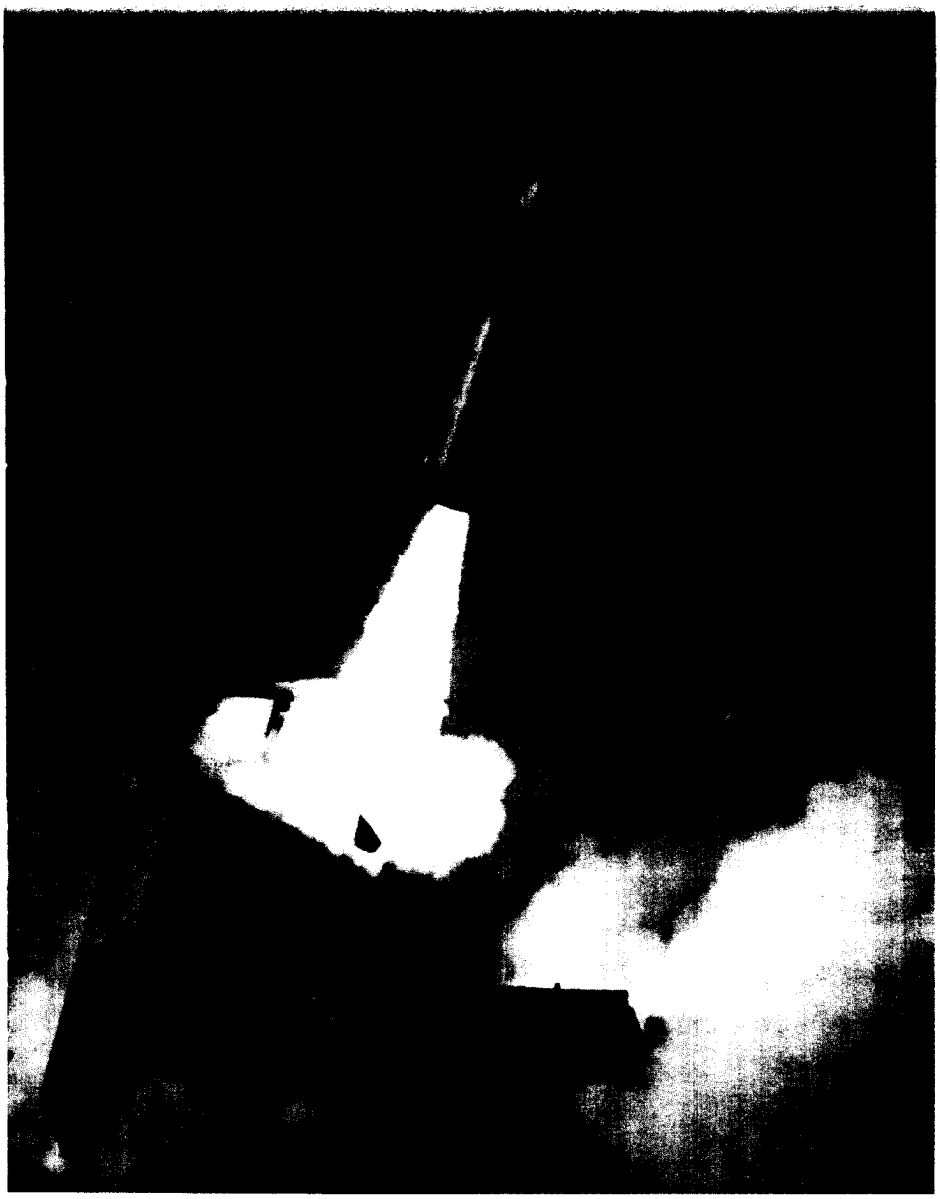
The first thing you, as a PM, need to do when facing a major milestone decision is to purchase a high-quality, carry-on suitcase. Then, get your Training and Doctrine Command System Manager (TSM) to do the same. You will both be on the road much more than you anticipate and, frankly, much more than should be necessary.

Next, ensure you are equipped with the communications tools you will need to stay in touch with the office while on the road. I was fortunate to have a truly gifted deputy and a talented workforce that stayed on top of the day-to-day operations of the office, but even so, you have to know what's going on. A laptop with a reliable dial-in tool, a beeper, and a cell phone made life easier.

### IPT Process — Room for Improvement?

While the IPT process works well, it simply does not work well enough. You and your TSM will still have to undertake numerous trips, meetings, pre-briefings, and briefings, always working as a combined PM/TSM team. In my situation, it was necessary to schedule every briefing that was required prior to implementation of the IPT process. The closer you get to your decision review, the more time you'll need to spend in the Penta-

*Griswold is the Project Manager of the Army Tactical Missile System/Brilliant Anti-armor Submunition Project Office at Redstone Arsenal, Ala. He is a graduate of APMC 99-1, DSMC.*



BLOCK II MISSILE LAUNCH
U.S. ARMY, WHITE SANDS MISSILE RANGE

**The Block II/BAT missile had a highly successful flight test program leading up to the decision reviews. Even so, we found that casual observers, including some IIPT members, had difficulty differentiating between test results and test objectives.**

gon. IPT and IIPT members who have been quiet for months come alive with issues as the review approaches. (This is to be expected and is not necessarily a criticism. Team members don't have the luxury of focusing solely on one program.) Prioritization of effort results in a flurry of activity as the light at the end of the tunnel gets brighter.

Similarly, team members and the principal players and decision makers they represent have their own thoughts on how the process should work. In reality, some team members are empowered to say, "No" but not necessarily empowered to say, "Yes." That makes it essential to not only work with the team members, but also to pre-brief their bosses before the big decision points. Figure 1 lists the offices that were scheduled for pre-briefings prior to the Army Systems Acquisition Review Council (ASARC) or Overarching IPT (OIPT). Only one office declined the pre-brief, and that office later nonconcurred with a major issue.

Following the IIPT, the program proceeded to the OIPT level and then to the Defense Acquisition Board Readiness Meeting (DRM). While we were eventually successful, my opinion is that the IPT process broke down after the OIPT. The decisions made at the OIPT and, indeed, at the DRM were challenged as the Acquisition Decision Memorandum was being staffed. I found that some concurrences have a limited life span and that some issues never die.

### Smaller Sometimes is Better

We found it beneficial to have a small team (six members) within the project office (Figure 2). We initially had a much larger team, but found it unwieldy and unproductive. The team leader (in this case the product manager) was empowered with tasking authority throughout the project. I emphasize that getting the production decision was the No. 1 priority for the project. Selecting the right people and giving them the support they need is key to success.

For our project, support included setting aside a dedicated workspace, known as the War Room, where they could meet to collectively review issues and progress. While each team member maintained a desk in their respective division/branch,

FIGURE 1. **Scheduled Block II/BAT Prebriefs**

| | |
|---|---|
| **A R M Y** | |
| DCSOPS* | Deputy Chief of Staff for Operations & Plans |
| DCSLOG | Deputy Chief of Staff for Logistics |
| DISC4 | Director of Information Systems for Command, Control, Communications & Computers |
| DUSA(OR) | Deputy Under Secretary of the Army (Operations Research) |
| PA&E | Program Analysis & Evaluation |
| OPTEC | Operational Test & Evaluation Command |
| CEAC | Cost and Economic Analysis Center |
| SARDA | Secretary of the Army for Research, Development & Acquisition |
| MILDEP | Military Deputy |
| **O S D** | |
| DDP | Director of Defense Procurement |
| OUSD(A&T) API | Office of the Under Secretary of Defense (Acquisition & Technology), Acquisition Program Integration |
| OUSD(A&T) S&TS* | Office of the Under Secretary of Defense (Acquisition & Technology), Strategic & Tactical Systems |
| DOT&E | Director of Operational Test & Evaluation |
| DTSE&E | Director, Test, Systems Engineering & Evaluation |
| DUSD(IA&I) | Deputy Under Secretary of Defense (Industrial Affairs & Installations) |
| OSD(PA&E) | Office of the Secretary of Defense (Program Analysis & Evaluation) |
| OUSD(Comptroller) | Office of the Under Secretary of Defense (Comptroller) |
| C3I | Command, Control, Communications & Intelligence |
| J-8 | Joint Staff Director for Force Structure, Resources & Assessment |
| OUSD(A&T) | Office of the Under Secretary of Defense (Acquisition & Technology) |

*Two pre-briefings scheduled.

each one also had a desk in the War Room.

## IIPT — Silence Never Means Consent

The IIPT began meeting one year prior to the planned ASARC date. Membership included, but was not limited to, Army and OSD action officers representing the principals listed in Figure 1. We met about once a month and generally tried to key the meetings so that review of major test activities could be reported. The closer we came to the decision reviews, the better the attendance. This sometimes contributed to late breaking issues. I found it beneficial to ask each member to discuss their agency's outlook and position prior to concluding each IIPT. The most important thing to remember is that, "Silence never means consent" (Figure 3).

Another observation is that some IIPT members are reluctant to stay focused on their particular area of oversight (or at least what I thought their area should be.) This is understandable when an issue is broad-based and affects multiple aspects of the program, but is difficult to deal with when the boundaries are clear-cut.

## A Need for Two Sub-IPTs

We found it beneficial to establish two sub-IPTs: one for cost and one for test. Originally we had additional IPTs, but they were disbanded when found to be duplicative of work being performed in either the IIPT, the test IPT, or the cost IPT. Additionally, the test IPT established several sub-IPTs for specific technical test issues.

## Cost IPT

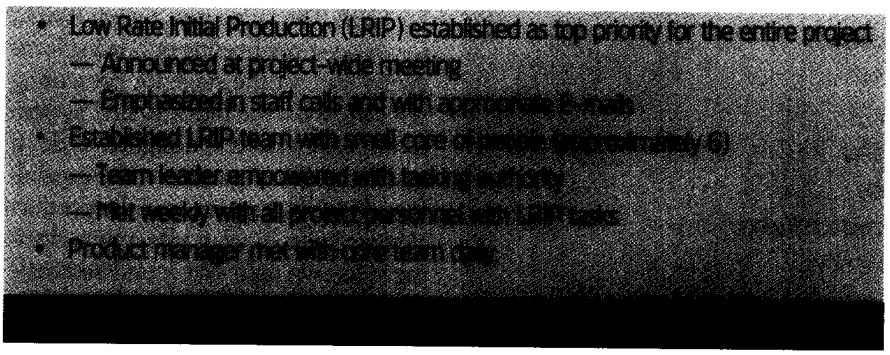
The cost IPT's mission was to get an Army Cost Position (ACP) established and assist the Cost Analysis Improvement Group (CAIG) in their review and analysis of the ACP. This process was much more involved than I expected and was the topic of numerous discussions. The cost IPT was very successful with the ACP, and the program was able to undergo a "paper Cost Review Board" because of their diligence. Even so, getting the CAIG assessment of the ACP was the very last thing completed before the OIPT, and it threatened to delay the process. Although we started a full year in advance and worked closely with analysts at all levels, this seemed to be a never-ending, open issue. In fact, new issues were raised on the day of the DRM. As you will see elsewhere, the IPT process can only do so much.

## Test IPT

Since the test program is so vital to getting a decision, a few points are worth noting. The Block II/BAT missile had a highly successful flight test program leading up to the decision reviews. Even so, we found that casual observers, including some IIPT members, had difficulty differentiating between test results and test objectives. For example, just because a test did not result in 100-percent target hits does not mean it did not meet its objectives. Test objectives must be emphasized to head off unrealistic expectations.

The Block II/BAT system was faced with a mismatch of the evaluation methodology and the system schedule. The eval-

FIGURE 2. **In-House Team**



uation methodology for submunition reliability was established along with the initial Test and Evaluation Master Plan (TEMP) and relied on a test-fix-test approach. Schedule changes caused by the Program Objective Memorandum and Congressional cuts caused us to purchase all of our test hardware before testing, thus negating the opportunity to make fixes between tests. We noted the various problems, devised fixes for them, and will introduce the fixes into the next hardware build.

An alternative evaluation methodology that takes delayed fixes into account was available and applied to our system. Although we still were evaluated based on the original approach, having an alternative to better explain the real situation was essential in getting a production decision. The lesson learned here is to ensure the evaluation methodology is realistic for your situation. Our test IPT worked well in presenting the available data in a reasonable way.

One other observation concerning testing is that you will be evaluated and held responsible for things out of your control. Expect it, and find a way to mitigate the risk to your program. In our case, the command and control (C2) system, the launcher, the missile, and the BAT submunitions all met expectations. Army TACMS-BAT relies on other systems, managed by other project offices, to locate the target and feed the required information into the C2 system. While completely out of the control of the Army TACMS-BAT Project Office, the Block II/BAT system was rated "yellow" for effectiveness because of the targeting aspect of performance.

## A Home Away From Home

You'll need a conference room or place where you can retire at the end of the day to assess progress and get ready for the next pre-briefing or meeting. You'll also need graphics support, classified storage, secure E-mail, and phones. What worked for us was to use the Crystal City, Va., office of one of our support contractors. Located close to the Metro, it was next to an approved Army Lodging Success Program hotel.

## Documentation — The Good, the Bad, and the Ugly

DoD 5000 lists the various documents required for a decision review. While all are important, some are more important than others. By far, the TEMP is the most critical. It drives your budget and schedule and provides the means of assessing performance. As noted in Figure 3, a standing test IPT was required to stay on top of the test program. At the IPT level, early agreement on the TEMP emerged. Even so, it took several months and multiple changes for the TEMP to gain approval at Operational Test and Evaluation Command (OPTEC). The lesson here is that, once again, the IPT process works well, but not well enough.

The TEMP may have been the most important document, but the ACP was certainly the most troublesome. Development of the ACP went relatively smoothly because of the superb work done by the cost IPT. After the "paper Cost Review Board," getting the CAIG's validation and assessment of the ACP was difficult, despite having worked the issue for a year.

The System Assessment is prepared and briefed by OPTEC. Much more comprehensive than I anticipated, it includes assessments of many things besides testing and performance. Review of the system assessment in advance of the ASARC (and the ASARC pre-briefs) is key. While not your document, an opportunity still exists to influence the verbiage of OPTEC's assessment. Another observation is that the assessment tended to focus on the Milestone III (full-rate) criteria rather than the low-rate criteria. In our case, we have different performance requirements for low rate and full rate. It proved extremely beneficial in that OPTEC not only joined us for selective pre-briefings, but also briefed their assessment to the IIPT.

Finally, remember that the assessment is based on effectiveness, suitability, and survivability, not necessarily tied to acquisition milestones. Don't expect a clear statement such as, "Ready to enter Low-Rate Initial Production [LRIP]."

FIGURE 3. **IPTs**

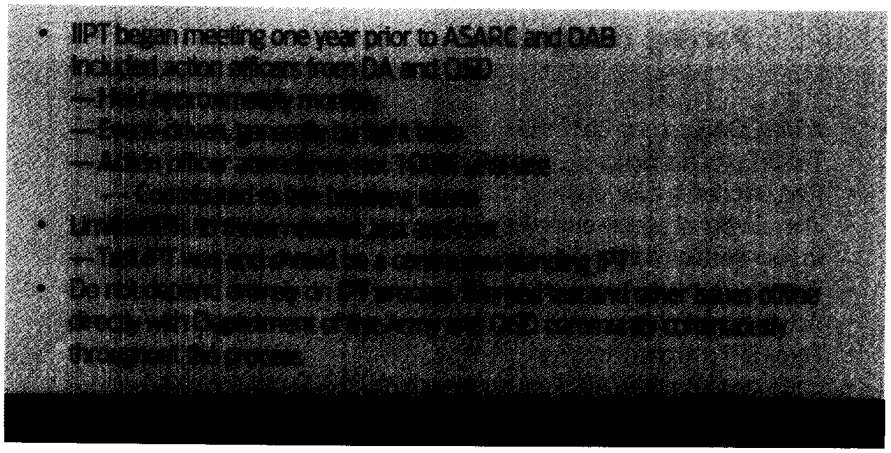
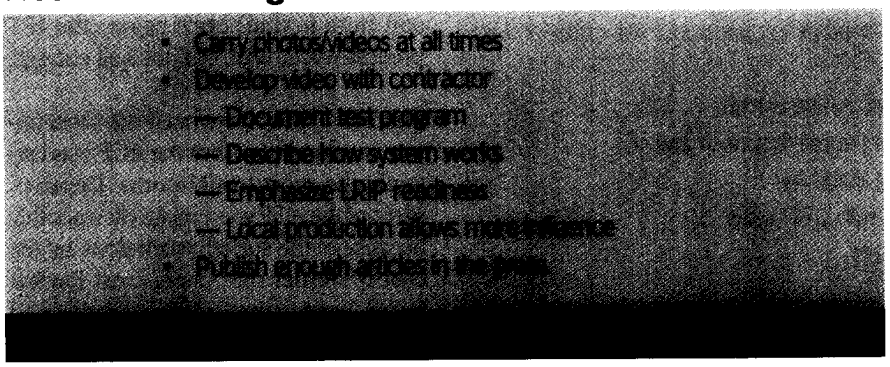


FIGURE 4. **Marketing**




Modeling and Simulation (M&S) played a major role in our test activities. While not a specific document called out in the DoD 5000 series, models developed as part of your program require formal accreditation by the Commanding General, OPTEC. Because the Block II/BAT missile has requirements to operate in weather and countermeasure environments that are difficult or impossible to replicate in actual flight tests, we developed the STRIKE model. Before the results of the model (in conjunction with actual test data) could be accepted as genuine measures of performance, the model had to be accredited. Although development of the model was highly successful, our emphasis on the System Assessment caused us to lose visibility on the accreditation process. Although we eventually completed the accreditation, we should have started the process earlier in our program.

Our TSM effectively staffed the Operational Requirements Document (ORD) and also took the lead in the Joint Requirements Oversight Committee. The ORD outlines the Critical Performance Criteria, which, in our case, made up the bulk of the exit criteria. Exit criteria are one of three categories of items by which you will be judged. The others are the directives from your previous Acquisition Decision Memorandum and the listing of critical issues for a milestone review from DoD 5000.

The Modified Integrated Program Summary (MIPS) is intended to be the primary Army decision document to support milestones. In reality, it was not used as a decision tool, and was provided to the Army Acquisition Executive only after the decision was already made. We plead guilty to not submitting it on time, but found it didn't fit into the decision cycle created by the IPT environment.

## Sell Your Program, Don't Just Present It

You have to approach a decision process as if you are selling a product. You cannot afford to simply present your program; you have to sell it (Figure 4). You will find that some of the principal players and decision makers have little or no idea about your system; for them, you will have to start with the basics. I carried photos at all times and created a video to specifically support readiness for LRIP. The video was a great lead-in to whatever pre-briefing or briefing I was giving and set the stage for presenting not only what the Block II/BAT system is, but also what it is designed to do. It addressed the requirement, the capabilities, the test program, and the production facilities. In all, it was a mini-briefing in its own right. Never underestimate the power of a photo or video!

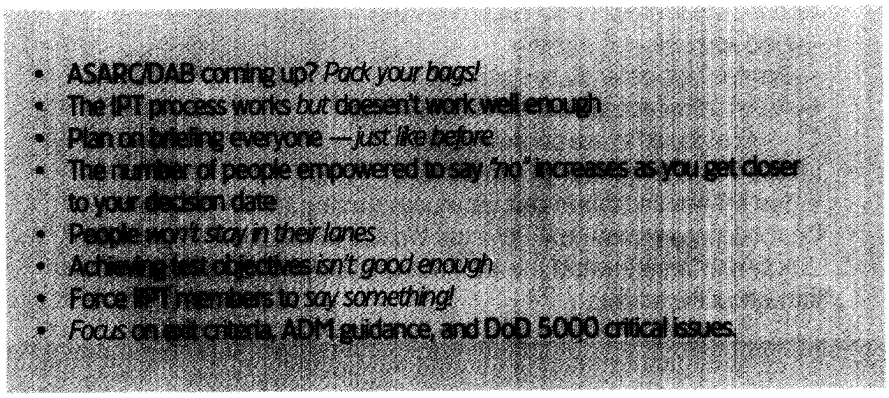
Something that we did not do very well was take advantage of the opportunities to highlight successful test events and accomplishments through positive press releases. Although we had occasional articles in the Redstone Rocket, our local command information paper, in hindsight we needed items that would have visibility within the Pentagon.

## No One Said it Would Be Easy

I can not say that the decision review process is enjoyable or even that it works as outlined within the IPT process. It is, however, rewarding to know that a great weapon system is one step closer to being in the hands of our warfighters. Acquisition reform, so highly evident in PM/contractor relations, is not as obvious within the Pentagon. The IPT process makes it easier to draw out positions and issues, yet lacks what it takes to bring issues to closure. Only by empowering team members to speak for their organizations and by ensuring that what is being said truly represents positions of all the principal players and decision makers can the process improve.

Having said that, only with the hard work of the IIPT members were we able to resolve most issues and meet with the principal players and decision makers to work through the others. Figure 5 recaps the program strategies discussed in this article. Taken together, they empowered us to achieve our common goal – to provide a superior weapon system for the warfighter in the field, well into the 21st century.

FIGURE 5. **Parting Thoughts**




**Editor's Note:** For comments or questions on this article, send an E-mail to the author at **kelley.griswold@msl.redstone.army.mil.**

AIR FORCE NEWS SERVICE

# ACC Pursuing Information on Chemical Agent Disposal Sites

LANGLEY AIR FORCE BASE, Va. (AFPN) – Air Combat Command (ACC) has launched an initiative to identify and clean up sites where chemical warfare materials may have been disposed of at many ACC installations in the past.

Named the chemical agent records search initiative (CARSI), the effort is focusing on chemical agent identification sets (CAIS). The sets, which contain four-ounce vials of mustard agent, were used for chemical agent training from the 1920s to the 1960s.

The initiative was prompted by the discovery of sets during a routine environmental cleanup at Ellsworth Air Force Base, S.D., in August 1997.

During the early 1980s, the Army destroyed about 21,000 sets, and officials here believe most of the rest were expended during training. However, discoveries like the one at Ellsworth suggest that some of the sets may have been buried, which was an acceptable disposal practice during the period they were used for training.

"There isn't an immediate danger to the base or surrounding communities," said Norm Guenther, the ACC program manager. "The potential for a problem exists primarily during construction activities when digging is taking place."

Phase II of CARSI is currently underway, and ACC has hired Mitretek Systems, a nonprofit organization working in the public interest, to conduct confidential interviews with current and former Air Force employees to identify potential CAIS disposal locations. Besides conducting interviews, Mitretek will also review records at ACC bases and regional repositories for more information on CAIS use and disposal. Phase II is expected to be completed some time this year.

"We're hoping that the more people we reach, the more useful information we'll be able to gather," said Guenther.

The first phase, conducted between November 1997 and May 1998, involved a search of national records repositories. Mitretek reviewed correspondence, inventories, news reports, and other sources, looking for references to the use of or potential disposal locations of CAIS. The results of Phase I showed evidence of historical usage of CAIS at most ACC bases; however, no specific disposal locations were found.

A recovered chemical warfare materiel response handbook was completed and provided to ACC installations during Phase I to ensure base people have the knowledge and the tools to respond appropriately in the unlikely event CAIS are discovered.

"Part of this initiative is also to make sure our people know how to respond should they encounter a problem unexpectedly," said Guenther. "With this handbook, they will be able to do that."

Anyone with information about the past use and disposal of CAIS at ACC installations should contact the survey team at Mitretek, toll free at (877) 237-8789 or send an E-mail message to afsurvey@mitretek.org.

Alternatively, letters may be mailed to Donna Grubb-Hewlett, Mitretek Systems, 7525 Colshire Drive, McLean, Va. 22102-7400.

Questions on the initiative should be directed to Guenther at (757) 764-9315, or the base environmental flight chief.

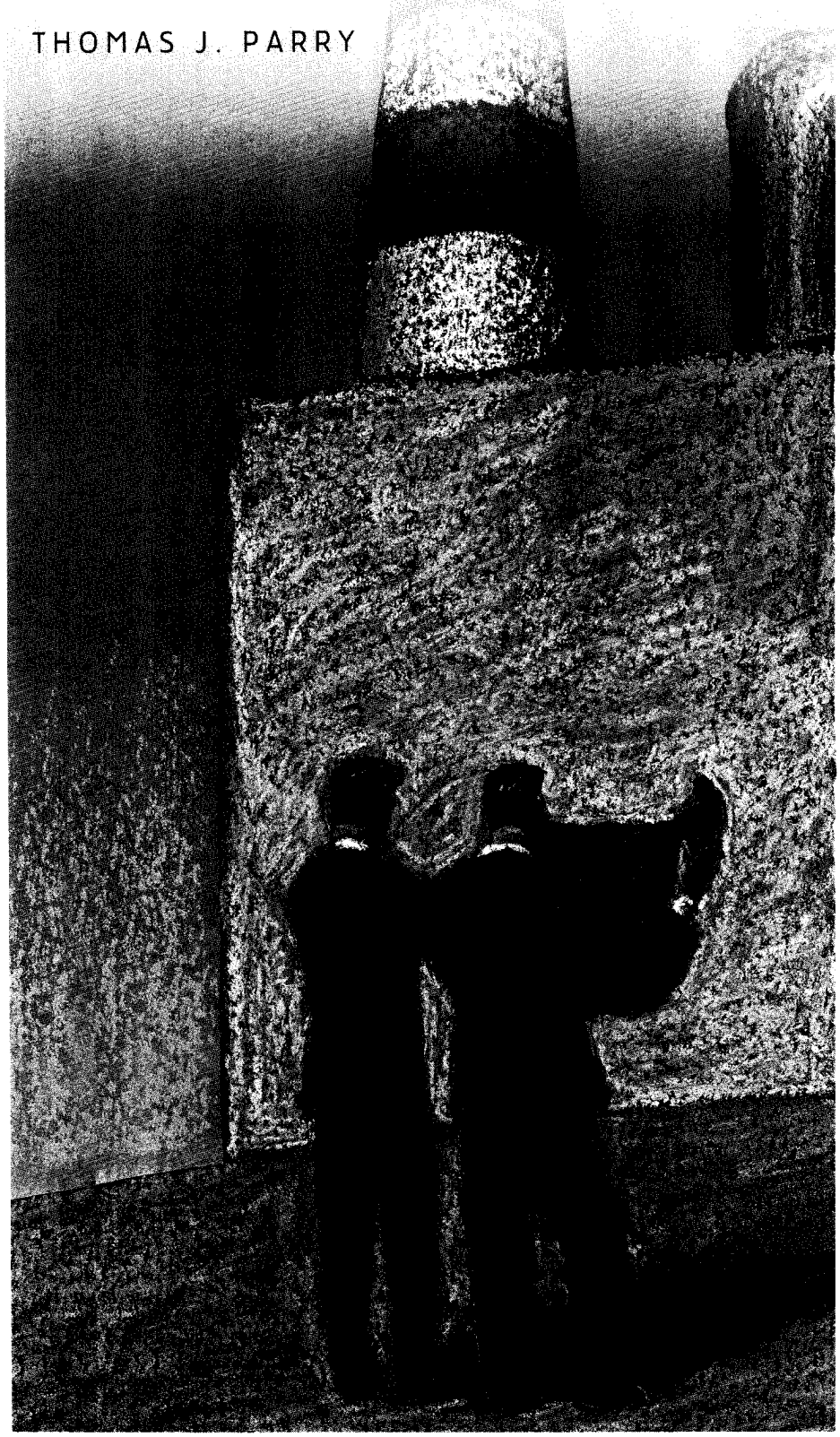
**Editor's Note:** Published by the ACC News Service, this information is in the public domain at **http://www.af.mil/news** on the Internet.

A FOUR-OUNCE BOTTLE OF MUSTARD AGENT WAS RECOVERED FROM A LANDFILL AT ELLSWORTH AIR FORCE BASE, S.D. AIR COMBAT COMMAND HAS LAUNCHED AN INITIATIVE TO IDENTIFY AND CLEAN UP SITES WHERE CHEMICAL WARFARE MATERIALS MAY HAVE BEEN DISPOSED OF IN THE PAST.

# IPPD Gains Increased Emphasis Through Publication of New DoD Handbook

## Meeting Cost and Performance Objectives From Product Concept Through Production

THOMAS J. PARRY



As early as 1992, a Defense Science Board (DSB) report first recommended implementation of Integrated Product and Process Development (IPPD) within DoD. In 1994, with the impetus for reforming the DoD acquisition process gaining momentum, newly enacted legislation, particularly the Federal Acquisition Streamlining Act (FASA), opened the door for innovative management techniques such as the IPPD.

In 1995, realizing the need for a fundamental change in the way the Department acquires goods and services, [then] Defense Secretary William Perry issued a memorandum mandating that the concepts of IPPD and Integrated Product Teams [IPT] be applied throughout the acquisition process to the maximum extent practicable.[1]

Why did Secretary Perry consider IPPD to be of such value to the acquisition process that he mandated its application? How is it to be "applied throughout the acquisition process?" By whom?

The task of answering frequently asked questions and "getting the word out" to the acquisition workforce fell to Systems Engineering within the Office of the Under Secretary of Defense (Acquisition and Technology). From our view, we could not start that process without first

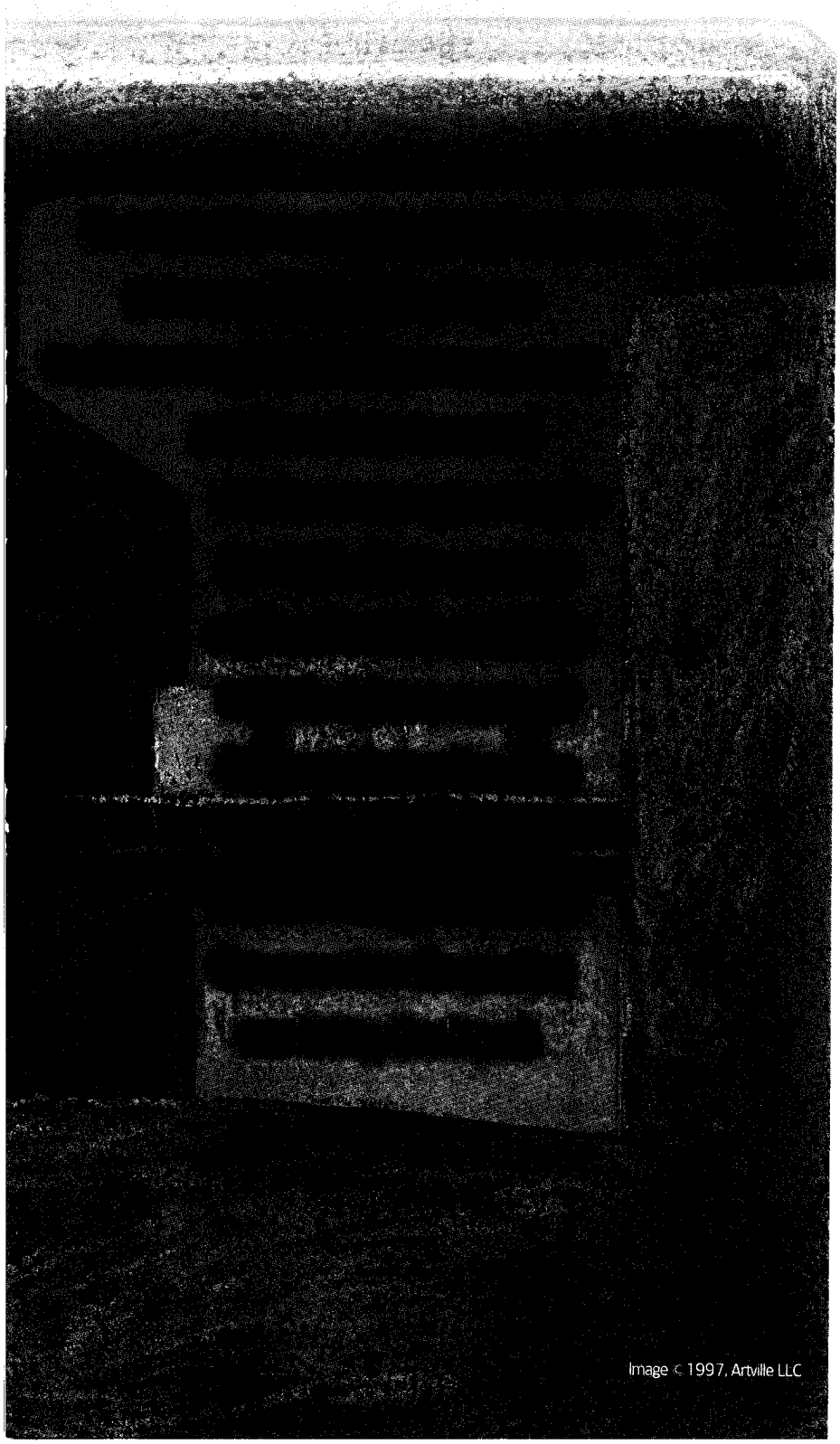
*Parry is the senior engineer and principal assistant to the Deputy Director, Systems Engineering, Office of the Under Secretary of Defense (Acquisition and Technology). His professional career includes over 30 years of systems engineering experience in the Office of the Secretary of Defense, Department of the Air Force, and private industry.*

defining IPPD and all it embodies in a way that the acquisition workforce could relate to their day-to-day activities.

## IPPD — A Management Approach

Beginning our efforts in 1995, we set out to establish policy and publish guidance on what IPPD is and how to implement it. Using Perry's original memorandum and several acquisition reform studies, we drafted and received approval of the new wording for inclusion in DoD Directive 5000.1 and DoD Regulation 5000.2-R relative to implementing IPPD on major weapon system programs.[2,3] DoD 5000.2-R defines IPPD as:

**A management technique that simultaneously integrates all essential acquisition activities through the use of multidisciplinary teams to optimize the design, manufacturing, and supportability processes. IPPD facilitates meeting cost and performance objectives from product concept through production, including field support.**




In February 1996, our office published the *DoD Guide to IPPD*, which addresses three major components of IPPD: tools, teams, and processes.[4] Coupled with the *Rules of the Road – A Guide for Leading Successful Integrated Product Teams*,[5] which provides a discussion of oversight IPTs, the guide laid the foundation for use of IPPD in the Department.

That was four years ago. Today, to further help program managers in their implementation of IPPD, we recently published the *DoD IPPD Handbook*.[6]

This article reemphasizes the need for IPPD in defense acquisition programs and presents a chapter-by-chapter recap of our latest handbook and its contents. Before we get into the handbook, however, a brief recap of IPPD and its history is in order.

## Need for IPPD

To respond to increasing global economic pressures, U.S. industry began implementing engineering management practices of concurrent or simultaneous engineering in the 1980s. These practices employed multifunctional or multidisciplinary teams of design and manufacturing engineers to develop the manufacturing processes at the same time the product was being developed. By "designing it right the first time" and cutting scrap, rework, and engineering change proposals, companies cut cycle time and costs, while improving quality.

IPPD expanded on concurrent engineering, including developing all the processes parallel with the product. More than product and process engineering functions, IPPD also includes all stakeholders – those developing not only the product, but all product-related processes, such as test and evaluation, manufacturing, support, operations and training, as well as business processes.

Multidisciplinary teams can include the primary stakeholders – the customers or users – and personnel from functions such as design, manufacturing, maintenance, test, quality, finance, and contracting.

A significant number of documented cases credit IPPD directly or cite generic practices and tools that correspond to the IPPD approach for reductions in cost and cycle time, and increases in quality and performance. These cases are widespread and encompass DoD as well as commercial programs.

Two DoD programs, which were studied in depth, revealed that design milestones were achieved 2.5 years sooner than an earlier comparative program, and that changes to the design were less than 10 percent of the changes made in the earlier program. In another DoD program, IPPD implementation resulted in the design and production of some parts with higher quality and a cost reduction of 30 percent.

In almost every case, the programs reported better working relationships between government and industry and identified risk and problems earlier. Ultimately, early problem solving resulted in reduced cost and a product performance that better met the customer's requirements.

## What's in the Handbook?

Program office personnel and their counterparts on industry program teams are the target audience for the handbook. Besides telling you how to get started in IPPD, the handbook suggests methods and specific tools that program managers can use to implement IPPD – no matter where they are in the acquisition process. Interspersed with the text are implementation examples from acquisition programs and industry. Program managers should keep in mind, however, that there are many ways to accomplish IPPD.

IPPD is a management approach, not a specific set of steps to be followed. The seven chapters in our latest handbook contain information to help decide which techniques and tools are best suited to your program.

CHAPTER 1
The handbook begins by introducing definitions of relevant terms and principles, such as stakeholder involvement, customer focus, early and continuous life cycle planning, concurrent development of products and processes, and proactive identification and management of risk.

CHAPTER 2
Chapter 2 is the essence of the handbook and explains the application of IPPD across the DoD acquisition process. The greatest detail is given for Phases 0 and I because this is where implementation of IPPD gives the biggest payoff.

CHAPTER 3
Chapter 3 discusses team best practices, specifically working-level IPTs, including team structure, member selection and training, team management, charters, and team meetings.

CHAPTER 4
Covering IPPD metrics for products, processes, and progress, Chapter 4 discusses several examples of metrics that could be used by programs and further addresses the metrics development process.

CHAPTER 5
Containing information on integrated information environments, Chapter 5 includes information on shared databases, electronic business, groupware, use of the Internet, and security.

CHAPTER 6
Containing a thorough discussion of the necessary connection between IPPD and modeling and simulation (M&S), Chapter 6 explains the use of Simulation Based Acquisition (SBA), tells how M&S is addressed in DoD, and provides several examples of the use of M&S for early decision making in IPPD.

CHAPTER 7
The last chapter concludes the handbook with descriptions of additional tools that can offer substantial benefits in an IPPD environment. These include tools to assist decision making, such as Quality Function Deployment, defect prevention tools, and cost models.

## Why Would You Even Want to Use IPPD?

To answer that question, let me address four principles of IPPD that I believe will help you achieve the benefits of IPPD implementation on your programs.

**Stakeholder Involvement and Customer Focus.** A stakeholder is an organization or functional activity that has a stake in the decision at hand or the outcome of the program. The term stakeholder also is used for the empowered working-level representatives of that organization or functional activity who serve on IPTs. As such, stakeholders are important decision makers. They control the resources and collectively have the know-how to get the job done.

The term "stakeholder" is used throughout the handbook in both senses of the word. The handbook stresses the importance of having empowered representatives (stakeholders) from all of the functional areas involved with the product and processes – all who have a stake in the success of the program – such as design, manufacturing, test and evaluation, logistics, personnel, and, especially, the customer.

IPPD management practices promote a customer focus by including the customer in decision making and on the multidisciplinary teams. These teams conduct trade studies during the requirements definition and development processes to ensure that the design remains consistent with customer needs and is affordable. One such trade-off analysis process that is focused on reducing and controlling life cycle cost, while meeting customer needs, is called Cost As an Independent Variable.

**Concurrent Development of Products and Processes.** Concurrent development of products and processes refers to the simultaneous development of the deliverable product (hardware and software) and all of the processes necessary,

not only to make that product, but to make that product work. The effective development of these processes can significantly influence the acquisition and life cycle cost. Examples include the manufacturing processes needed to fabricate the product, the logistics support processes needed to support the product, or the processes to collect and disseminate information. Emphasizing design of these processes, *while* the product is being designed, helps avoid costly, complicated, or unworkable supporting processes when the product is produced and fielded.

Not developing the processes concurrently with the product could wipe out other potential cost reductions by using an inefficient manufacturing and support process, or by causing a redesign of the product. Concurrent development of the hardware and the software significantly eases hardware and software integration.

Multidisciplinary teamwork through IPTs, with an emphasis on real-time and open communication, is key to accomplishing this concurrent development. An enhanced communication environment that includes a shared database where stakeholders can access information is of primary importance to the efficiency of concurrent development.

Another enabling tool for concurrent development is M&S. Alternative product and process concepts and designs can be "played out" in models and simulations early in the process to aid in decision making and trade-offs.

Seeking to streamline ways in which it acquires systems, DoD is looking at M&S tools as a potential way to reduce the time, resources, and risk associated with the process, while improving the quality of the systems produced through SBA.

**Early and Continuous Life Cycle Planning.** Early and continuous life cycle planning is accomplished by having stakeholders, representing all aspects of a product's life cycle, as part of the multidisciplinary teams. Early life cycle planning with customers, functions, and suppliers lays a solid foundation for the various phases of a product and its processes. Key program activities and events are defined so that progress toward cost-effective targets can be tracked, resources can be applied, and the impact of problems, resource constraints, and requirements changes can be better understood and managed. Early emphasis on life cycle planning ensures the delivery of a functional, affordable, and supportable system.

**Proactive Identification and Management of Risk.** IPPD is not a "design now, test later" approach to product and process development. Proactive identification and management of risk is accomplished in many ways in the IPPD environment.

IPPD is key to an organized, comprehensive, and iterative approach for identifying and analyzing cost, performance, and schedule risks and for executing mitigating actions to control critical risk areas. IPTs develop technical and business performance measurement plans with appropriate metrics to monitor the effectiveness and degree of anticipated and actual achievement of technical and business parameters.

M&S tools are used to simulate, test, and evaluate the product prior to starting production. For example, the Simulation, Test, and Evaluation Process (STEP) is a major DoD initiative designed to improve the acquisition process by integrating M&S with test and evaluation.[7] STEP moves beyond the "test-fix-test" approach to a "model-simulate-fix-test-iterate" approach. Problems are fixed as they are discovered.

In addition, robust design methods are used to minimize problems in manufacturing and operations. Event-driven scheduling is used to integrate all development tasks and ensure that a task is not started until all prerequisite tasks are complete.

## Follow-on IPPD Study

Now that more detailed guidance in the form of our *DoD IPPD Handbook* is available, we need to ensure that appropriate training is provided to current and future members of the acquisition workforce. A training videotape will soon be available from the Defense Acquisition University (DAU), and a formal course is under joint development by our office and DAU. A follow-on study has also been initiated to look at the maturity of IPPD implementation across a broad spectrum of programs, and to bring forward the lessons learned on what works and what doesn't. We want to find successful examples of IPPD implementation—including the pitfalls to avoid and the barriers to eliminate—and make all this information conveniently available to you.

## Want to Volunteer?

If you have good or bad lessons learned or you believe your program or project is "Best In Its Class," why not share your observations and experiences with other program managers? Just think how you

will be helping your fellow program managers, while simultaneously broadcasting the successes of your program.

We want to encourage you to participate in our IPPD study. We also welcome any information that you may want to submit anonymously or informally (without participating in the formal study).

Finally, we would like to know your response to the handbook. What helped? What didn't? How can we change the handbook to help you better, and what format do you think would be especially helpful for disseminating the results of our study? Contact Tom Parry at (703) 695-2300 or **parrytj@acq.osd.mil**.

## REFERENCES


1. OSD Memorandum, "Use of Integrated Product and Process Development and Integrated Product Teams in DoD Acquisition" (OSD, May 10, 1995).
2. DoD Directive 5000.1, Defense Acquisition (OSD, March 15, 1996).
3. DoD Regulation 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs (OSD, March 23, 1998).
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7. For a further discussion of STEP, see "Meet 'MASTER' – Modeling & Simulation Test & Evaluation Reform," *Program Manager*, March-April 1999, p. 8.


# ST. LOUIS CHOSEN FOR DOD'S 1999 MAINTENANCE SYMPOSIUM

The 1999 Department of Defense Maintenance Symposium and Exhibition will be held Nov. 15-18, at the Regal Riverfront Hotel, St. Louis, Mo. The theme for this year's symposium, which is co-sponsored by the National Defense Industrial Association, is "Transforming Maintenance with Technology."

Maintenance comprises the largest of DoD's logistics workforces, with more than 500,000 personnel and annual appropriations of more than $40 billion.

This third annual conference is the single opportunity for the entire DoD maintenance community to come together to share information and focus on weapons systems and equipment maintenance. Maintenance managers, both military and civilian, from all ranks and Services will be in attendance. They represent the full range of DoD's maintenance operations, including depots, operating commands and units, and research and development activities, along with their commercial industry counterparts.

Senior Defense officials and congressional representatives also will attend and participate in the conference. In addition, the DoD Maintenance Awards are presented to outstanding maintenance units at a special awards banquet held during the symposium.

Symposium planners say their agenda will address key challenges and explore common interests for maintenance management systems and process technologies that will transform maintenance operations for the 21st century. Seminar sessions will:

- Identify the major management issues for maintenance.
- Review management and technical solutions in design or development.
- Demonstrate technology applications for maintenance management and processes.
- Identify needs for new management tools, research and products.
- Showcase world-class operations.

The entire 1999 DoD Maintenance Symposium is open for press coverage. The media point of contact is Glenn Flood, (703) 695-6294.

**Editor's Note:** This information, released July 20 by the Office of the Assistant Secretary of Defense (Public Affairs), is in the public domain at **http://www.defenselink.mil/news** on the Internet.

ARCH SYMBOLIZING THE CITY OF ST. LOUIS, MO. – GATEWAY TO THE WEST.

DoD Photo

OASD PUBLIC AFFAIRS NEWS RELEASE

# Advanced Concept Technology Demos Serve The Warfighter In Operation Allied Force

Critical warfighter needs throughout Operation Allied Force were met by the Department of Defense's Advanced Concept Technology Demonstration (ACTD) program. The ACTD process provides modern technologies in rapid response to warfighter demands at reduced costs and time.

Products from nearly 20 percent of the 57 ACTDs developed by the program since its 1995 initiation were either deployed or prepared for deployment to the Balkans in support of Operation Allied Force. A few examples include:

The Predator Medium-Altitude Endurance Unmanned Aerial Vehicle provided a rapidly deployable reconnaissance and surveillance capability. The ACTD process enabled a Predator deployment to the Balkans less than 19 months after the program's start (as contrasted with an average defense program development time of 11 years).

Software developed for the Precision/Rapid Counter-Multiple Rocket Launcher ACTD was used in theater for mission planning.

Precision Targeting Identification allowed a day/night target detection, classification, and dissemination capability at ranges that cannot be achieved with conventional detection and monitoring systems.

Counter-proliferation I (CP I) provided an integrated strike capability to neutralize weapons of mass destruction, storage facilities, and other counter-force targets. CP I capabilities were deployed for use against hardened targets.

Advanced Concept Technology Demonstrations are now a proven method for reducing acquisition cycle time, a key goal of DoD's overall acquisition reform efforts. They rapidly provide modern technology to the warfighter and save significant expense by avoiding unnecessary developmental costs. ACTD program funding – part of the President's fiscal 2000 budget currently pending in the Congress – will serve to continue these successful initiatives and permit additional urgent CINC needs to be addressed.

**Editor's Note:** This information is in the public domain at **http://www.defenselink.mil/news** on the Internet.

# Attack [Send]!

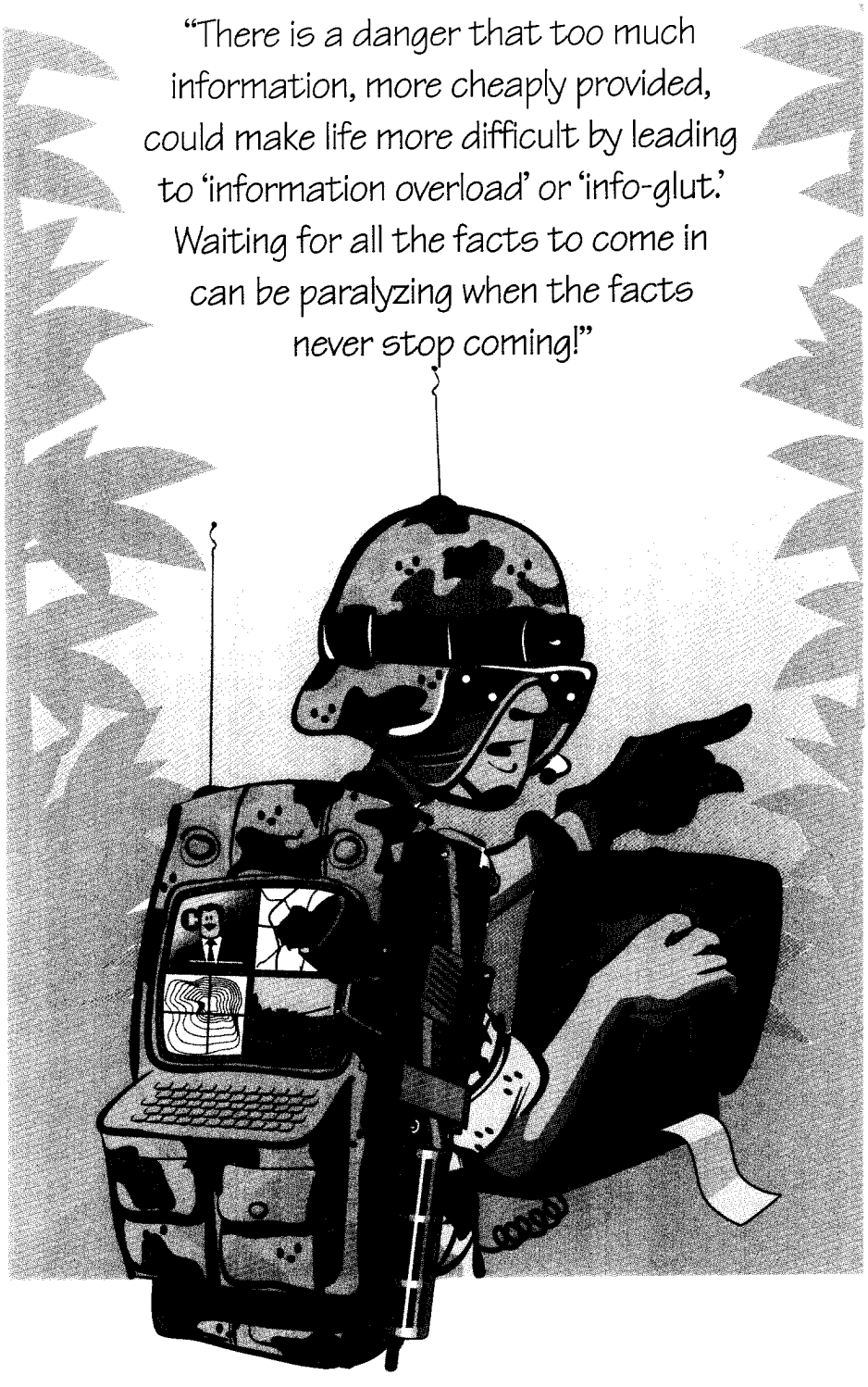
## Leveraging Computer Capabilities To Address Computer Misuse at Battalion, Company Levels

CAPT. STEVE HENDERSON, U.S. ARMY

Imagine an Army of yesterday, an Army without computers, without Power Point®, without E-mail. A general crouches down on the ground, his battle captains anxiously awaiting his orders. He takes off his gloves and briskly sweeps away the leaves and loose grass that cover the soft dirt at his feet. He reaches into his pocket and retrieves a few small pebbles and begins to draw with his finger in the soft soil.

"Twenty-ninth Regiment, you'll move up on a wide arc like so," he states as he drops a pebble at the head of a small row he plowed with his finger. A young colonel nods in total comprehension. The general continues drawing in the earth, carving a violent inverted "T" with a pebble at the bottom. "Fourteenth Regiment, you'll block the enemy counterattack here" he states, and is answered by another nod in the affirmative.

Suddenly a courier approaches, and recites from memory a situation update from a unit already in contact. The courier explains in detail the enemy's current composition and disposition, and gives exact details on the future role of friendly artillery and cavalry. The general responds with two minutes of updates and requests. The courier salutes and departs. The general returns to his briefing, sketches a few more lines, rearranges a few more stones, and dismisses his men.




*Henderson is a student in Class 99-2, Aviation Officer Advance Course, Fort Rucker, Ala.*

The scene of a modern-day Tactical Operations Center (TOC) crowded with banks of computers, local area network cables, and photocopiers? No. The scene of an efficient and automated system of battle command and staff that helped win American wars for almost 200 years? Yes.

## Immersed But Not Submerged

Make no mistake about it, the U. S. Army is immersed in the computer renaissance. Just ask any first sergeant how computers impact his operations and he'll show you a field desk full of nifty spreadsheets, laser-printed reports, and memoranda that practically write themselves. Walk into the office of your senior instructor pilot and he'll hit a button and tell you how many hours of required individual training remain for the year and how many hours of flying you have left to work with. March across the hall to your maintenance platoon sergeant, and she'll print you out a list of open faults on every aircraft, show you what parts are on order, and print a list of inspections due for the week.

Although the use of computers improves and streamlines many of the tedious processes inherent in military operations, the expected increase in battle command and staff efficiency remains to be seen. Without a doubt, computer technology in areas such as exceptionally accurate weapons systems and secure communications greatly increases our ability to win wars. But why haven't we seen a comparable increase in the efficiency and conduct of our command and staff functions at the battalion and company levels? Why hasn't the presence of computers in our command posts and TOCs allowed leaders and soldiers to focus less on office functions and spend more time training, maintaining, and leading?

## Computerization — Negative Trends

In many ways, the presence of computers at battalion and company levels has actually diminished and detracted from the ability of units to carry out daily command and staff operations. The following problem areas represent negative trends noted in the field:

**Information overload and paralysis.** Computers provide an incredible amount of finite details to decision makers and staff members. However, some Army leaders and staffs are growing less efficient by taking more and more time to sift through the ever-increasing amount of up-to-date information. Our "one-thirds/two-thirds" planning rule is the leading casualty of this phenomenon.

Appendix I of Field Manual (FM) 101-5, *Staff Organization and Operations,* warns of this problem: "Commanders who demand or allow their staffs to demand perfect information will be more vulnerable to defeat through the loss of initiative."[1] Computer science lecturer Tom Forrester further explains, "There is a danger that too much information, more cheaply provided, could make life more difficult by leading to 'information overload' or 'info-glut.' Waiting for all the facts to come in can be paralyzing when the facts never stop coming!"[2] Likewise, if the normal flow of facts and information is absent or delayed, many staff officers and leaders wait for information that never arrives before proceeding.

**Verbose orders and other correspondence, with less emphasis on analysis.** The computer's ability to quickly duplicate, edit, and "cut and paste" from other products greatly eases the burden of creating orders and other correspondence. However, many units are simply regurgitating higher headquarters' information and staff work rather than conducting independent data collection and unit-level analysis. Or, units reuse old products without injecting new facts and analysis. The net result is a large volume of information that looks suspiciously like a higher headquarters' document or a previous product. This product is passed down to a subordinate commander who may use perhaps 20 percent of the information.

FM 101-5 highlights this problem, stating,: "Army operations produce tremendous volumes of information. Much of this information is useful, but not pertinent, to the commander during decision making. Commanders and staffs who understand this can avoid potential information overload by using effective systems to accurately and rapidly convey information."[3]

**Fascination with flashy presentations and graphics.** The Power Point® slide show, complete with fancy color schemes and animated graphics, is becoming the standard for military briefings. Like any visual aid, computer slide shows can help increase the effectiveness of a military briefing. However, units are substituting

STANDARD DIRECTORIES ON THIS COMPUTER – DO NOT REMOVE

| | |
|---|---|
| C:\Personnel | Personnel-related files (memoranda, rosters, etc.) |
| C:\Training | Training directory – Misc. training memoranda, spreadsheets |
| C:\Training\Schedules | Training schedules |
| C:\Training\Orders | Training-related Operational Orders (OPORD) |
| C:\Training\METL | Mission Essential Task List (METL)-related training, assessments, guidance |
| C:\Operations | Operations directory – Misc. operations memoranda, spreadsheets |
| C:\Operations\Orders | OPORDs |
| C:\Operations\Taskings | Unit Taskings |
| C:\Supply | Supply-related files (memoranda, hand receipts, etc.) |

FIGURE 1. **Hard-Copy Legend for Standardized Directory Structure**

slide shows for more functional visual aids such as tactical maps, overlays, hand-drawn objective sketches, and sand tables. Worse yet, overlays, concept sketches, and maps created with the straight lines and autoshapes of presentation software are terribly inaccurate, misleading, and erroneous. We are excusing a serious lack of attention to detail in the name of eye-pleasing presentations.

To demonstrate, think back to the last time you followed a landing zone/pickup zone sketch or strip map that someone generated with computer graphics. How accurate was it compared to the actual terrain? Undoubtedly, the product appeared extremely linear and two-dimensional, which is very unlike Mother Nature.

**Computers aren't always the answer.** Units often turn to computers as a magic panacea that can solve any problem. However, throwing computers at problems may cause us to ignore or discount larger issues linked to areas such as leadership, personnel, or standard operating procedures. Author and computer consultant James Green argues: "Every office has its problems with poor quality, missed due-dates, lost files, and countless other dilemma that are crying for a solution that no one seems to have the time to develop ... If you have problems now, fix them, then automate. Otherwise you'll find the problems remain, but you may not be able to see them so clearly because they have vanished into the bowels of a computer."[4]

## Leveraging Computers As Combat Multipliers

The lack of tangible improvements and the problems magnified by computers in company and battalion operations are not caused by the *presence* of computers but instead by the *misapplication and mismanagement* of computers. With careful planning, leadership, and inspection, companies and battalions can realize the true combat multiplying potential of computers. The following 10 principles represent essential considerations and important building blocks in the use of computers at the battalion and company levels:

### Principle 1 — Establish and Enforce an Automation Policy

Maximizing the potential use of computers at the battalion and company levels starts with a clearly defined task and purpose for unit-level automation. This policy can take the form of an automation standard operating procedure, policy letter, or mission statement. The end goal of a company or battalion automation program should also be measurable. Examples of automation goals include allowing more time for leaders and staffs to monitor and serve subordinate units or creating more time for subordinate unit planning.

Automation policy must also address when to automate and when not to automate. This guidance must contain specifics. For example, the policy might contain the following clause: "If an activity takes more time to complete on the computer and the time won't be repaid through later reuse, then don't use a computer." Or, "Soldiers will not draw tactical overlays or maps with the computer."

Guidance should focus on what price the unit is willing to pay for an automated product. As Army Capt. Michael C. Dorohovich refers to in his "Commonsense Approach to Automation," units should ask the following question: "Will automating a particular action save time or manpower? If not, then do not change the way you are currently doing business."[5]

Additionally, the unit must decide if computerized products and other forms of automation are worth diverting soldiers and leaders away from their primary wartime mission. Lastly, an automation policy should establish specific standards for computerized products. These standards must focus on improving productivity rather than on making something pleasing to the eye. For example, the battalion and company should set a standardized template for all computerized briefings. This template should include a standard font size, color scheme, and limit on graphics and other niceties. This will prevent "recreating the wheel" and force subordinates to focus on content rather than appearance.

### Principle 2 - Maximize the Principle of Reuse

One of the greatest selling points of the computer is its ability to store and manipulate information electronically. Individuals can easily and quickly recall, edit, and reuse information stored in electronic form. To maximize productivity, all computer usage at the battalion and company levels must address this principle whenever possible. Constantly ask two questions when using the computer: "Am I able to reuse this product later?" and "How can I design and store this product to facilitate reuse?" When reusing old electronic products, ensure they are properly updated and reformatted to adequately address the task at hand.

### Principle 3 — Use Software to Fullest Potential

A major obstacle to increased computer productivity stems from a failure to use software to its utmost potential. As software improves, we are still tied to techniques and habits learned with older products and programs. For example, people are still limiting document filenames to a maximum of eight letters as called for in early operating systems. The results are cryptic names that require opening each file to determine its contents. However, Windows® 95/98 operating systems now allow longer file names (up to 255 characters). Therefore, instead of naming an important training document file "req4tng.doc," save it instead as "Memorandum for Record Requesting Night Vision Device (NVD) Driver Training Area."

Additionally, users can save files with author, title, and descriptions to make classification and organization easier. By taking advantage of these features, units will maximize and facilitate reuse and later reference. Longer file names also facilitate the ability to search a storage device for keywords relating to a topic. Other important and overlooked software features include:

- The ability to make and track document changes (complete with audio-voice commentary) without having to print a single piece of paper.
- Synchronizing personal and professional schedules via E-mail.
- Sharing and consolidating common unit documents via a local network.
- Document and spreadsheet template features that will automatically include and update common fields such as letterhead, date, and signature block.

PRINCIPLE 4 – USE THE RIGHT TOOL FOR THE RIGHT JOB

Units will gain immediate improvements in computer productivity by simply using the right software tools for the right job. When using computers to perform battle command and staff functions, select an application with features that best address your problem. For example, units should store large amounts of similar information about a set of objects (such as Physical Training [PT] scores) using spreadsheets, not word processors. This facilitates sorting and mathematical analysis (totals, averages, highest, lowest). Units should use databases, not spreadsheets, to record a large amount of varying information about a set of objects (such as soldier information). This facilitates data retrieval and general cataloging. Finally, units should not use computers at all if other forms of filing and recording are faster and more efficient.

> Although computers may help achieve a high level of productivity in garrison, we must always consider what happens when we go to war. A dependence on computers in battle command, mission planning, and the military decision-making process can destroy warfighting abilities when deployments, weather, or indirect fire eliminate our ability to use computers.

PRINCIPLE 5 – STANDARDIZE FILE AND DIRECTORY STRUCTURES

Like a cluttered filing cabinet, an unorganized computer directory structure frustrates the retrieval, review, and reuse of information. Addressing this problem with standardized directory and file structures will help battalions and companies realize increased productivity.

To prove this point, examine the file structure on a computer other than your own. Undoubtedly you'll find it cryptic and appalling, and would rather type a new document from scratch than sift through existing information. If you do find something that looks useful, there's no way of telling if it's a draft document or a piece of accurate information. This problem is magnified with computer storage devices growing larger and larger.

Units should organize all computer directories in the unit according to a simple standardized scheme. Examples of possible efficient directory structures include organizing files by traditional staff functions, by document type, or according to the Modern Army Record Keeping System (MARKS) model. The unit should develop a hard-copy legend for the chosen directory structure and post it near each computer. This will help enforce standardization and greatly facilitate the retrieval of information. Figure 1 lists a hard-copy legend of an example directory structure.

PRINCIPLE 6 – DEMAND THE PROPER USE OF COMPUTERIZED GRAPHICS AND PRESENTATIONS

Units must ensure oral presentations accompanied by computerized applications such as Power Point® are accurate in content, efficient in terms of time invested, and maximize the principle of reuse. If a computerized presentation will not be reused, seriously consider using butcher-boards or hand-drawn overhead transparencies.

If a computerized briefing is chosen, ask yourself what the cost of producing the presentation will be in terms of time and effort. If you're on the receiving end of one of these computerized briefings, ask the briefers how much time they took to produce the slides. Then ask them when they last took PT, the date of their last weapons qualification, or the last time they logged flying hours in their particular aircraft.

**All graphic presentations should:**

- Display symbols, graphics, and terminology consistent with FM 101-5-1.
- Display essential information.
- Display information clearly and understandably.
- Display information accurately, reliably, and in a timely manner.
- Be able to be changed promptly and easily as the information is updated.
- Be rapidly distributed to higher, lower, and adjacent units.

FIGURE 2. **FM 101-5 Characteristics of Graphic Information Presentations**

Don't just assume higher headquarters and senior officers expect a large volume of pretty slides. Most senior leaders only expect a briefing that is well rehearsed, contains valuable information, and is briefed by someone who knows the material better than how to use the computer platform upon which it is presented. Army doctrine gives us clear guidelines for developing graphic presentations. Figure 2 lists the characteristics of graphic information presentations as listed in Appendix I of FM 101-5.[6]

If computerized slides are required, then higher headquarters units must push slide templates containing as much format as possible down to subordinate units on disk. This will standardize content and minimize the time subordinates must invest making a slide show.

Finally, never use computerized slides as the primary medium for tactical briefings or mission planning. This includes using computer graphic applications to make strip maps, concept sketches, engagement area sketches, and overlays. No substitute exists for the fidelity and detail of maps, overlays, and hand-drawn sketches. Additionally, a map is always present in a briefing room for constant reference, where a computerized slide is quickly replaced by the next slide in the show. Lastly, the more times a map is scanned or duplicated with graphics, the more it loses its accuracy.

### Principle 7 — Establish Archiving and Data Mining

Encouraging the efficient archiving of electronic files will lead to a long-term increase in command and staff productivity. Periodically collect, classify, and store computerized information such as memoranda, orders, and after-action reviews. Then print out a consolidated catalog of all documents stored in the archive with a description of each file. This catalog will serve as a quick deskside reference and will encourage later reuse or "mining" of information.

The standardized directory structure mentioned earlier will help in this endeavor. This type of large-scale archiving will positively affect unit productivity in three ways:

- First, it will allow individuals to retrieve, analyze, and reuse information and products.
- Second, today's computer operating systems have the ability to search for key words *within* the contents of individual documents, presentations, and spreadsheets. This might allow a staff officer to search the unit archive much like using a search engine to explore the Internet. This same officer might then examine key lessons learned and points of contact when planning a major training event similar to one the unit may have conducted three years ago.
- Third, storing electronic copies will eliminate much paper documentation. This cuts down on needless office clutter. However, ensure regulations do not require a local hard copy before destroying paper copies.

### Principle 8 — Train Soldiers in Efficient Computer Use

Like most tasks in the Army, the efficient use of computers requires effective training. Units should establish organized and informal training sessions to improve and standardize computer usage. These training sessions might mean formal classes integrated with military occupational specialty training, consisting of a task, condition, and standard that supports the staff or unit Mission Essential Task List. Or, training might include self-teaching workbooks designed to drill users on certain computerized procedures.

Focus the training on actual organizational procedures and policies and not just on how to use the software. Knowing how to use a word processor is one thing. Knowing how to use it to create an OPORD in the proper format and then save it in the right place is another. This minor investment in good computer training will save time later and increase command and staff productivity.

### Principle 9 — Implement Version Control

As previously mentioned, one of the biggest selling points of computers is their ability to quickly recall and edit existing information. One can easily recall an existing document, edit a few pieces of information, and produce an updated yet similar product. Access to a good laser printer or copy machine gives us the ability to mass-produce the information and quickly place it into distribution. Future changes are also easily implemented, and new documents are quickly reproduced and distributed.

Before long, several like versions of the same document are on the street. This cycle causes a great deal of confusion as leaders and soldiers struggle to determine which version is the most current. This problem usually arises with movement manifests, OPORDs, or training calendars.

Units must implement version control procedures to ensure increased information flow does not cause increased confusion.

- First, ensure every document contains a date/time stamp. Many software applications allow special fields that automatically print this information in the margin of the document.
- Second, brief changed information as opposed to tossing it into an in-box. Thoroughly announce the changes and instruct subordinates to destroy previous versions.
- Third, if the changes are minor, call the affected units and instruct them to make a pen-and-ink change.

### Principle 10 — Remember, We're a *Field* Army!

Although computers may help achieve a high level of productivity in garrison, we must always consider what happens when we go to war.

A dependence on computers in battle command, mission planning, and the military decision-making process can destroy warfighting abilities when deployments, weather, or indirect fire eliminate our ability to use computers. Simply planning to bring more generators, plastic bags, and plywood to protect our machines is not enough. We must plan for and rehearse "computerless" opera-

tions in garrison and during field problems.

Leaders and staffs must practice and develop good command and staff procedures that capitalize on pen, paper, acetate, and grease pencil. Units can also minimize the drastic effects of suddenly not having computers by not incorporating computers into daily operations when other means are available.

## Harnessing the Potential

Computers are powerful machines that retain the potential to serve as combat multipliers in all facets of military operations. However, active leadership, planning, and training are essential to ensure we harness the absolute potential of these useful tools.

Likewise, we must remember that unmanaged application of automation or dependency on computers can have debilitating effects on the way we do business. Army leaders at the battalion and company levels must ensure computer usage is guided by clearly defined goals, sound policy, and standardized and supervised procedures. These steps will help bring dramatic increases in battle command and staff effectiveness.

**Editor's Note:** The author welcomes questions or comments concerning this article. Contact him via E-mail at **stevehenderson@digitalblacksmith.com.**

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Photos by Richard Mattox

## DSMC Hosts Single Process Initiative Workshop

Civil-Military Integration of government-industry business practices and processes has been a longstanding goal of Acquisition Reform. The Single Process Initiative (SPI) is the mechanism by which DoD expedites the transition of existing government contracts to common best processes. Based on input from military servicemembers of the Block Change Management Team, Stan Soloway, Deputy Under Secretary of Defense (Acquisition Reform); Navy Rear Adm. Leonard Vincent, Commandant, Defense Systems Management College (DSMC); and Air Force Maj. Gen. Timothy Malishenko, Commander, Defense Contract Management Command (DCMC), co-sponsored an SPI Workshop Jul. 19-21 at DSMC's main campus, Fort Belvoir, Va.

Approximately 150 people attended the three-day workshop, representing the working-level SPI community from the military services, Defense Logistics Agency (DLA), DCMC, Defense Contract Audit Agency (DCAA), Department of Defense Inspector General, other government personnel, and invited industry representatives. "Streamlining the SPI Process" was the theme for this "working" workshop, which focused on ways of streamlining and improving SPI through communication, education, and sharing of lessons learned.

Institutionalized by Dr. Paul G. Kaminski, Under Secretary of Defense (Acquisition & Technology) in a December 1995 memorandum, SPI allows contractors to have existing contracts modified to replace multiple government-unique management and manufacturing systems with common, facility-wide systems. Contractor proposals are reviewed and approved by a Management Council, which is composed of senior representatives from customer buying activities and program management offices, DCAA, DCMC, and contractors. After approval of a contractor's SPI proposal, the Administrative Contracting Officer executes a block change modification that modifies all affected contracts at the facility.

DCMC has the lead for implementation of SPI. For more information on Civil-Military Integration of government-industry business practices and processes, go to the SPI Center Web site at **http://www.dcmc.hq.dla.mil/dcmc_o/oc/Spi/index.htm** on the Internet.

From left: Air Force Maj. Gen. Timothy Malishenko, Commander, DCMC; Jill Pettibone, Commercial Designations Integrated Process Team (IPT); Stan Soloway, Deputy Under Secretary of Defense (Acquisition Reform); Navy Rear Adm. Leonard Vincent, DSMC Commandant.

Kathy Zalonis, Acting Director, SPI Center, DCMC

**Editor's Note:** "Meet MASTER - Modeling & Simulation Test & Evaluation Reform," which ran on p. 8 of our March-April 1999 issue of *Program Manager,* generated more reader response than any article we've ever published. Lack of space precludes printing them all; however, the letters shown here were typical.

Just finished reading your article in the Mar-Apr edition of the DSMC *Program Manager* Magazine and wanted to provide some feedback from the trenches. First, let me thank and congratulate you for writing an excellent article which accurately zeroes in on the foundational problems facing the M&S [Modeling & Simulation] communities. I work in the 53rd Wing, Eglin AFB, Fla., and currently supervise a group of test managers who are responsible for the T&E [Test & Evaluation] of aircrew training devices (a.k.a., flight simulators). As such, we are keenly aware of the lack of standardization, interoperability, and validation of models for use in training, T&E, and [SBA].

We have attempted a local "grass roots" effort to combine efforts of the acquisition community, the laboratory, and the test and training communities to propose a local repository of models which may be used across the spectrum. No small task. Our suggestion is that each of the major product centers establish a repository of models for their respective technical vectors.

For example, here at Eglin, a repository for [ownership] munition models would be established ... this office would not only maintain the models, but ensure that they were verified and validated. Wright-Patterson would maintain the aero models, SMC [Space and Missile Systems Center] space models, etc. The office here at the Air Armament Center is valiantly attempting this with no funding or manpower authorizations. I agree that PMs are not incentivized to fund the models out of their budget since there is no external advocacy forcing the issue.

As a former PM, I can empathize with the issues you state ... especially the lack of a quick return on investment. Perhaps requiring a basic model as part of an offeror's proposal would get the ball rolling "up front and early." In the not-too-distant future, an offeror's proposal should simply be a virtual prototype.

In the training arena, common models with the same level of fidelity are crucial as we head toward Distributed Mission Training in the Joint Synthetic Battlespace. We currently have limited capability to validate [ownership] models as well as threat models in order to accredit flight simulators for training, let alone the rigorous validation needed for Mission Rehearsal. The only agency which conducts threat model validation for simulators within the AF Information Warfare Center (AFIWC/SAMM) is slated for closure. Once they are gone, we have no capability. We are working through the AF Agency for Modeling and Simulation in Orlando and DMSO [Defense Modeling and Simulation Office] to ensure HLA [High Level Architecture] compliance, but that doesn't solve the issue of models. We don't need any more unfunded mandates ... if we're serious about initiatives like MASTER [Modeling & Simulation Test & Evaluation Reform], we need the top-down leadership, advocacy, and funding to make them a reality.

You state at the end of your article that you hope to precipitate meaningful and open discussion. This is sent in response. Thanks again for bringing this issue to the forefront. You can be assured that it struck a chord with those of us working hard to leverage this great technology!

**Air Force Lt. Col. Keith Yockey**
**Eglin AFB, Fla.**

I read your article in *PM* Magazine with great interest. Just wanted to say "right on!" I can recall ... that M&S issues were always like getting your teeth pulled. Now that I am working at PM Smoke and Obscurants I see the PM's frustration at the lack of smoke and obscurant effects represented in M&S. Hopefully you will have stimulated discussion and action with the article.

**Maj. Mark O'Brien**
**PM, Smoke Obscurants, Edgewood Area**
**Aberdeen Proving Ground, Md.**

I saw [the] "MASTER" article in the DSMC *Program Manager* magazine and thought it was very well done. It is very thoughtful, and asks good questions about who is going to pay for all this M&S work that needs to be done, which people have been glossing over for a long time now. I hope you get a lot of reaction from the article that will cause these questions to be addressed. Thanks for writing the article. It needed to be done. Nice job!

**Dale Atkinson**
**Defense Consultant, IDA**

I offer the following constructive suggestions concerning the MASTER proposal you put forth. Make DMSO a command organization. Give it the 2 to 3 percent funding and allow it to allocate 100 percent of these M&S "fenced" funds to the consortium to do necessary work. Clearly, this work would be to extend or evolve existing models in support of the integrated M&S fabric as defined and bounded by HLA/RTI [High Level Architecture/Run Time Infrastructure]. HLA/RTI itself would still be funded by a limited OSD R&D [Research & Development] line of accounting, separate and apart from the Consortium funds to assure it remains "overarching."

This slight modification to the MASTER concept offers several advantages not immediately evident in the proposal as pitched. Namely:

It makes HLA a far more legitimate standard and naturally extends it into actual practice. At the same time, the consortium, if allowed to do so, provides a valuable feedback forum to make the HLA and RTI more realistic in real-time environments. In essence, there is nothing better than the results of bottom-up, physics-based problem solving to make a standard "stick."

It provides a better mechanism for funds arbitration than via some advisory body such as the DSB [Defense Science Board]. This essential function will involve binding decisions that will govern livelihoods and should legitimately be a line management or "command" function. It can not work as a series of unenforceable recommendations by a set of paid, "super annuited" consultants.

It avoids the inevitable food fights among contending M&S feifdoms/Czars for the available funds, or at least introduces some modicum of control over the natural scrapping. It also assures better balance and helps prevent a handful of aggressive consortium players from creating counterproductive "empires" as is entirely possible in an unconstrained environment where funds are available.

It allows an orderly allocation of funds to further M&S in support of the PM structure. In this regard, the DMSO customer should be clearly defined as the cradle-to-grave acquisition management structure, not the laboratories and field activities. In turn, these acquisition support organizations should really serve as the arms and legs to make M&S happen on behalf of the PMs.

It provides a forum that better integrates the various and sundry Joint activities and the RCC [Range Commanders Council] to participate and, where appropriate, derive the benefit of some added funding as contributors to the consortium.

Most importantly, given an appropriate executive mindset, it provides sound governance of a phenomenon that could otherwise remain chaotic absent good fiscal and policy oversight. In essence, it is in keeping with effective [model management] yet allows the flexibility to leverage resources as required from the vast matrix of available talent to advance our knowledge and achieve a shared objective.

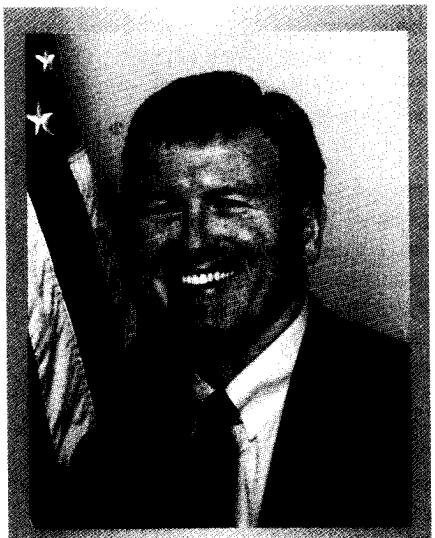
**George Hurlburt**
**Naval Air Warfare Center**
**Patuxent River, Md.**

Thanks for "thinking out of the box" on M&S. As a test engineer, currently working in multibody dynamics, I share all the views you expressed. Implementing your strategy should also have the beneficial effect of reducing the sizable duplication in M&S capabilities which now exists in the DoD.

**Jim Faller**
**Army Research Laboratory**

# DSMC Reaping the Rewards of AMCEP

## "Relevancy Counts in Everything We Do"



*Dr. J. Robert "Bob" Ainsley*

**Dr. J. Robert "Bob" Ainsley is assigned as the full-time Program Manager for the Acquisition Management Curriculum Enhancement Program (AMCEP) and Chair of the Acquisition Management Functional Board/DSMC Special Working Group. In an effort to educate the acquisition and technology workforce on AMCEP and all it embodies, Ainsley spoke with *Program Manager* June 10.**

**Q**

*Dr. Ainsley, would you tell us how AMCEP began?*

**A**

In August 1998, the DSMC Commandant, informally established the Acquisition Management Curriculum Enhancement Program (AMCEP) to posture the college to better support the future acquisition and technology workforce. On Nov. 30, 1998, he published a memorandum officially establishing its purpose, team composition and leadership, reporting chain, and authority. Most importantly, he established the high priority the program has for resources essential to ensure its success by stating that AMCEP "is the college's top curriculum review and revision effort."

**Q**

*What is the primary purpose of AMCEP?*

**A**

AMCEP seamlessly integrates the Acquisition Management Functional Board (AMFB) requirements process and the Defense Acquisition University (DAU) course development and delivery process. It implements a continuous, evolutionary process that facilitates and improves the integrated acquisition management curriculum. In this way, it will ensure that our development programs best prepare the acquisition and technology workforce for the future.

**Q**

*What is the enhancement effort's primary thrust?*

**A**

The effort creates a problem-based learning (PBL) curriculum that replicates actual problems graduates will likely encounter in subsequent assignments. The development of critical thinking skills and the transparent application of information technology enable students to better cope with the challenges they will face. A significant body of research shows that we learn more and retain it longer when we apply information toward the solution of a problem. As we apply the discipline within the context of a dilemma, we are storing the information in association with certain aspects of the situation. When we are confronted with similar and related problems, we pull from that association. Relevancy counts in everything we do.

**Q**

*You mentioned the AMFB; what is it, and what is its mission?*

**A**

The AMFB advises and supports the Under Secretary of Defense (Acquisition & Technology), developing policies and procedures for civilian and military personnel in Defense Acquisition Management. The AMFB charter clearly establishes the general and specific responsibilities, as well as the authority it exercises. Specifically, the AMFB acts as the subject matter expert on the qualifications and career development requirements for the Program Management career field, including weapon and information systems.

A second prime responsibility of the AMFB is to provide requirements for cross-functional acquisition management generalists, Integrated Product Team (IPT) members from a program, the Service staffs, or the Office of the Secretary of Defense (OSD) staff.

**Q**

*What is your relationship with the AMFB?*

**A**

The AMFB is authorized to establish Special Working Groups (SWG) to perform specific tasks on behalf of the board. We are one of those SWGs and have been jointly chartered by the Chair, AMFB and the DSMC Commandant to seamlessly integrate the AMFB requirements process

with the DAU course development and delivery process, as implemented by DSMC. I am assigned to the Office of the Commandant as the full-time Program Manager of the AMCEP and as the Chair of the AMFB/DSMC Special Working Group. I report administratively to the Provost and operationally to the Senior Steering Group (SSG) for the AMFB/DSMC Special Working Group.

Team members have been selected by me in coordination with the appropriate Deans, and approved by the Provost. Other members will be added as resources permit. Dr. J. Ronald Fox of Harvard University has agreed to serve as an advisor to the team. We have developed event-based schedules, including monthly reviews.

**Q**
*What part does the DAU play?*

**A**
The DAU develops courses in the acquisition (ACQ) and program management (PMT) course categories in response to requirements generated/validated by the AMFB.

As a member of the DAU consortium of schools, DSMC maintains, modifies, and conducts a number of integrated acquisition management and program management courses developed according to processes promulgated by the President, DAU. These courses are an integral element of a Program of Instruction designed to build upon the knowledge and skills acquired. Classes must be successfully completed in a prescribed sequence. Inherent in the design of the program is the necessity for acquiring on-the-job experience between courses.

**Q**
*What is your first task?*

**A**
Our initial effort is a review of PMT-302, the Advanced Program Management Course (APMC). Subsequent to the completion of that review and the implementation of the enhancements derived from it, we are to immediately design and implement a continuous, evolutionary process that results in improved integrated acquisition management courses. Incremental improvements identified by group members shall be implemented as an integral part of the standard DSMC course improvement processes through teaming, coordinating, and consulting. .

**"The group [AFMB/DSMC Special Working Group] will act as an IPT, looking for faster, better, and cheaper ways to provide more efficient and effective acquisition management education and training."**

**Q**
*What is your role coordinating the curriculum?*

**A**
I have primary authority over the review and revision of the integrated curriculum as it relates to AMCEP. I serve as the DSMC integrated curriculum configuration manager. This authority does not usurp or diminish the authority and responsibility of the department chairs and faculty to conduct curriculum reviews within their respective areas of expertise, or their role in instructional effectiveness and currency.

**Q**
*What are these integrated courses?*

**A**
They include the Fundamentals of Systems Acquisition Management Course (FSAMC: ACQ-101); the Intermediate Systems Acquisition Course (ISAC: ACQ-201); the Advanced Program Management Course (APMC: PMT-302); the Executive Program Managers Course (EPMC: PMT-303); and the Program Managers Skills Course (PMSC: PMT-305).

**Q**
*What were the expectations for this group?*

**A**
The group acts as an IPT, looking for faster, better, and cheaper ways to provide more efficient and effective acquisition management education and training. They use surveys, interviews, and other effective techniques to validate and modify (if required) immediate course requirements and evaluate existing courses for adequacy. An APMC analysis was briefed to the AMFB in February 1999. Immediate modifications were incorporated into the course rapidly in accordance with DAU standards and procedures. The group continues to work issues like these and reports status each month to an SSG.

**Q**
*Is this the story of a successful IPT?*

**A**
Absolutely! AMCEP, with its IPT relationship with the AMFB, is the college's top curriculum review and revision effort. The necessary resources for AMCEP are negotiated among the appropriate Deans, the Provost, and me. The mediation of resource conflicts and re-setting of the college's resource priorities remain with the Commandant. We have every expectation that we will continue to function as a successful IPT. In fact, through the AFMB, members from the OSD and Service communities are assisting us in

## Working Group(s) Composition

The DSMC Commandant, in coordination with the Chair of the AMFB, will select the working group chair to be assigned as the full-time Program Manager. The working group membership will be composed as follows:

- Program Manager (Working Group Chair)
- Select DSMC personnel as approved by the Provost
- A representative nominated by the President of the DAU
- A representative nominated by the AMFB Chair
- Functional board representatives appointed by the AMFB Chair

The Program Manager shall report administratively to the DSMC Provost and operationally to a Senior Steering Group (SSG), with membership composed as follows:

- Chair of the AMFB (SSG Chair)
- President of the DAU
- DSMC Commandant
- Additional membership as appointed by the Chairman of the AMFB.

the development of the problem-solving instructional materials.

For example, members from the Deputy Under Secretary of Defense for International and Commercial Programs, U.S. Navy Program Executive Officer for Aviation, and the U.S. Marine Corps Advanced Amphibious Assault Vehicle Program Office have either written materials for us or provided significant insight to the credibility and validity of those materials. This stakeholder involvement has helped to ensure ownership into the development of the acquisition and technology workforce.

**Q**

*What are the longer-range goals of the group?*

## Working Group(s) Tasks

- Identify, select, and obtain approval (when required) of working group members.
- Identify and obtain facilities, resources, and necessary administrative support.
- Design, develop, prototype, conduct, and evaluate future course requirements.
- Obtain approval of course requirements and design.
- Develop event-based schedules before all significant activities, including progress reports to the Senior Steering Group.

**A**

The group will identify longer-range requirements for course migration, including but not limited to, course addition, deletion, or change. These requirements will be documented and provided to the AMFB at the conclusion of the review.

**Q**

*How will you know you have succeeded?*

**A**

Improvements must include an enhanced professionalism, capability, and job performance among graduates of acquisition management courses and program management courses.

**Q**

*What tools will you use?*

**A**

Course offerings must foster and develop critical thinking, leadership skills and PBL. Guided, self-directed learning and other adult learning educational processes will be applied to the extent practicable and desirable. Of course, acquisition reform initiatives will be incorporated within appropriate course offerings. And industry views and best practices will be incorporated within appropriate course offerings. Case studies will be included in the learning environment to the extent practicable to add experiential learning. We hope to minimize redundancy among the integrated courses. Appropriate technology-based learning systems such as the Defense Acquisition Deskbook and the World-Wide Web will also be incorporated.

**Editors Note:** The Nov. 30, 1998, memorandum approving concepts and guidelines of the Acquisition Management Curriculum Enhancement Program was jointly approved by John C. Wilson Jr., Director, Systems Acquisition, OSD, and Chair, Acquisition Management Functional Board; and Navy Rear Adm. Leonard Vincent, DSMC Commandant. For further information about AMCEP, contact Dr. Ainsley at **ainsleyb@dsmc.dsm.mil** or call Commercial (703) 805-4565; DSN 655-4565.

# DoD Acquisition Policy and Deskbook Design Team Wins Hammer Award

Dr. Jacques S. Gansler, Under Secretary of Defense (Acquisition & Technology) and Stan Soloway, Under Secretary of Defense (Acquisition Reform), presented Vice President Gore's Hammer Award to the DoD Acquisition Policy and Deskbook Design Team at the Pentagon April 28. This team streamlined acquisition regulatory and policy management and developed an automated acquisition information system. They reduced over 1,200 pages of guidance into 16 pages of mandatory policy and 122 pages of implementing guidance. Their efforts resulted in savings to the government of more than $118 million per year with $25 in savings for each dollar invested.

The Hammer Award is the Vice President's special recognition of teams of federal employees and their partners who have made significant contributions in support of the President's National Performance Review principles – putting customers first, cutting red tape, empowering employees, and getting back to basics – resulting in a government that works better and costs less.

**DSMC PROFESSORS PART OF TEAM EFFORT**

FROM LEFT: STAN SOLOWAY, DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM); AIR FORCE LT. COL. BRIAN BRODFUEHRER, DSMC PROFESSOR; RIC SYLVESTER, ASSISTANT DEPUTY UNDER SECRETARY OF DEFENSE (SYSTEMS ACQUISITION); RITA LEFLER, PROGRAM ANALYST, OFFICE OF THE ASSISTANT DEPUTY UNDER SECRETARY OF DEFENSE (SYSTEMS ACQUISITION); AIR FORCE LT. COL. BOB FAULK, DSMC PROFESSOR; NAVY REAR ADM. LEONARD VINCENT, DSMC COMMANDANT.

BELOW: DOD ACQUISITION POLICY AND DESKBOOK DESIGN TEAM

Photos by Richard Mattox

# CALL FOR AUTHORS

## Article Possibilities

- Hot topics
- Lessons learned
- Op-Ed articles
- Reinventing government
- Speeches and addresses by high-level lecturers
- People to interview
- Acquisition news
- Changing acquisition paradigms
- Quality
- Research and development
- Defense industrial base
- Acquisition education

***DSMC Press is seeking quality articles for publication in Program Manager Magazine.***

**Tell Your Friends & Associates, Please!**

Contact the editor, (703) 805-2892 or visit the DSMC Web site: www.dsmc.dsm.mil/pubs/articles.htm

## Potential Authors

- Current and former program managers
- CEOs
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- DAU faculty
- Current and former DSMC students
- Military acquisition leaders
- Field users of weapons systems
- Previous PM and ARQ authors
- High-level DoD and industry executives
- Policy makers
- Budget and finance careerists
- Weapons users in the air, in the field, and at sea


**WHAT:** **DTIC '99 ANNUAL USERS MEETING & TRAINING CONFERENCE**

**WHEN:** **Nov. 8-10, 1999**

**WHERE:** **DoubleTree Hotel National Airport**
300 Army Navy Drive
Arlington, Va.

**INFO:** **http://www.dtic.mil/dtic/annualconf/**
or call Julia Foscue (703) 767-8236

Interested exhibitors should contact FBC, Inc., (800) 878-2940, ext. 226.

# Largest International Event in DSMC History

## Eleventh Atlantic Seminar — An Unqualified *Coup de Maître*

RICHARD KWATNOSKI

The week of June 28 through July 2 proved to be a record-setter for DSMC and its international educational partners, bringing together more acquisition professionals, representing more nations, than previously ever hosted by the college during its entire 27-year history.

Sponsored by the International Defense Educational Arrangement (IDEA), the Eleventh Annual International Acquisition/Procurement Seminar - Atlantic was held in Scott Hall at the DSMC main campus, Fort Belvoir, Va. The Atlantic Seminar is held in the United States only once every four years, and is hosted by DSMC as one of the four participating IDEA member nations: the United States, United Kingdom, Germany, and France.

By all accounts, this seminar was a *coup de maître*, or great success, with over 170 participants from nine nations. Last year 130 attended the 10th Seminar in Paris; four years ago at DSMC slightly over 100 attended. This year's seminar clearly marked the greatest turnout for any of the Atlantic seminars.

Navy Rear Adm. Leonard Vincent, DSMC Commandant, along with his counterparts from defense educational institutions in the United Kingdom, Germany, and France provided the official welcome and opening remarks. Participating nations were the four IDEA member nations, plus Australia, Canada, Ireland, Portugal, Romania, and Spain.

*Kwatnoski is the Director, International Acquisition Courses, DSMC.*

National presentations on international cooperation from the four IDEA member nations were well received. Alfred Volkman, Acting Deputy Under Secretary of Defense for International Programs, gave the U.S. national presentation. The luncheon speaker, Susan Ludlow-MacMurray, Director of International Security Programs in the Office of the Secretary of Defense, provided insights into the security implications of industrial globalization.

### Keynote Address

Highlighting the seminar was a strong keynote address by Dr. Jacques S. Gansler, Under Secretary of Defense (Acquisition & Technology), on "Armaments Cooperation and The Revolution In Business Affairs."

Gansler began his address with a rundown of recent worldwide events followed by a warning to be constantly vigilant and prepared. "There is little doubt," he told the international audience, "that we live in a world where dramatic change has become a way of life. In fact, we may be testing Marx's theory of 'permanent revolution' – a period of permanent upheaval, characterized by minor and major political and military eruptions that require us to be constantly vigilant and prepared – at almost a moment's notice – to engage in conflict anywhere on our planet."

FROM LEFT: PRESIDENT PETER GEORGE, BAKWVT (GERMANY); IGA JACQUES PÉCHAMAT, DEPUTY COMMANDANT, CHEAR (FRANCE); SHARON BOYD, MANAGER, INTERNATIONAL SEMINARS, DSMC (UNITED STATES); WING COMMANDER CHRIS HOCKLEY, RMCS (UNITED KINGDOM); PROF. RICHARD KWATNOSKI, DSMC (UNITED STATES): SEMINAR DIRECTOR RICHARD KWATNOSKI PRESENTS FLOWERS TO SHARON BOYD ON BEHALF OF THE IDEA BOARD OF DIRECTORS FOR HER EXEMPLARY MANAGEMENT OF THE ADMINISTRATIVE ASPECTS OF THE ATLANTIC SEMINAR.

Speaking of coalition warfare and technology and information security, Gansler said, "The current and likely future geopolitical situation will almost certainly involve increased use of multinational coalition operations. In fact, it is hard to imagine a case in which we will not be acting in a coalition environment. In this situation, each nation's security becomes highly dependent on the ability and willingness of its coalition partners to act in concert when threatened by hostile forces. That means, however, that *the vulnerability of the weakest link makes us all vulnerable.*"

The threats that were once predicted for the early 21st century, he believes, "are with us now, and, I fear, here to stay." As transnational terrorist elements and rogue nations shift to biological and chemical attacks (both at home and abroad), and as they intensify their information warfare attacks on our nation's infrastructure (for example, against our air traffic control systems and our electronic financial systems), Gansler predicts these threats will surely grow in number, magnitude, and geographic dispersion.

"We and our coalition partners," he said, "must both focus on counter-proliferation efforts as well as develop and deploy effective countermeasures against these likely, modern threats; for example: information warfare defenses, broad-based vaccines and special medical agents to counter biological and chemical weapons, defenses against ballistic and cruise missiles, and the ability to destroy hard and deeply buried targets."

Maintenance of competition through consolidation and industrial restructuring/teaming was another area he talked about. "The key to our policy on domestic consolidation," Gansler said, "is to understand the need for maintaining competition. Competition drives increased efficiency, and, most importantly, promotes innovation. Monopolistic conditions," he emphasized, "beyond being simply undesirable from a price standpoint, would allow a monopolistic defense firm potentially to seal off military capabilities that could result from new innovations in the non-defense sector.

> "Industrial globalization is taking place, with very little likelihood that we could — or should — do anything to delay it or prevent it. Therefore, we must embrace it, without looking back, with an eye to making it serve both our industrial needs and our national security strategy. If we don't, it will likely be used against us. And, perhaps even worse, it likely will weaken our international alliances. These are results that none of us can allow. Leadership in this area requires both governments and corporations to take actions over the coming months. The U.S. has made this a top priority, and we need the cooperation of our allies to make this effort truly successful."
>
> —Dr. Jacques S. Gansler

"Given the importance, as I said, of new, often commercially developed technology, we simply *cannot* let this happen," he stated. Gansler went on to say that the United States has encouraged consolidation, and will continue to do so, "as long as we see potential savings and as long as we can maintain effective competition in all critical defense sectors ... We will continue to strive to resist mergers that threaten to become monopolistic."

In closing, Gansler spoke of leadership, partnership, and cooperation. "Industrial globalization is taking place, with very little likelihood that we could – or should – do anything to delay it or prevent it. Therefore, we must embrace it, without looking back, with an eye to making it serve both our industrial needs and our national security strategy. If we don't, it will likely be *used against us.* And, perhaps even worse, it likely will *weaken our international alliances.*"

These results, Gansler told the international audience, "None of us can allow." Leadership in this area, he emphasized, requires both governments and corporations to take actions over the coming months. "The United States has made this a top priority, and we need the cooperation of our allies to make this effort truly successful."

## An International Agenda

Other topics covered during the weeklong seminar included the comparative acquisition practices of the IDEA nations, international project management, trans-Atlantic industrial cooperation, acquisition and security, international testing, international agreements, intellectual property rights, and the international implications of acquisition reform.

A representative of the Australian Defence Force Academy provided a presentation on defense trends in the Pacific. The last day of the seminar offered participants presentations on acquisition/procurement education and integrated product teams in the international environment.

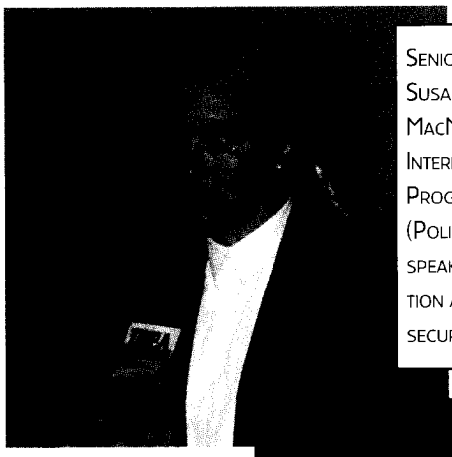
## Next Year — United Kingdom

The Twelfth Annual International Acquisition/Procurement Seminar – Atlantic will be held next year at the Royal Military College of Science, in Shrivenham, United Kingdom, during the last week of June 2000.

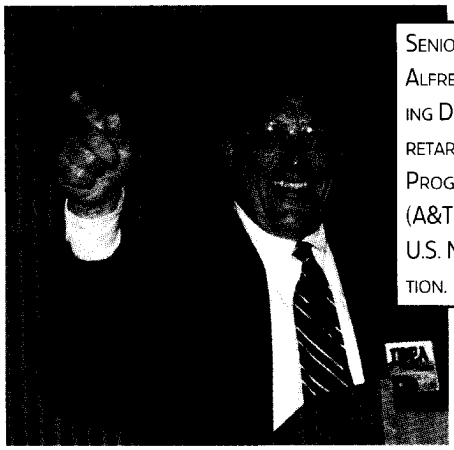
**Editor's Note:** For regular updates on international seminar activities, the author encourages readers to browse the DSMC Web site's international link at **http://www.dsmc.dsm.mil/international/international_atlantic.htm** on the Internet.

Photos by Richard Mattox

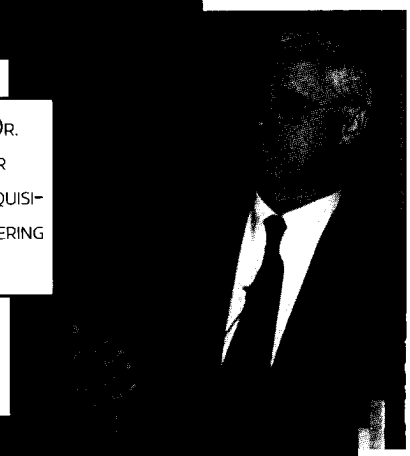
# IDEA



Senior U.S. Presenter, Susan Ludlow-MacMurray, Director, International Security Programs, OUSD (Policy): Luncheon speaker on globalization and international security.

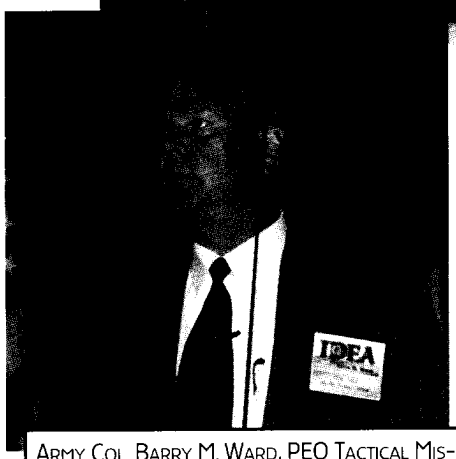


Senior U.S. Presenter — Alfred G. Volkman, Acting Deputy Under Secretary (International Programs), OUSD (A&T): Delivering the U.S. National Presentation.

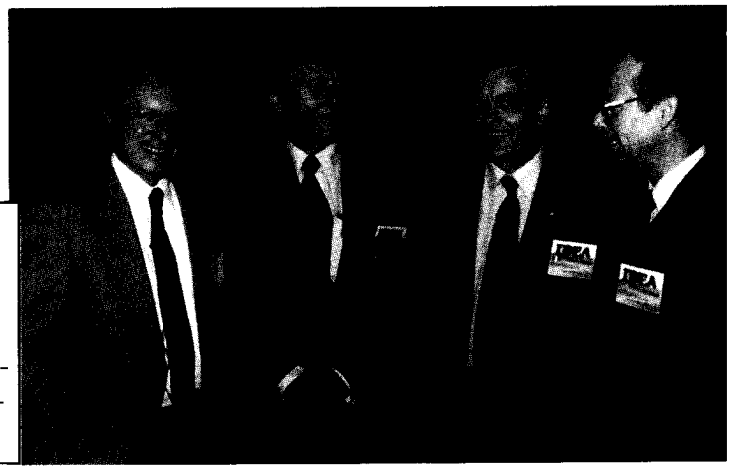


Senior U.S. Presenter — Dr. Jacques S. Gansler, Under Secretary of Defense (Acquisition & Technology): Delivering the Keynote Address.

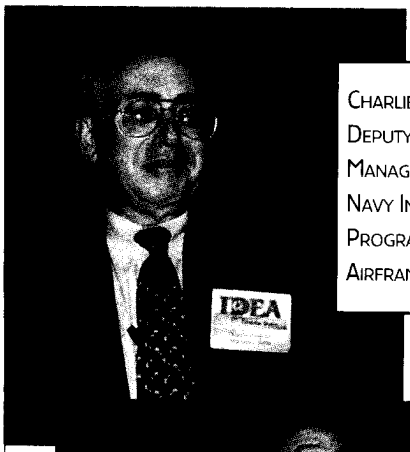
International Panel From Left — Marvin Winkelmann, OUSD (IP); Navy Rear Adm. Leonard Vincent, DSMC Commandant; Reinhard Schuette, German Federal Ministry of Defense; Jean Tisnes, French Délégation Générale pour l'Armement; John Taylor, Minister (Defence Materiel) British Embassy. Vincent served as Chair for the panel of National Presenters.



Army Col. Barry M. Ward, PEO Tactical Missiles, MLRS Project Office: Army International Program – Multiple Launch Rocket System.

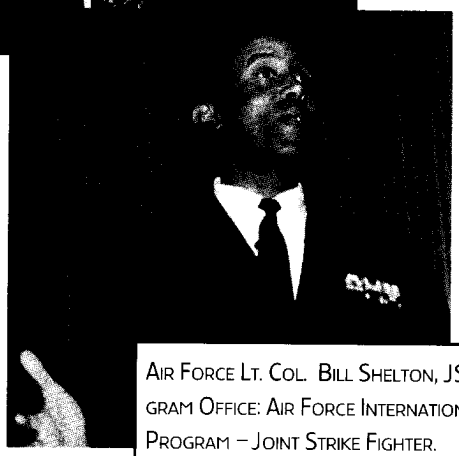


International Panel From Left — Barry L. Abrahams, Senior VP Business Development, Raytheon Systems Co.; Dr. Burkhard Theile, Director, Future Systems Division, STN ATLAS Electronik GmbH; Francois Gayet, VP North America, THOMPSON International; Frank Cevasco, VP, Hicks and Associates, Inc. Cevasco served as Chair for the panel of international defense industrialists.



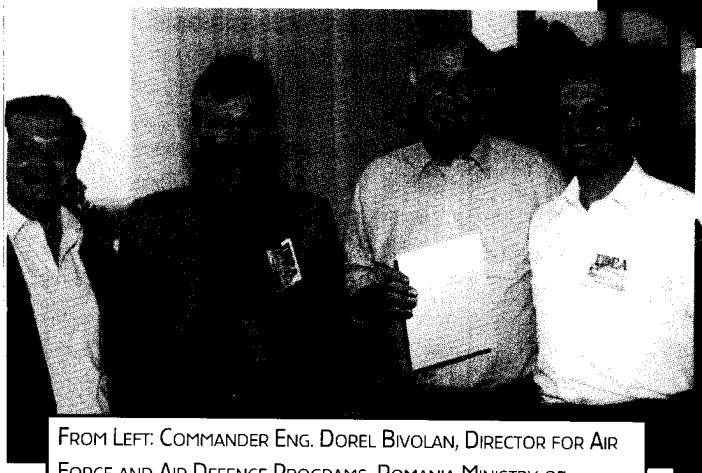
Charlie Stein, Deputy Program Manager RAM: Navy International Program – Rolling Airframe Missile.

IDEA Board of Directors From Left — Navy Rear Adm. Leonard Vincent, DSMC Commandant (United States); Brigadier Will Cook, Deputy CM, RMCS (United Kingdom); President Peter George, BAkWVT (Germany); IGA Jacques Péchamat, Deputy Commandant, CHEAr (France): Heads of IDEA defense educational institutions conclude successful annual meeting.



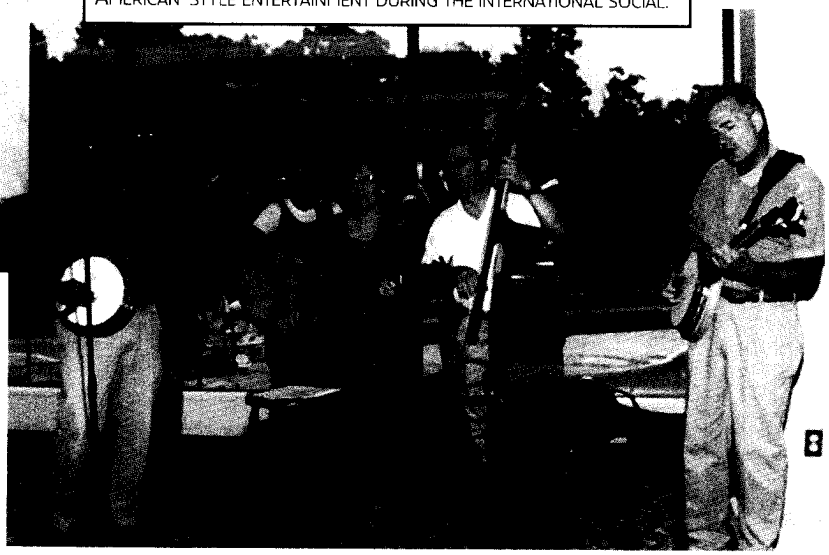
Air Force Lt. Col. Bill Shelton, JSF Program Office: Air Force International Program – Joint Strike Fighter.

From Left: IGA Jacques Péchamat, Deputy Commandant, CHEAr; Tony Kausal, Air Force Chair, DSMC; Dr. Gertrud Humily, Conseiller Délégué aux Formations Internationales; Navy Rear Adm. Leonard Vincent, DSMC Commandant: Meeting at the international social.

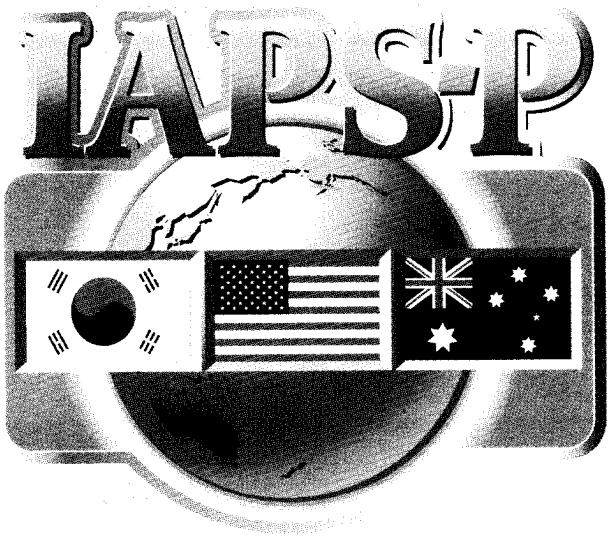


From Left: Commander Eng. Dorel Bivolan, Director for Air Force and Air Defence Programs, Romania Ministry of National Defence Procurement Department; Col. dr. eng. Ion Truto, Chief of Research, Technologies and Procurement Programs Directorate, Romania Ministry of National Defence; Brig. Gen. John A. Vize, Office of the Assistant Chief of Staff (Support), Defence Forces Headquarters Ireland; Col Dannie T. Bulpit, Defence Cooperation Attaché, Canadian Embassy: International participants at the international social.

From left: DSMC Professors Mike Mears and Bill Lightsey, accompanied by the other members of *Manassas Bluegrass* provide American-style entertainment during the international social.



# Second International Acquisition/Procurement Seminar – Pacific




**September 14-17, 1999**

**Sponsored jointly by the**
**Korean Institute for Defense Analysis (KIDA)**
**Defense Systems Management College (DSMC)**
**Australian Defence Force Academy (ADFA)**
**in**
**Seoul, Republic of Korea**

## Topics

- **Comparative National Acquisition Practices: PACRIM Nations**
- **National Policies on International Acquisition/ Procurement**
- **International Program Managers: Government and Industry**
- **Trans-Pacific Cooperation**
- **Legal Issues and Intellectual Property Rights**
- **Defense Industry**

**Qualified participants pay no seminar fee.**

For further information, contact any member of the international team at DSMC: **(703) 805-5196**
or
Visit our Web site:
**http://www.dsmc.dsm.mil/international/international.htm**

## KIDA, DSMC, and ADFA to Conduct International Seminar

The Second International Acquisition/Procurement Seminar—Pacific focuses on international acquisition practices and cooperative programs. The seminar is sponsored by defense educational and related institutions in the United States, the Republic of Korea, and Australia.

The seminar will be held Sept. 14-17, at the Korean Institute for Defense Analysis, Seoul, Republic of Korea.

Those eligible to attend are Defense Department/Ministry and defense industry employees from the three sponsoring nations, who are actively engaged in international defense acquisition programs. Other nations may participate by invitation. PACRIM nations participating in the First Pacific Seminar were Canada, Japan, New Zealand, Singapore, and Thailand.

Those desiring an invitation should contact any member of the international team at DSMC. Those government personnel and industry representatives desiring an invitation should fax an official letter of request, prepared on agency/industry letterhead, to DSMC; or, visit the seminar registration Internet Web site at **http://www.dsmc.dsm.mil/international/international.htm.**
*Qualified participants pay no seminar fee.* Invitations, confirmations, and joining instructions will be issued after July 1.

**In the United States, contact:**

- Prof. Richard Kwatnoski, Director, International Acquisition Courses, DSMC
- Sharon Boyd, International Seminar Coordinator, DSMC

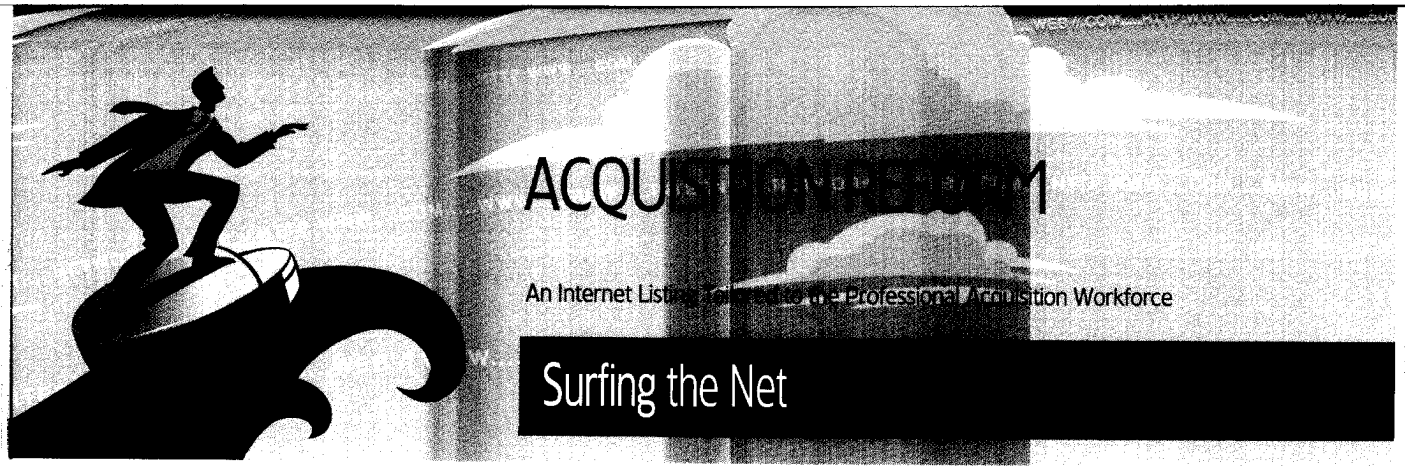
Comm: (703) 805-5196/4592
DSN: 655-5196/4592
Fax: (703) 805-3175
DSN: 655-3175

**In South Korea, contact:**

Dr. CHO, Namhoon
E-mail: chonh@kida.re.kr

**In Australia, contact:**

Dr. Stefan Markowski
Comm: (61) 2 6268 8094
Fax: (61) 2 6268 8450
E-mail: s.markowski@adfa.edu.au



# ACQUISITION REFORM

An Internet Listing for the Professional Acquisition Workforce

## Surfing the Net

### DEPARTMENT OF DEFENSE

**Under Secretary of Defense (Acquisition and Technology) (USD[A&T])**
http://www.acq.osd.mil/
ACQWeb offers a library of USD(A&T) documents, a means to view streaming videos, and jump points to many other valuable sites.

**Deputy Under Secretary of Defense (Acquisition Reform) (DUSD[AR])**
http://www.acq.osd.mil/ar
AR news and events; reference library; DUSD(AR) organizational breakout; acquisition education and training policy and guidance.

**Acquisition Systems Management**
http://www.acq.osd.mil/api/asm/
Documentation, including Department of Defense Directives 5000.1 and 5000.2-R, Major Defense Acquisition Programs List, and more.

**Director, Test, Systems Engineering & Evaluation (DTSE&E), USD(A&T)**
http://www.acq.osd.mil/te/programs/se
Systems engineering mission; Defense Acquisition Workforce Improvement Act information, training, and related sites; information on key areas of systems engineering responsibility.

**Defense Acquisition Deskbook**
http://www.deskbook.osd.mil
Automated acquisition reference tool covering mandatory and discretionary practices.

**Defense Acquisition University (DAU) and Acquisition Reform Communications Center (ARCC)**
http://www.acq.osd.mil/dau
DAU course and schedule information; consortium school links; documents, publications, and forms. ARCC provides acquisition reform training opportunities and materials.

**Defense Acquisition University Virtual Campus**
http://dau.fedworld.gov
Take DAU courses online at your desk, at home, at your convenience!

**Army Acquisition Corps (AAC)**
http://www.dacm.sarda.army.mil
News; policy; publications; personnel demo; contacts; training opportunities.

**Army Acquisition**
http://www.acqnet.sarda.army.mil
A-MART; documents library; training and business opportunities; past performance; paperless contracting; labor rates.

**Navy Acquisition Reform**
http://www.acq-ref.navy.mil/
Acquisition policy and guidance, World-class Practices, the Acquisition Center of Excellence, and training opportunities.

**Navy Acquisition, Research and Development Information Center**
http://nardic.nrl.navy.mil
News and announcements; acronyms; publications and regulations; technical reports; "How to Do Business with the Navy," and much more!

**Naval Sea Systems Command**
http://www.navsea.navy.mil/sea017/toc.htm
Total Ownership Cost (TOC); documentation and policy; Reduction Plan; Implementation Timeline; TOC reporting templates; Frequently Asked Questions (FAQ).

**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 Federal Acquisition Regulation (FAR) Site**
http://farsite.hill.af.mil/
FAR search tool; *Commerce Business Daily* Announcements (CBDNet); *Federal Register*; Electronic Forms Library.

**Headquarters, Air Combat Command (HQ ACC) — Contracting Division**
http://www.acclog.af.mil/lgc/lgc.htm
Business opportunities; acquisition regulations; policy guidance and technical assistance in areas such as: performance measurement, International Merchant Purchase Authorization Card (IMPAC); commercial practices; outsourcing and more.

**Defense Systems Management College (DSMC)**
http://www.dsmc.dsm.mil
DSMC educational products and services; course schedules; *Program Manager* magazine and *Acquisition Review Quarterly* journal; 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 Imagery and Mapping Agency (NIMA) (Formerly Defense Mapping Agency [DMA])**
http://www.nima.mil
Imagery; maps and geodata; Freedom of Information Act resources; publications.

**Defense Modeling and Simulation Office (DMSO)**
http://www.dmso.mil
DoD Modeling and Simulation Master Plan; document library; events; services.

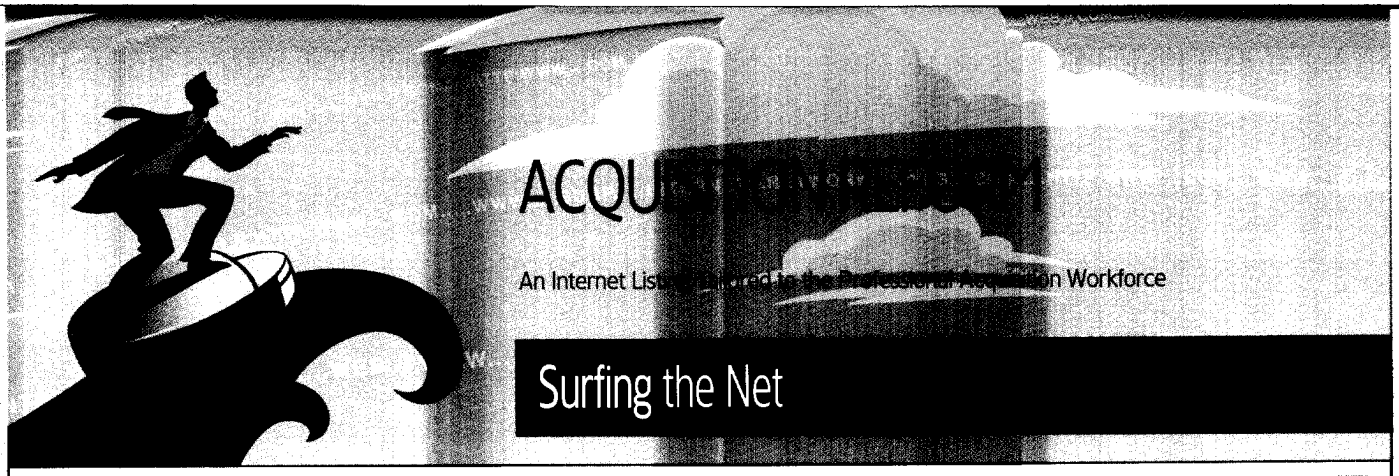
**Defense Technical Information Center (DTIC)**
http://www.dtic.mil/
Technical reports; products and services; registration with DTIC; special programs; acronyms; DTIC FAQs.

**Joint Electronic Commerce Program Office (JECPO)**
http://www.acq.osd.mil/ec/
Policy; newsletters; Central Contractor Registration; assistance centers; DoD Electronic Commerce 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 Education and Training Network (GETN) (For Department of Defense Only)**
http://atn.afit.af.mil/schedule.htm
Schedule of distance learning opportunities.

**Government-Industry Data Exchange Program (GIDEP)**
http://www.gidep.corona.navy.mil
Federally funded co-op of government and industry participants that provides an electronic forum to exchange technical information essential during research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.



# ACQUISITION REFORM

An Internet List Tailored for the Defense Acquisition Workforce

## Surfing the Net

### FEDERAL CIVILIAN AGENCIES

**ARNET (Joint effort of the National Partnership for Reinventing Government and Office of Federal Procurement Policy)**
http://www.arnet.gov/
Virtual library; federal acquisition and procurement opportunities; best practices; electronic forums; business opportunities; acquisition training; Excluded parties List.

**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://nais.nasa.gov/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 Partnership for Reinventing Government (NPR)**
http://www.npr.gov/
NPR accomplishments and inititatives; "how to" tools; library.

**National Technical Information Service (NTIS)**
http://chaos.fedworld.gov/onow/
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

**DoD Acquisition Workforce Personnel Demonstration Project**
http://www.crfpst.wpafb.af.mil/
*Federal Register* and Waivers Package; documents and briefings; reference material; operating procedures; FAQs.

**DoD Specifications and Standards Home Page**
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.

**Joint Advanced Distributed Simulation (JADS) Joint Test Force**
http://www.jads.abq.com
JADS is a one-stop shop for complete information on distributed simulation and its applicability to test and evaluation and acquisition.

**Risk Management**
http://www.acq.osd.mil/te/programs/se/risk_management/index.htm
Risk policies and procedures; risk tools and products; events and ongoing efforts; related papers, speeches, publications, and Web sites.

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

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

**GSA Federal Service Supply**
http://pub.fss.gsa.gov
The No. 1 resource for the latest services and products industry has to offer.

### INDUSTRY AND PROFESSIONAL ORGANIZATIONS

***Commerce Business Daily***
http://www.govcon.com/
Access to current and back issues with search capabilities; business opportunities; interactive yellow pages.

**Electronic Industries Alliance (EIA)**
http://www.eia.org
Government Relations Department; includes links to issue councils; market research assistance.

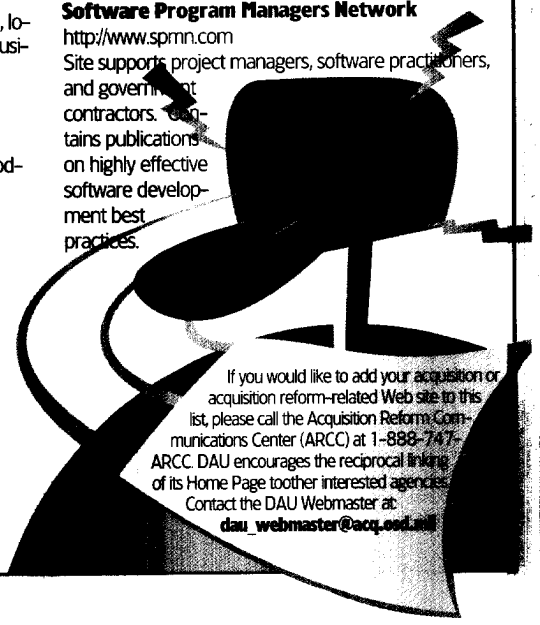
**National Contract Management Association (NCMA)**
http://www.ncmahq.org
"What's New in Contracting?"; educational products catalog; career center.

**National Defense Industrial Association (NDIA)**
http://www.ndia.org
Association news; events; government policy; *National Defense* Magazine.

**International Society of Logistics**
http://www.sole.org/
Online desk references that link to logistics problem-solving advice; Certified Professional Logistician certification.

**Computer Assisted Technology Transfer (CATT) Program**
http://catt.bus.okstate.edu
Collaborative effort between government, industry, and academia. Learn about CATT and how to participate.

**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 reform-related Web site to this list, please call the Acquisition Reform Communications Center (ARCC) at 1-888-747-ARCC. DAU encourages the reciprocal linking of its Home Page toother interested agencies. Contact the DAU Webmaster at: **dau_webmaster@acq.osd.mil**

# DSMC Welcomes 15th Commandant

## Vincent Retires, Anderson Takes Over at July 30 Change of Command

NORENE L. BLANCH

Air Force Brig. Gen. Frank J. Anderson Jr., became the 15th Commandant of the Defense Systems Management College (DSMC) July 30 in a change of command ceremony at DSMC's main campus, Fort Belvoir, Va. He succeeds Navy Rear Adm. Leonard "Lenn" Vincent, who has served as DSMC's Commandant since Dec. 30, 1997.

The ceremony not only marked transfer of DSMC's leadership to Anderson, but also celebrated the culmination of a distinguished 32-year military career for Vincent, who retired from active duty effective Aug. 1.

Continuing the legacy of his 14 predecessors, Anderson brings a wealth of acquisition and contracting experience to the position of Commandant, including his most recent assignment as Deputy Assistant Secretary for Contracting, Office of the Assistant Secretary of the Air Force for Acquisition.

### Soloway on Vincent's Legacy

Stan Z. Soloway, Deputy Under Secretary of Defense for Acquisition Reform and Director, Defense Reform, spoke of the impact of Vincent's leadership on the education of the acquisition workforce and Anderson's future role as DSMC's newly appointed Commandant.

"Lenn recognized early on, the extraordinary challenges facing our educational system" as the college adjusts to the demands of a "dynamic and different acquisition environment," said Soloway.

FROM LEFT: NAVY REAR ADM. LEONARD "LENN" VINCENT, DSMC OUTGOING COMMANDANT, STANDS AT ATTENTION AS DEPUTY UNDER SECRETARY OF DEFENSE (ACQUISITION REFORM) AND DIRECTOR, DEFENSE REFORM STAN Z. SOLOWAY PASSES THE DSMC COLORS AND MANTLE OF LEADERSHIP TO AIR FORCE BRIG. GEN. FRANK J. ANDERSON JR., JULY 30.

"He has been a forceful champion for creative and innovative thinking and teaching, and has worked tirelessly to help DSMC to move into a new era. He has also been a leader in our efforts to define our program manager of the future and to massage and create a training and education program that will genuinely provide our program management community with the tools of expertise they will need.

"And in his usual team-focused manner," Soloway told the overflow audience assembled in DSMC's Scott Hall, "Lenn has always shown incredible decency and a genuine belief in providing an environment where people are not *forced* to work together, but [one] in which they would *want* to work together. Indeed, throughout his career, Lenn Vincent has fostered environments where *listening* was as important or sometimes more important than *directing*."

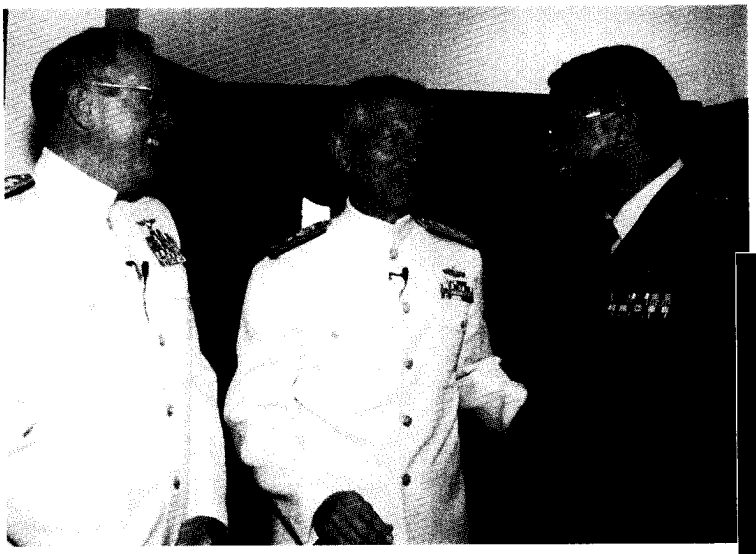
Once Vincent's intent to retire became official, Soloway knew that finding a replacement for him would create a major challenge.

"Finding someone to fill Lenn's shoes would not be and was not easy," said Soloway. "As often happens, the answer was right there before us ... There could not be a better or more natural successor for Lenn than Frank Anderson. His varied background, his deep commitment to change and reform, his well-established skills as a leader, and his very real understanding of the training challenges and educational challenges that we face, add up to an obvious and a wonderful choice.

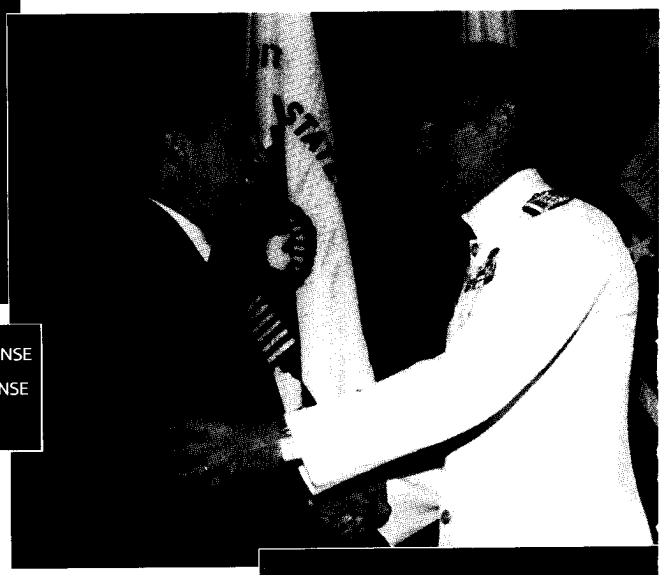
*Johnson is managing editor, Program Manager magazine, Visual Arts and Press Department, Division of College Administration and Services, DSMC. Blanch is an editor with the Visual Arts and Press Department, Division of College Administration and Services, DSMC.*

# VINCENT RETIRES, ANDERSON

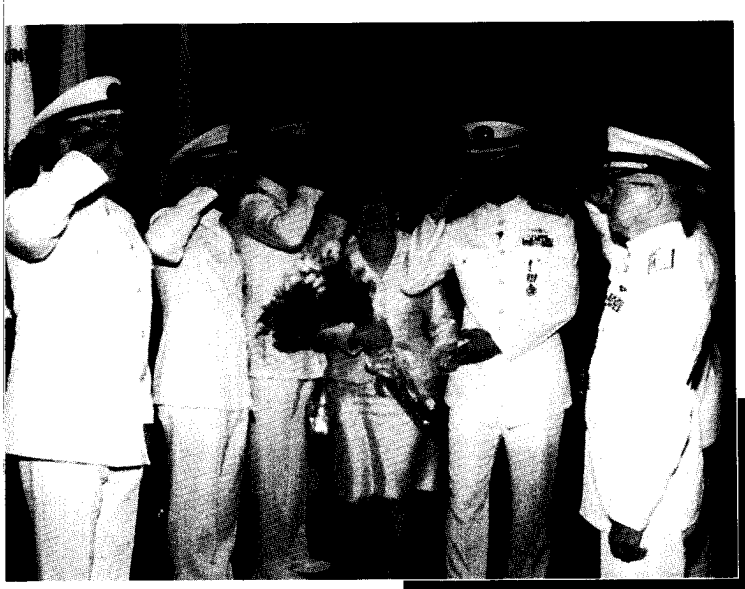
## Soloway Passes DSMC Colors t



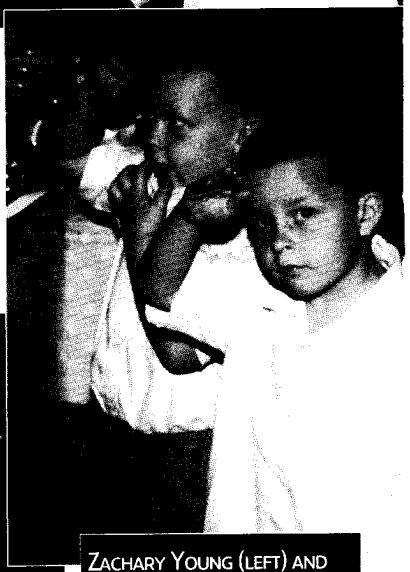
Navy Vice Adm. John A. Lockard, Retirement Ceremony Guest Speaker; Navy Rear Adm. Leonard "Lenn" Vincent, Outgoing DSMC Commandant, and Air Force Brig. Gen. Frank J. Anderson Jr., new DSMC Commandant, chat prior to the Change of Command.

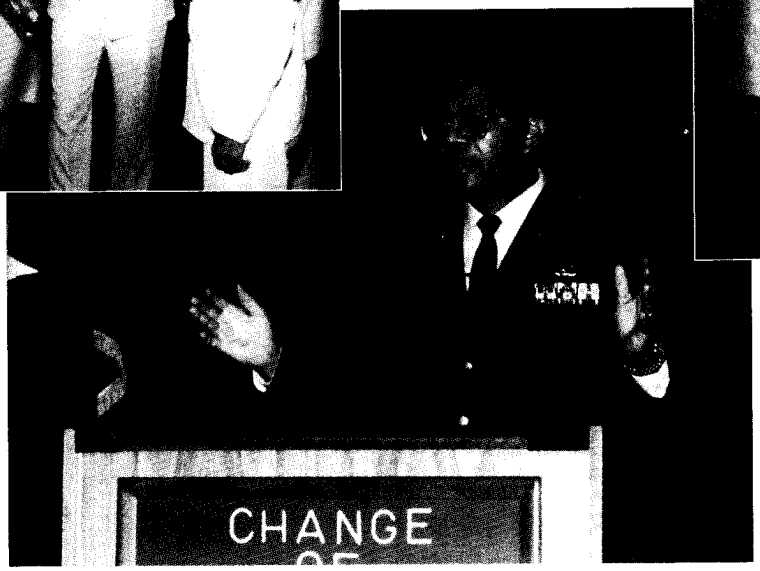


Deputy Under Secretary of Defense (Acquisition Reform) and Director, Defense Reform Stan Z. Soloway congratulates Vincent after awarding him the Defense Distinguished Service Medal.



Vincent and wife, Shirley, are honored with a "Piping Over the Side" Ceremony.



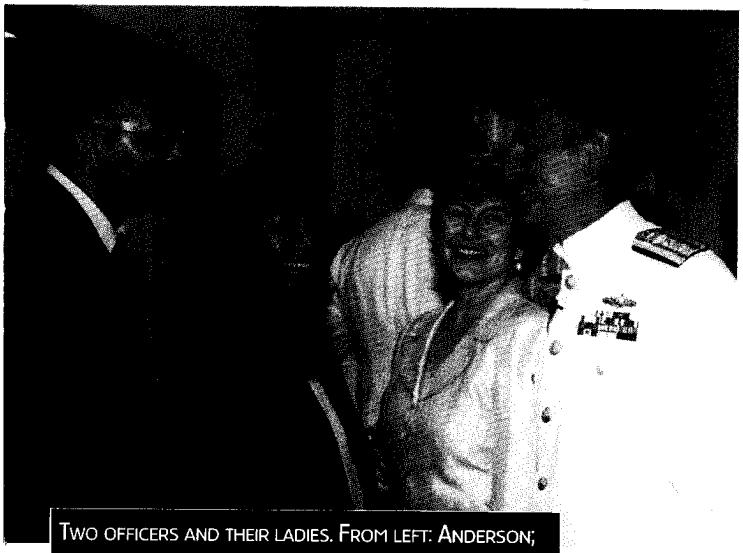



Air Force Brig. Gen. Frank J. Anderson Jr. addresses the overflow crowd, including the DSMC staff and faculty, for the first time in his new role as DSMC Commandant.

Zachary Young (left) and his cousin, Henry Dillon salute their grandfather, Admiral Vincent, as he retires from 32 years of active duty service in the U.S. Navy. Zachary also had cause for celebration on July 30 — his 5th birthday.

# BECOMES 15TH COMMANDANT

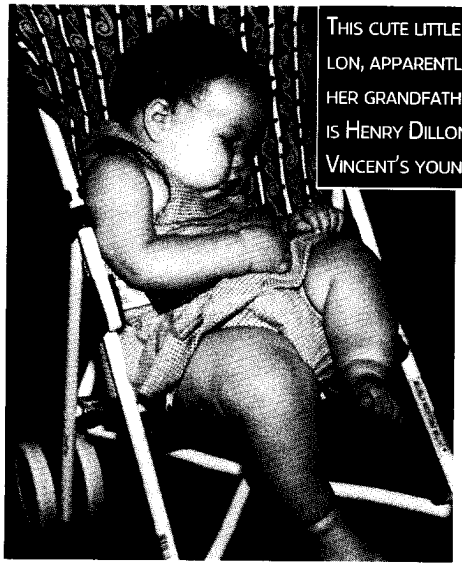
## Anderson at July 30 Ceremony



TWO OFFICERS AND THEIR LADIES. FROM LEFT: ANDERSON; BONNIE ANDERSON; SHIRLEY VINCENT; VINCENT.


DSMC PROVOST AND DEPUTY COMMANDANT, RICH REED (RIGHT) THANKED VINCENT FOR THE LEADERSHIP, FUN TIMES, AND "RESTORING A SENSE OF BALANCE TO THE COLLEGE." ON BEHALF OF THE COLLEGE, HE PRESENTED VINCENT A FLAG FLOWN OVER THE *USS ARIZONA*, A WWII BATTLESHIP SUNK BY THE JAPANESE ON DEC. 7, 1941. THE *ARIZONA* STILL LIES AT THE BOTTOM OF PEARL HARBOR, HAWAII — A PERMANENT MEMORIAL TO THOSE WHO LOST THEIR LIVES THAT DAY.

FULL PARTNERS IN THEIR HUSBANDS' MILITARY CAREERS, BONNIE ANDERSON AND SHIRLEY VINCENT WATCH PROUDLY AS ANDERSON BEGINS ANOTHER CHAPTER IN HIS MILITARY CAREER, WHILE VINCENT CONCLUDES A 32-YEAR NAVAL CAREER.



THIS CUTE LITTLE CHERUB IS ELIZA DILLON, APPARENTLY NAPPING THROUGH HER GRANDFATHER'S RETIREMENT. ELIZA IS HENRY DILLON'S BABY SISTER AND VINCENT'S YOUNGEST GRANDCHILD.

LONGTIME DSMC FRIEND AND SUPPORTER, R. NOEL LONGUEMARE, FORMER PDUSD(A&T), OSD, WAS A WELCOME GUEST AT THE CHANGE OF COMMAND AND RETIREMENT CEREMONY.

"Frank has earned a well-deserved reputation," he commented, "as an innovator, a forward thinker, a leader who is not afraid to take risks, and more than willing to support his people when they do so."

DSMC and the acquisition workforce, Soloway concluded, will be the beneficiary of the excellence-in-leadership passed from Vincent to Anderson.

## "I Believe in People"

In keeping with military tradition and ceremony, the audience remained silent as Vincent passed the DSMC colors to Soloway who, in turn, passed them to Anderson. With this symbolic gesture, the transfer of leadership was completed, marking a new era of Air Force leadership at DSMC.

With dignity and enthusiasm, Anderson accepted the DSMC mantle of leadership, addressing the college's faculty and staff for the first time in his new role as Commandant. He referred to the ceremony as a "new beginning" for the Vincents, as well as for DSMC.

Describing what he refers to as having a "healthy belief and confidence in people," Anderson said he looks at his new responsibility as an "opportunity to command and lead.

"I am pleased and challenged to be following in the footsteps of Admiral Vincent," he told those attending. "I know I have a huge hill to climb. But what my experience has taught me is [that] if I do not [try to] take the hill by myself, I'll succeed. And what I plan to do is to build lots of teams as we take on this monumental challenge of aligning our educational institution so that we can satisfy the challenges in front of us to prepare our workforce for the 21st century."

Anderson discussed the important task that DSMC has in preparing students to go back to the workplace so that they can build a work environment in which they can excel in everything they do.

The education community is challenged, he noted, because "We are asking more of our people in the workplace today than we ever have. This concept of empowerment and depending on our folks is absolutely real and critical to our success in the community. That is why I am proud to be a part of DSMC and the Defense Acquisition University.

"If we are going to win," he concluded, "it is going to be because of our people, and we play a key role in preparing them so that they are ready for the challenges that we are placing on them every day."

## Vincent — Teacher, Coach, Leader, Champion

Navy Vice Adm. John Lockard officiated at the retirement portion of the ceremony, referring to Vincent as a champion, a teacher, a coach, and a leader. Reviewing many of his career accomplishments, Lockard also talked about Vincent's career progression from humble beginnings in McAlester, Okla., to the elite minority of military officers who ultimately attain flag officer rank.

Although Lockard touched on many key accomplishments of Vincent's career, he focused more on Vincent's character. Lockard maintained that he could go on and on talking about all of Vincent's achievements, "But I don't think I will. Instead," he countered, "I think I'll talk about the man from McAlester, Oklahoma — the man who had a dream as a youngster to become a teacher and a coach." He described hard work, continuous personal growth, and a desire to do better as Vincent's most notable attributes.

Lockard also spoke of Vincent's commitment to "taking care of people, setting the example for people to follow, and mastering the fundamentals himself before trying to teach them or equipping someone else." This, he said, was an example of how Vincent effectively applied his acquired skills as teacher and coach to his role as DSMC's Commandant.

Rich Reed, DSMC Provost and Deputy Commandant, also spoke briefly about Vincent's DSMC tenure, saying that he "built bridges over previously troubled waters," and allowed the staff and faculty to "regain their sense of respect and put balance back in their lives."

## The End of a Story, The End of a Military Career

Vincent described his retirement by saying, "This is the ending of the story of a career. I am finishing up one of the finest experiences that I believe anyone could hope for — a wonderful career in the United States Navy, also capped off by being the Commandant of the Defense Systems Management College."

He spoke of the Department of Defense's tradition of the Change of Command, a tradition that for him holds a much deeper meaning than just the changing of leadership. Not only was the ceremony the "passing of the baton," but for him personally, it was also "the marking of a milestone."

Vincent went on to describe his view of DSMC as an organization "embracing change, and one that wants to grow, improve, experiment, and to be on the cutting edge of all of the new techniques, methodologies, and education."

Assuring DSMC's faculty and staff that Anderson would lend his talents to DSMC just as all of the commandants before him, Vincent said, "I am confident DSMC will continue to move upward from a foundation that has been carefully laid. The DSMC team has been and is every general manager's dream. We have Hall of Famer's in every position.

"I want to thank every member today here at DSMC," he concluded. "You gave me your best day in and day out ... I can honestly say that it has been my sincere honor to be DSMC's fourteenth Commandant, and I am grateful for the opportunity that you have all shared with me."

Looking pointedly at his successor, Vincent had a few departing words of Oklahoma-style, down-to-earth advice that will undoubtedly go down in DSMC history: "General Anderson, DSMC is not your father's Oldsmobile. You're about to get behind the wheel of a roadster, so *strap yourself in and have fun!*"

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