

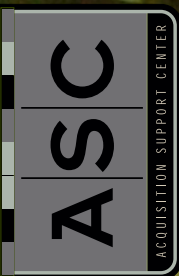
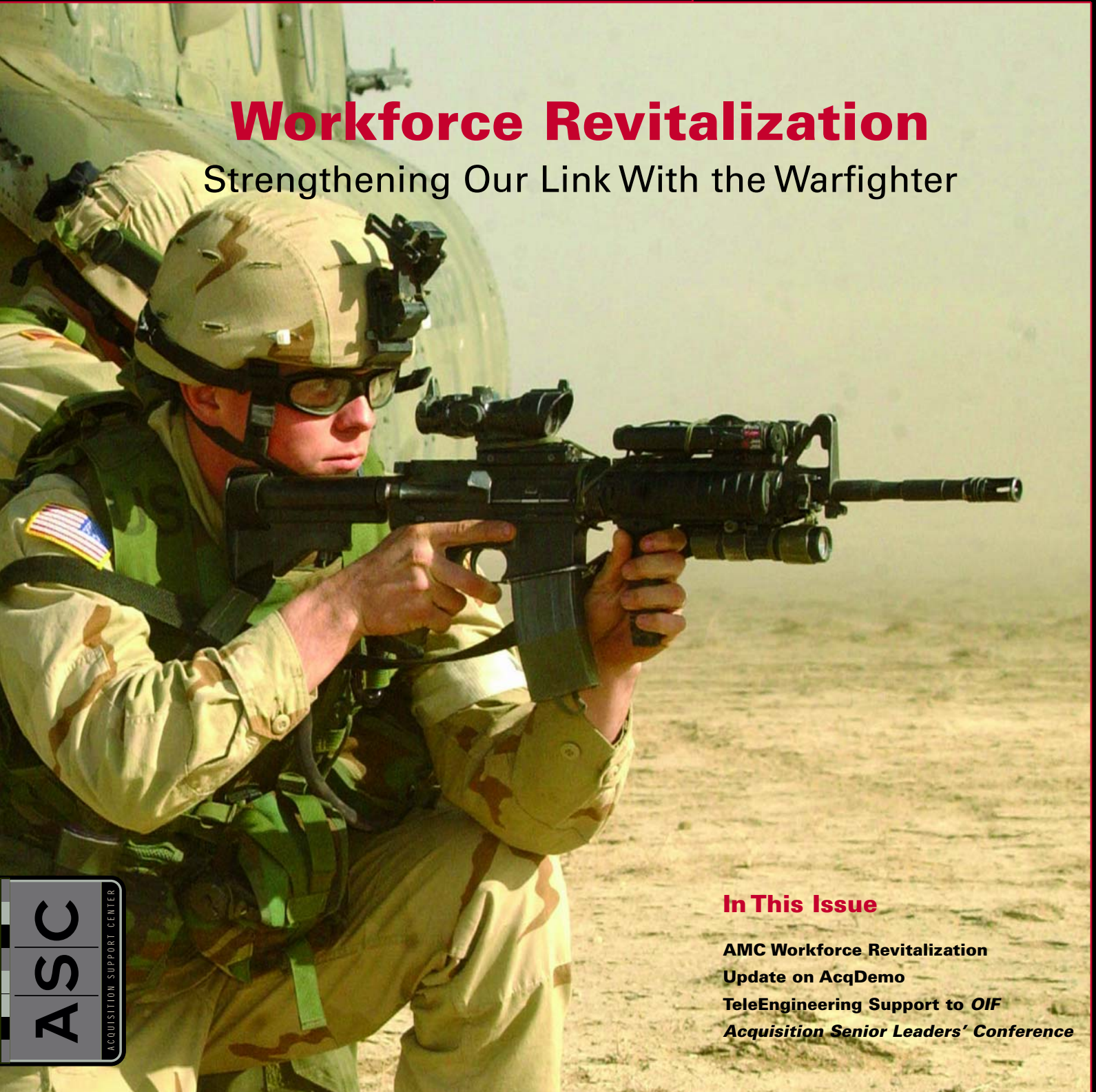
# ARMY AL&T

September - October 2003



## Workforce Revitalization

Strengthening Our Link With the Warfighter

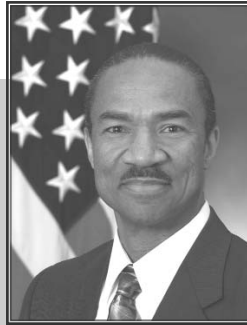


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## From the Army Acquisition Executive

# People Make It Happen!



**O**ur Army is the world's pre-eminent land force. It is respected by our friends and feared by our enemies. As Army Chief of Staff (CSA) GEN Peter J. Schoomaker recently stated, "We set the standard. We were part of the joint team that defeated the Taliban in Afghanistan and took down a brutal regime in Iraq. Today we are deployed and conducting contingency operations at an unprecedented pace. Our soldiers, civilians and their families set the standard every day for selfless service."

Although we are the world's most powerful, most capable and most respected Army, there is no written law that suggests our status will always remain that way. People will make that happen. In fact, people are central to everything we do in the Army. Institutions do not transform — people do. Platforms and organizations do not defend the Nation — people do. Units do not train, stay ready, grow and develop leaders, make sacrifices and take risks on the Nation's behalf — people do. As former CSA GEN Creighton Abrams once said, "People are not in the Army, they are the Army." And that statement is as true today as it ever was!

People are our most precious resource and we are investing appropriately to ensure that the Army's Acquisition, Logistics and Technology Workforce is prepared to achieve the Army's mission requirements — today and tomorrow. In accomplishing this, we developed the U.S. Army Acquisition Workforce Campaign Plan. The Campaign Plan will be briefed to the CSA and the new Secretary of the Army in early FY04 to ensure our goals and objectives are in total alignment with the Army's transformation.

Briefly, the Campaign Plan includes the following three strategic objectives.

- **Strengthen the relationship between the acquisition workforce and the operational Army — the warfighter.** The AL&T workforce consists of 11 different acquisition career fields/tracks with more than 60,000 members. We are the people who, with our industry partners, research, manage, develop, test, evaluate, contract, field and sustain our warfighting systems and equipment. Without the right people providing world-class systems, the U.S. Army would not be the pre-eminent power that it is today. We must continue developing cohesion among our communities and continue conveying this message to the rest of the Army, the Department of Defense and Congress.
- **Provide a clearly defined environment for the entire Army acquisition community that encourages and offers career opportunities and leadership development at all levels for both civilians and officers.** We are developing and maintaining a professional workforce that is ready to meet the challenges that lie ahead. Successfully executing the Army's Acquisition Human Resource Strategic Plan is instrumental in reshaping our workforce.

- **Ensure that the Army's acquisition community is technically competent and responsive to the Army's current and future needs.** The AL&T workforce is leveraging state-of-the-art technology to always stay one step ahead of our adversaries. We are maturing our advanced technologies and integrating them into safe, effective, suitable and supportable warfighting systems.

Workforce initiatives are aimed at attracting the talent, providing the training and growing the leaders required for achieving successful transformation. They include recruiting and retaining initiatives, high-profile developmental assignments, advanced educational and experiential opportunities and expanding the Acquisition Personnel Demonstration Project.

This issue's lead article by LTG John S. Caldwell Jr., Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology and Director of Acquisition Career Management, expands on these three objectives and includes information on the Communication and Outreach Plan, which is aligned with the Campaign Plan. In addition, more than 50 percent of the AL&T workforce will be eligible to retire during the next 5 years, and Caldwell's article expands on our plans to "capture" the institutional knowledge of these skilled team members before they depart.

My organization has a clear vision: *equip and sustain the world's most capable, powerful and respected Army.* Our goal is clear: *deliver the most technologically advanced capabilities at the right time, right place and right price to operational commanders and their combat forces.* And last, our focus is clear: *design programs, develop people, streamline production and continuously develop process improvements.*

During the last year, while working on each of our four focus objectives, we centered our efforts on programs to meet major milestones successfully, ensuring that our weapon systems and equipment got into our soldiers' hands as quickly as possible. A focal point was also developing a world-class acquisition workforce. Our planning efforts are paying big dividends because the AL&T workforce is at the forefront in the march towards the Army's transformation to the Future Force. The workforce's collective expertise and abilities to research, manage, develop, test, evaluate, contract, field and sustain our warfighting systems are absolutely critical to the Army's overall success and we will continue to provide our warfighters the materiel they need to fight with greater lethality, survivability and sustainability — regardless of where the battlefield or mission takes them.

We accomplished much in FY03 but there is still much more left to do. So let's roll up our sleeves and continue working hard and working together in FY04. People make it happen and that's why I'm relying on each and every one of you!

**Claude M. Bolton Jr.**  
Army Acquisition Executive



# ARMY AL&T

September - October 2003

# ACQUISITION, LOGISTICS & TECHNOLOGY

**PB 70-03-5**

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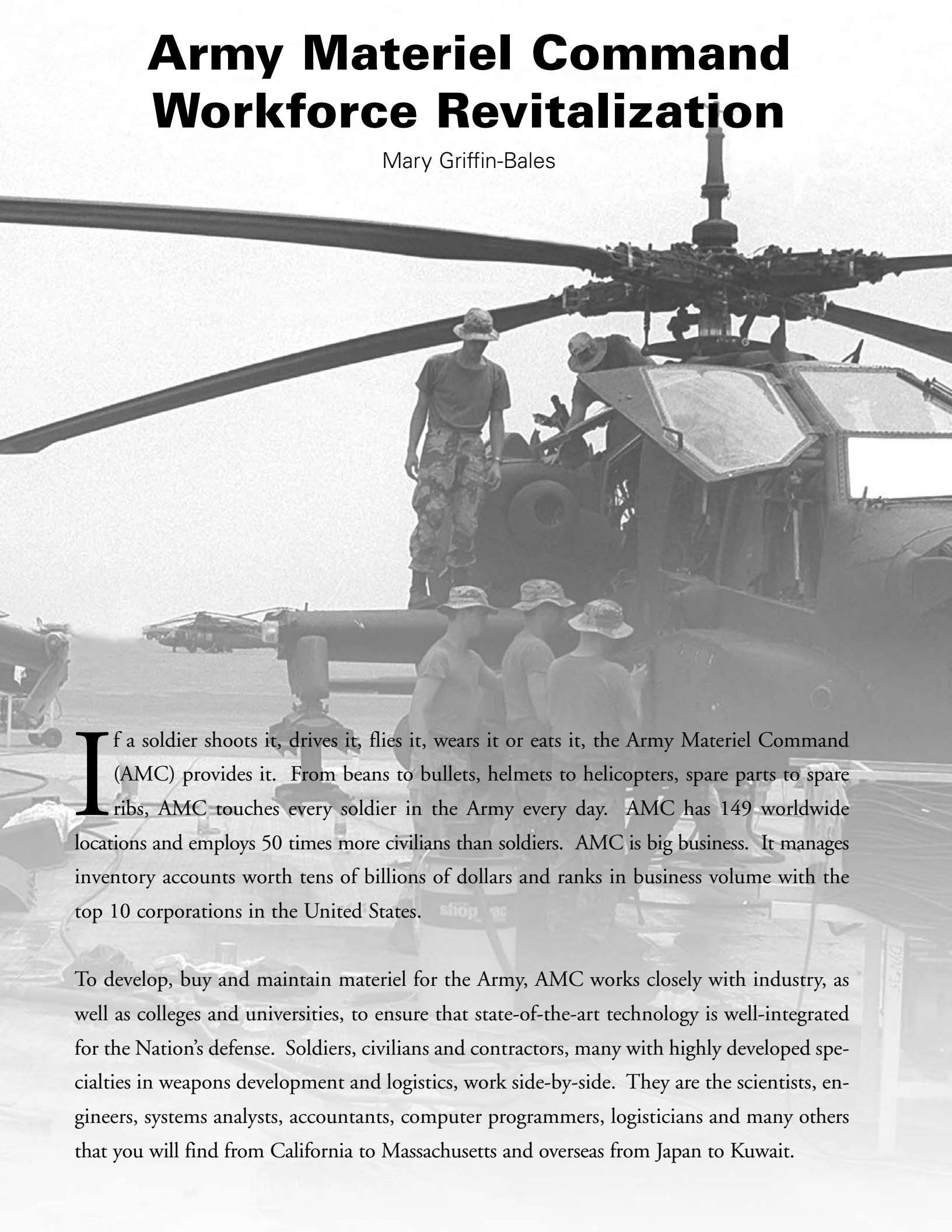
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# Army Materiel Command Workforce Revitalization

Mary Griffin-Bales



**I**f a soldier shoots it, drives it, flies it, wears it or eats it, the Army Materiel Command (AMC) provides it. From beans to bullets, helmets to helicopters, spare parts to spare ribs, AMC touches every soldier in the Army every day. AMC has 149 worldwide locations and employs 50 times more civilians than soldiers. AMC is big business. It manages inventory accounts worth tens of billions of dollars and ranks in business volume with the top 10 corporations in the United States.

To develop, buy and maintain materiel for the Army, AMC works closely with industry, as well as colleges and universities, to ensure that state-of-the-art technology is well-integrated for the Nation's defense. Soldiers, civilians and contractors, many with highly developed specialties in weapons development and logistics, work side-by-side. They are the scientists, engineers, systems analysts, accountants, computer programmers, logisticians and many others that you will find from California to Massachusetts and overseas from Japan to Kuwait.

Since September 11, 2001, Americans have heard the call to public service — to make a difference — and AMC is just the place to do it. AMC is a place where the work is exciting and really matters. The Blue Force Tracker Installation teams from Tobyhanna Army Depot can attest to that. During *Operation Iraqi Freedom* they installed the Blue Force Tracker device on every lead vehicle making it possible for the command and control centers to track friendly forces and avoid confusing them with the enemy. Now DOD is making plans to install Blue Force Tracker in every Navy, Air Force and Marine vehicle and aircraft. AMC is doing today what other companies have not even thought of doing.

How is the talent for these jobs acquired and retained? Simple — AMC trains leaders and attracts America's brightest, tech-savvy graduates for our premier fellows and intern training programs. The AMC fellows is a structured, 5-year program that grows multifunctional generalists in the following specialties: contracting and acquisition, supply management, materiel maintenance management, quality and reliability assurance, engineers (non-construction) and scientists and information technology. Fellows complete graduate degree requirements at Texas A&M University, College Station, TX, during their first year, followed by multiple rotational assignments. They enter the program at the GS-7 level with a target of GS-12/-13. The intern program, by comparison, lasts 2 years. It covers 22 career programs with disciplines ranging from budget to physical security and law enforcement. In addition to the fellows and intern programs, AMC



Erica Jones, right, of the Aviation and Missile Research, Development and Engineering Center's (AMRDEC's) Software Engineering Directorate, shows Lori Hardy and Jennifer Elliot, college students attending the Technological Excellence in Aviation, Missiles and Space Week 2003 Conference, the Kiowa Warrior simulator. (photo by Kimberly Danford)

has a 4-year Blue Collar Apprentice Program. Graduate apprentices earn certification from the Department of Labor. Student employment programs for high school and college students are popular throughout AMC activities and are a direct link into the AMC intern and apprentice programs.

AMC is not without challenges in revitalizing its workforce. Like every employer, AMC faces stiff competition to attract the best applicants and retain its talented workforce. But it is not all about recruitment and retention. Continuous learning is key to ensuring the workforce develops the strategic competencies needed to transition with AMC from industrial commodity-based work to knowledge-based integration missions. Today, 205 employees are transitioning to the revolutionary Logistics Modernization Program. These employees are learning new and future business practices that provide the tools to work in a new enterprise system.

This is just one example of how AMC is retraining its workforce.

Whether it's training and development or college recruitment, AMC is meeting the challenge to revitalize its workforce for today and tomorrow.

MARY GRIFFIN-BALES is assigned to the Field Support Division, Office of the Deputy Chief of Staff, G1, Headquarters, Army Materiel Command. She has served in personnel management positions in Japan, Korea, Germany, Massachusetts and the Washington, DC, metro area. Griffin-Bales is a retired Air Force Reserve Nurse Corps lieutenant colonel and a graduate of the Air Command and Staff College. She received a B.A. in geography from Keene State College and completed the Army Management Staff College Sustaining Base Leadership and Management Program.



(Left to right) Walt Adamczyk, a Quality Engineer in the Program Management Brigade Combat Team at the U.S. Army Tank-automotive and Armaments Command (TACOM), Warren, MI; Wanda Gilbert, AMC fellow; and Calvin Haggen, a Quality Assurance Specialist with the Defense Contracting Management Agency, TACOM; stand in front of a Nuclear Biological Chemical Reconnaissance Vehicle at the Army Tank Plant in Lima, OH, where they performed a final inspection record on the vehicle. (photo by Paul Gherian)

## Interview With GEN Paul J. Kern, Commander, Army Materiel Command

**Q:** Fifty percent of your workforce is reaching retirement. You lost nearly a full generation of workers during the 1990s reductions. What is your plan to revitalize your workforce?

**A:** AMC is in transition from the Industrial Age to the Information Age. Our workforce has been trained to use processes and tools that worked well in the last part of the 20th century. Today, high schools and colleges teach new Information Age skills, such as parallel processing on real-time systems, skills unfamiliar to most of our workforce. The successor force, which will come from our student employment, apprentice, intern and fellows programs, will bring these skills with them. In May, I went to the NASCAR races. NASCAR is the largest spectator sport in the world. Average attendance is 80,000 people. Very technically

oriented people attend NASCAR, including those in the racing business. What a great opportunity for recruiting civilian engineers, particularly for our tank automotive operations. What a parallel — tank automotive and NASCAR racing! How many places like that can we find where we can double up with recruiters?

**Q:** You wrote that “success or failure of Army transformation depends in large measure on the quality and effectiveness of the AMC workforce.” Can the AMC workforce really have such a dramatic effect on Army transformation?

**A:** Absolutely! You don’t achieve successes through organizations and machines. You achieve them through the people in those organizations who use the equipment. We are about half the size we were 12 years ago, so our people must

work harder and learn new skills at the same time. The number of deployments we send scientists, engineers, logisticians and mechanics on is increasing. We have 8,000 soldiers, civilians and contractors in the desert supporting *Operation Iraqi Freedom*. We need to employ people who understand the new technologies. They need to know the challenges of the deployments and environments that we operate in, whether it is the mountains of Afghanistan, the deserts of Kuwait, the jungles of the Philippines, Germany or the area south of the Balkans. Army transformation requires a workforce that is comfortable operating in these many different environments, with new technologies and new tools that are emerging in the 21st century. This successor group must get the experience from the current employees who have been through this for the

last 20-30 years. We cannot transform the Army without transforming AMC's people.

**Q:** The AMC workplace environment continues to change with unprecedented technological advances. How are you preparing your workforce for this change?

**A:** The biggest work process change in AMC is LOGMOD [a logistics enterprise system]. We have re-trained a very large segment of our workforce and we did it online and

face-to-face. New ways of doing things can bring people together, although sometimes it scares people to relearn doing something. The reality is, we have to deal with the human side very carefully to make sure we don't ask our employees to do something we haven't prepared them for.

**Q:** How do you encourage students, midlevel workers and others to perform public service as a government employee?

**A:** When we show some folks the things that we are doing, they get excited. They can't find jobs like this in other sectors. AMC gives them a lot more responsibility. We send them off to Afghanistan to take a robot into a cave. They say "Wow, I can help a soldier stay out of harm's way with these new capabilities." Employees will be rewarded financially, but more importantly, they will be rewarded because they are doing something that is interesting and productive.



## Interview With Vic Ferlise, Civilian Deputy, Communications-Electronics Command

Thomas Sturges, standing, of AMRDEC's Software Engineering Directorate, demonstrates the Unmanned Aerial Vehicle simulator to a college student attending the Technological Excellence in Aviation, Missiles and Space Week 2003 Conference. (photo by Kimberly Danford)

**Q:** How would you describe the U.S. Army Communications-Electronics Command's (CECOM's) Workforce Revitalization?

**A:** Revitalization at CECOM has been going on for some time. Two years ago the average employee was 48 years old and we found that our folks retired around 60 years old. CECOM uses all the reshape tools provided by DOD and met every downsizing target without a reduction in force throughout the 1990s. In the last 2 years, through extraordinary efforts, we were able to hire 1,500 people, mostly college graduates. Our average age remains 48. Also scooped up were some outstanding midcareer engineers from the dot-coms. We have a reshape tool that industry can't match — excess military housing leased to new engineers for \$300 per month. That's not a bad deal for a house on the Jersey Shore

while we introduce them to the CECOM work, and it's also good for CECOM because we would have been subsidizing these empty units.

**Q:** What kind of work is done at CECOM? What makes it an Employer of First Choice?

**A:** Fort Monmouth, NJ, has a rich history of research and development. However, 20 years ago, the leadership adopted a strategy that industry would lead the way in C4ISR [command, control, communications, computers, intelligence, surveillance and reconnaissance] technology development; the Army would leverage that technology. In the 1970s, organizations like Bell Laboratories were cranking out three patents a day trying to win the Nobel Prize for physics and science. Enormously talented organizations like Bell Labs have now transformed and are driven to return

rapid profits. Today, we are swinging back to a time where we need to be leaders in the development of technology where industry is not investing. We need to be investing heavily in capabilities like night vision. Unlike industry, we are not profit-driven and our engineers can focus on developing these great concepts. You ask, where is the advantage for our soldiers? Where is the science? Where is the advancement? It makes for a great place to work and challenges the engineers to be all they can be. One of the things that motivates people is to do work that they think is important, and we have the time and money to let them do it. Most importantly, though, we have the need. These people can see their products saving lives and that is why CECOM is an Employer of First Choice!

# Update: AAC Civilian PM and Post-Utilization Task Force

MAJ John Lemondes

**This article updates one published in *Army AL&T's* November-December 2002 issue on the Army Acquisition Corps (AAC) Civilian program/project manager (PM) and post-utilization task force's (TF's) progress.**

The initial article was written by Henry I. Jehan Jr. on behalf of Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT)/Army Acquisition Executive Claude M. Bolton Jr.; LTG John S. Caldwell Jr., Military Deputy to the ASAALT; and Acquisition Support Center (ASC) Director COL Mary Fuller. This article addresses the progress made since the last integrated process review in November 2002. New developments have been made, several initiatives have been closed or implemented and many more are near closure with estimated completion dates of late FY03 to early FY04.

## Background

The overall TF mission was to conduct a thorough root-cause analysis on why civilian selection rates to PM positions were so low and why post-placement of successful civilian PMs in positions of greater responsibility was not institutionally

recognized or practiced. In the initial assessment, 14 root-cause categories supported by 40 detailed root-cause issue statements were identified. The 14 root-cause categories identified by the TF include:

If new policies help the AL&TWF retain successful civilian PMs instead of losing them to industry at high attrition rates, then the TF will be deemed successful, but only time will tell.

- Unclear and inconsistent mobility expectations and policy.
- Lack of financial incentives.
- No career path beyond GS-15 (or equivalent personnel demonstration broadband level) or O-6 level PM.
- Improper use of permanent assignments to temporary or term positions.
- Inadequate supervisory and pre-command training.
- No meaningful civilian career model.
- Lack of civilian understanding of the board process.
- Deficiencies in Senior Rater Potential Evaluations (SRPEs).
- Deficiencies in Acquisition Career Record Briefs (ACRBs).

- Inadequate and inconsistent administration of benefits and entitlements.
- Inadequate peer socialization and leadership recognition.
- Inadequate cross-functional communication with ASAALT.
- Lack of acquisition requirements and accountability.
- Inadequate leadership commitment and follow-through.

These root-cause categories were subsequently reduced to the following 10 solution categories: road to Senior Executive Service (SES)/civilian career model; personnel action execution and management policy; benefits counseling, administration and environment; board selection process; training initiatives; DA policy; ASC and U.S. Total Army Personnel Command Acquisition Management Branch (AMB) policy and procedures and leadership. Effective post-utilization of civilian PMs is the essence of the above-listed solutions. If new policies help the Acquisition, Logistics and Technology Workforce (AL&TWF) retain successful civilian PMs instead of losing them to industry at high attrition rates, then the TF will be deemed successful, but only time will tell.

## Progress

As a direct result of this TF's findings, the entire AL&TWF will derive numerous benefits. Some of the most promising initiatives include:



- A new PM benefits, entitlements and procedures handbook condensing reference material for PMs.
- An updated, more functional ACRB.
- A revised civilian SRPE form, mirroring the military Officer Evaluation Report, allowing civilian senior raters to better identify top PM talent.
- Greater acquisition SES participation on DA selection boards.
- Significant improvements in sponsorship for incoming military and civilian personnel through the implementation of new policies.
- Creating temporary positions and assignment options for departing successful PMs.
- Providing senior leaders the option to designate civilian PMs as key and essential personnel.

- A revised AAC mobility agreement that more clearly explains the three types of mobility opportunities available to civilian AAC members and applicants to various selection boards.
- Improved and simplified selection board instructions.
- Improved linkage between the AMB and ASC Web sites for information retrieval.

### Pending Issues

Although numerous issues have been resolved, we are still challenged with a few others central to TF success. These include the PM end-of-tour Priority Placement Program (PPP), how to handle PPP exemption requests for Command Select List PMs and perhaps most importantly, the family implications

surrounding the Army spousal PPP. As we continue to develop solutions, we anticipate more civilians competing for difficult PM positions. Furthermore, as the TF enters its final execution phase, the AL&TWF can expect to realize relatively near-term benefits.

MAJ JOHN LEMONDES was the 51A Proponency Officer at ASC, Fort Belvoir, VA, when he wrote this article. He earned a B.S. from Penn State University and an M.B.A. and M.A. in public administration from Syracuse University. He is also a Command and General Staff College graduate.

# Logistics Management Proponency Office

Derek Sharpe

**Never before has the civilian contribution to the Army mission been more crucial. As the Army transforms, so must our civilian logisticians as their supporting role keeps abreast of new technologies, a changing force structure, process improvements in logistics support and changing civilian demographics. Training and development are two tools used to ensure a ready and capable civilian workforce.**

The Logistics Management Proponency Office (LogPro) provides training and development for current civilian logisticians; recruitment and training of interns; and career management for career pro-

grams 13, Supply Management, and 17, Materiel Maintenance Management. These two career programs have approximately 11,000 civilian logisticians at Army locations around the world.

LogPro provides a number of training vehicles for our civilians, centrally funded by the Army through the Army Civilian Training and Education System (ACTEDS). Training With Industry (TWI) and Training With Soldiers (TWS) are both exceptional programs. TWI provides the trainee experience with logistics-oriented private sector firms such as Boeing, FedEx and Sears. TWS provides a learning experience with our soldiers in the field using the products and logistics processes we design, influence and implement. With TWS, we get to know what our customers — soldiers — need and what we can do to improve our support to them.

LogPro provides funding for career logisticians to attend any accredited university for undergraduate and graduate education. The courses must be approved and logistics-related. We use a wide interpretation for logistics-related because it is our desire for all civilian logisticians to earn their bachelor's and graduate degrees. Funding is provided for books and tuition.

We also fund long-term training (more than 180 days) and many short-term training events. Our cross-functional training program has been a huge success, providing training up to 6 months for logisticians in a logistics area other than their own. For example, supply logisticians may train in maintenance, maintenance in transportation and so on. This training helps to "round out" the civilian, provides better job opportunities in the future and makes our logisticians more knowledgeable of the entire logistics support spectrum. Cross-functional training is available at virtually every Army major command (MACOM).

LogPro reviews applications for the Army Management Staff College's (AMSC's) Sustaining Base Leadership and Management Program, Senior Service Colleges, the Defense Leadership and Management Program and several Office of the Secretary of Defense (OSD) training programs for logisticians.

We review, comment, recommend and forward to the functional chief representative for approval the names of candidates for many of these programs. We must ensure that our best and brightest have access to, and funding for, these senior training and development programs.

Another equally important LogPro mission is to recruit, train, educate and assign Army civilian logistics interns. This mission becomes increasingly critical as the workforce population both declines in overall numbers and as the workforce grows older. The average age of current civilian logisticians is 51 years of age; but more significant is the fact that our age group 25 to 35 years is actually declining. This means that the workforce is aging without replacement.

It is vital that we recruit a younger workforce to train, learn and contribute as retirement and other factors continue to decrease our population of skilled and talented logisticians. We currently hire approximately 40 interns per year for assignments worldwide, but even that only fills less than half of the Army's requirement. Budget constraints limit recruitment.

The intern program lasts 18 months and our interns are hired as GS-07 with target grade GS-11 in 24 months. Interns are assigned to MACOMs based on MACOM

It is vital that we recruit a younger workforce to train, learn and contribute as retirement and other factors continue to decrease our population of skilled and talented logisticians.

requirements submitted the year before. The program includes 5 months of classroom training in logistics foundation courses. This training is conducted at the AMSC, Fort Lee, VA. All interns receive training in supply management and materiel maintenance management, intern leadership development, statistics, risk analysis, transportation, demil and disposal and other pertinent courses. Following formal training, our interns participate in on-the-job training for 60-90 days at an Army installation chosen based on the intern's background, experience and the Army's needs. Permanent duty assignment follows.

Our third and equally important mission is career management. Career management within the career program includes oversight of recruitment, classification, retention, training and development, future workforce planning, management of the workforce structure, understanding workforce demographics, leader development, personnel policy implementation and logistics workforce representation to other Army career programs, Assistant Secretary of the Army for Manpower and Reserve Affairs, OSD, academia and private sector business. Several overarching questions must be answered as we conduct career management activities: What are the logistics support requirements of the Army? How do we ensure a trained and ready workforce to meet these requirements? What are the personal and professional career needs of our workforce? How do we manage critical workforce issues achieving the highest productivity within budget?

It is obvious that the answers to these questions are complex and require resources beyond the reach of one office. It is also obvious that there is a wealth of knowledge and talent within the operational civilian logistics workforce. To use this talent, we are in constant communication with our career program managers at all MACOMs, subordinate commands and installations. Senior civilian logisticians appointed by the commander provide information to the proponenty office and to the general workforce, assisting us in resolving issues, programming intern intake, developing strategic plans and general management and oversight of programs and activities. They are the funnels, the go-between through which the DA proponenty office communicates with every civilian logistician within the worldwide Army.

Several of the critical programs LogPro is working include Army

Training and Leader Development, the Strategic Army Workforce, Future Logistics Enterprise, training and education of the nonacquisition workforce and training and development of the acquisition workforce. These programs, along with others, are essential to our logisticians maintaining a high level of skill and knowledge to carry us through Army transformation and to maintaining a high level of logistics support to our soldiers.

The Functional Chief for Supply Management and Materiel Maintenance Management, Office of the Deputy Chief of Staff, G4, understands and fully supports our civilian mission. Under the guidance of LTG Charles S. Mahan and that of his functional chief representatives, the LogPro objective is clear — meet the soldier's logistics requirement by providing training and development opportunities for our civilian workforce.

FY04 will be an exciting year for LogPro as we become a member of the Acquisition Support Center (ASC) organization and team. We will work with the acquisition logistics proponenty specialists in ASC to improve the professional skills of Army logisticians, whether in acquisition, sustainment or members of the nonacquisition workforce. This combined team, LogPro and ASC, will be better able to provide outstanding support to our workforce in career management, training and development and the recruitment and training of our interns. We look forward to this opportunity to better serve our customers.

DEREK SHARPE is the Director of the Logistics Management Proponenty Office. He holds a B.A. in economics and an M.S. in administration. Sharpe is a member of the Army Acquisition Corps and is Level III certified in life-cycle logistics.

## DOD Civilian Acquisition Workforce Personnel Demonstration Project Update

April Fortenberry, Jael Latham and Jerry Lee

On Jan. 8, 1999, the *Federal Register Notice* for the DOD Civilian Acquisition Workforce Personnel Demonstration Project was published and approved for implementation by the Office of Personnel Management. This demonstration project is commonly called AcqDemo. This article provides an update on AcqDemo participation, its Contribution-based

Compensation and Appraisal System (CCAS) results and its future.

For the specific objectives and personnel management interventions, please see the *Federal Register Notice* and its amendments at:

- <http://www.opm.gov/fedregis/1999/64r1425.pdf>

- <http://www.opm.gov/fedregis/2001/66-0028007-a.pdf>
- <http://www.opm.gov/fedregis/2002/66-0020192-a.pdf>
- <http://www.opm.gov/fedregis/2002/66-0044250-a.pdf>

### Participation

AcqDemo participation has modestly increased from 1,469 Army civilian employees since its initial

implementation to more than 4,100 participants with the potential for an additional 8,000. The additional 8,000 participants are contingent on the various local unions' acceptance of AcqDemo. There has been progress made in some areas and negotiation continues.

AcqDemo was implemented in 1999 with 15 charter Army organizations. Four of these organizations negotiated written agreements with local unions to allow bargaining employees to participate in AcqDemo. The four organizations and local unions are:

- Program Executive Office, Ground Combat Support (PEO, GCS), Warren, MI (American

Federation of Government Employees (AFGE) Local 1658).

- PEO, GCS, Picatinny Arsenal, NJ (National Federation of Federal Employees (NFFE) Local 1437).
- Eighth U.S. Army Contracting Command, Korea (NFFE Local 1363).
- Military Traffic Management Command Principal Assistant Responsible for Contracting (AFGE 909/2).

In 2000, the Health Care Acquisition Activity Regional Contracting Office, Madigan Army Medical Center, Tacoma, WA (AFGE Local 1502) joined the AcqDemo.

In 2002, AFGE Local 1904's members voted to participate in the AcqDemo as part of PEO,

Command, Control and Communications. AFGE Local 1904 also agreed for its PEO, Enterprise Information Systems members at Fort Monmouth, NJ, to convert to AcqDemo. AcqDemo reached a significant participation milestone in its developing partnership with unions when AFGE Local 1658 agreed to a 2-year extension on its AcqDemo agreement with PEO, GCS at Warren, in which 92 percent of voting dues-paying members favored continuation. A complete list of all Army AcqDemo organizations is in the accompanying chart.

The topic of most interest is AcqDemo's CCAS evaluation system. A common misconception of CCAS is that general pay increases (GPIs) are denied to all AcqDemo

**Fiscal Year**

**Army AcqDemo Organizations**

- 99** Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (formerly Research, Development and Technology)  
Acquisition Support Center (formerly Army Acquisition Executive Support Agency)  
Army Contracting Agency (formerly Contract Support Agency)  
Program Manager (PM), Acquisition, Logistics and Technology Enterprise Systems and Services (formerly Research, Development and Acquisition Information Systems Activity and now re-aligned under PEO, Enterprise Information Systems)  
PEO, Command, Control and Communications Tactical (formerly C3 Systems)  
PEO Ground Combat Systems at Warren and Picatinny Arsenal (formerly Ground Combat and Support Systems)  
PEO, Intelligence, Electronic Warfare and Sensors  
PEO, Chemical and Biological Defense  
National Guard Bureau, PEO, Chief Information Officer (formerly Reserve Component Automation Systems and Information Systems)  
Medical Command (MEDCOM) Health Care Acquisition Activity (HCAA) (HQ, Regional Contracting Offices at Eisenhower Army Medical Center, Madigan Army Medical Center, Beaumont Army Medical Center and Tripler Army Medical Center)  
HQDA G8, Force Development/Directorate of Integration (formerly Army Digitization Office)  
Eighth U.S. Army Contracting Command, Korea  
Army Test and Evaluation Command (ATEC) (formerly Army Operational Test and Evaluation Command)  
Office of the Administrative Assistant to the Secretary of the Army Defense Contracting Command - Washington and the Directorate of Logistics (formerly DSS-W)  
Military Traffic Management Command Office of the Principal Assistant Responsible for Contracting
- 01** Objective Force Task Force and PM, Future Combat Systems became independent pay pools
- 02** Joint Simulation System  
PEO, Aviation (management personnel only)  
PEO, Combat Support and Combat Service Support (management personnel only)  
MEDCOM HCAA (Walter Reed Army Medical Center)
- 03** ATEC's Developmental Test Command and Operational Test Command  
Aviation and Missile Command (management personnel only)  
Army Materiel Systems Analysis Activity  
PEO, Simulation, Training and Instrumentation  
PEO, Air and Space Missile Defense (management personnel only)  
Tank-automotive and Armaments Command (TACOM) (management personnel only)  
TACOM Acquisition Research, Development, and Engineering Center (management personnel only)

employees. This is not true. Acq-Demo has years of CCAS cycle data addressing that misconception and highlighting CCAS's strengths as a means of improving federal personnel management and compensating the workforce.

There are three regions of CCAS eligibility — A, B and C. The GPI can only be reduced or denied for A-rated employees. It can also be given in full to A-rated employees and is automatically awarded to all AcqDemo B- and C-rated employees. The organization's Personnel Policy Board sets GPI doctrine for A-rated employees. However, the Army's policy for the first CCAS rating period was to award the GPI to all Army AcqDemo civilian employees. During the 1999 CCAS rating period, although 4.15 percent of the 1,469 Army AcqDemo civilian employees were A-rated, all received the GPI. In 2000, 2.11 percent (34 of 1,609) Army AcqDemo civilian employees were A-rated and 12 of the 34 received the GPI per local policy. In 2001, 1.07 percent (18 of 1,675) Army AcqDemo civilian employees were A-rated and 5 of the 18 received the GPI. In 2002, 1.07 percent (20 of 1,861) Army AcqDemo civilian employees were A-rated and 10 of the 20 received the GPI. This data should be encouraging to potential participants who are concerned about the annual GPI. Additional information on CCAS eligibility and scoring techniques can be found at the AcqDemo Web site at [http://asc.rdaisa.army.mil/divisions/pm/acqdemo\\_ccas.cfm](http://asc.rdaisa.army.mil/divisions/pm/acqdemo_ccas.cfm).

The contribution rating increase (CRI) is a permanent additional base-salary increase that counts

toward a civilian employee's "high-three" for retirement. AcqDemo organizations must set the CRI fund at no less than 2 percent of the activity's total salary budget (2.4 percent for the first year). The average Army CRI funding levels were 2.91 percent in 1999, 2.96 percent in 2000, 3.69 percent in 2001 and 3.41 percent in 2002. The average Army CRI percent for the four CCAS rating periods were 2.70 percent in 1999, 2.57 percent in 2000, 3.08 percent in 2001, and 2.81 percent in 2002. The difference between the funding level and the percent increase is due to employees who are at the maximum salary for their broadband levels, who retired or who converted out of AcqDemo.

C- or B-rated AcqDemo civilian employees who are capped at the maximum salary for their broadband levels will receive their full GPI but cannot receive the CRI. It is Army policy that any CRI dollars not distributed to an employee will be added to the employee's contribution award (CA). For example, in 2003, the maximum base pay for an NH-III employee is \$79,629. If the employee's base pay is already \$79,629, and the employee's computed CRI is \$2,500 with a computed CA of \$1,800, this employee would receive the full GPI and the CRI of \$2,500 would be carried over and added to the \$1,800 CA for a total award of \$4,300. This award is a one-time lump sum payment. This policy is also applicable to employees who retired or converted out of AcqDemo to another federal agency before the payout.

As stated, the CA is a lump-sum payment and, like the Total Army Personnel Evaluation System

performance awards, does not count toward a civilian employee's "high three" for retirement. AcqDemo organizations must set the CA fund at no less than 1 percent of the activity's total salary budget (1.3 percent for the first year). The CA fund will not exceed 90 percent of the total awards budget to promote sufficient funding for awards not related to the CCAS process such as on-the-spot awards, special act awards and group awards. The Army average award-funding levels were 1.70 percent in 1999, 1.97 percent in 2000, 2.34 percent in 2001 and 2.42 percent in 2002. The average CA percent for the four CCAS rating periods were 1.42 percent in 1999, 1.90 percent in 2000, 1.85 percent in 2001 and 2.17 percent in 2002. Because of the CRI carryover being added to the CA, the average total award percent for the four CCAS rating periods were 2.00 percent in 1999, 2.38 percent in 2000, 2.79 percent in 2001 and 2.90 percent in 2002.

The new base-salary rate GPI, CRI and locality rate, where applicable, are effective the first full pay period in January of each year and paid over 26 pay periods. The CA is included in the first paycheck as a lump-sum payment to AcqDemo civilian employees.

To summarize the four CCAS cycles results: In 1999, 4.15 percent of the Army AcqDemo civilian workforce received no CRI because they were A-rated, and another 9.53 percent were ineligible because of time, retained-pay status or conversion out of AcqDemo. In 2000, 2.11 percent were A-rated and 11.25 percent were ineligible because of retained-pay status or conversion

out of AcqDemo. In 2001, 1.07 percent were A-rated and 11.16 percent were ineligible because of retained pay status or conversion out of AcqDemo. In 2002, 1.07 percent were A-rated and 6.83 percent were ineligible because of retained-pay status or conversion out of AcqDemo. Thus, 86.32 percent of the Army AcqDemo civilian workforce had a computed CRI (salary increase) in 1999, 86.64 percent in 2000, 87.77 percent in 2001 and 92.10 percent in 2002.

A CRI that was equal to or greater than a within-grade-increase (WGI) was given to 42.77 percent of the rated workforce in 1999, 40.33 percent in 2000, 47.22 percent in 2001 and 45.62 percent in 2002. This is quite favorable when compared to the scheduled WGIs for General Schedule (GS) employees, which are 1 year for Steps 2 through 4, 2 years for Steps 5 through 7, and 3 years for Steps 8 to 10.

### AcqDemo's Future

DOD has proposed to Congress a new personnel system called the

National Security Personnel System (NSPS). The proposed NSPS will include all DOD GS and appropriated fund pay and broadband civilian employees. If Congress legislates NSPS, the AcqDemo organizations and their civilian workforce will transition to the new system.

Concurrent with the NSPS initiative, DOD has reviewed the best practices of its demonstration projects including science and technology (S&T) laboratory demonstration projects and AcqDemo. DOD may consolidate all the laboratory projects under one governing authority called the *Best Practices Federal Register* for S&T demonstration projects and revise the *AcqDemo Federal Register* to mirror the *DOD Best Practices Federal Register*. The Best Practices demonstration projects model will be the seedling for NSPS. Regardless of whether NSPS is approved by Congress for FY04, DOD leadership envisions the civilian Acquisition, Logistics and Technology Workforce implementing best practices. AcqDemo is an active participant in the best practices

effort to ensure that lessons learned from AcqDemo are incorporated into a better personnel management system for DOD's entire civilian workforce.

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## DAE Certificates Presented to Army Winners

Catherine Anderson (Photos by Richard Mattox)

The Defense Acquisition Executive (DAE) Certificate of Achievement was established to enable the DAE to provide personal recognition to individuals, groups or teams who have made exceptional contributions to the department's acquisition programs

and systems or the improvement of life-cycle costs. The ideas, processes and methods of each recipient promote acquisition reform goals and help achieve best value for the government and our Nation's warfighters.



Army Acquisition Executive Claude M. Bolton Jr. presents Hari Bezwada and Kevin Carroll with their first of two DAE Certificates, this one for Program Management of Telecommunications Systems.



Bolton presents Catherine Doolos and Kevin Carroll with their DAE Certificate for the radical redesign of the Army's Tactical Message System.

Five Army teams were selected to receive the DAE Certificate for calendar year 2002. Assistant Secretary of the Army for Acquisition, Logistics and Technology and Army Acquisition Executive Claude M. Bolton Jr., with the U.S. Army Acquisition Support Center (ASC) as agent, presented these awards Aug. 14, 2003, at the Acquisition Senior Leaders' Conference in Seattle, WA.

The Product Management Office, Telecommunications Systems of Program Executive Office, Enterprise Information Systems (PEO, EIS) was the recipient of two certificates. Team members were heavily involved in the Pentagon renovation project, greatly contributing to the successful restoration of the Pentagon information technology infrastructure by the 1-year anniversary of the September 11, 2001, attack. In the program management category, the Telecommunications Systems Team embraced the challenge of moving Pentagon personnel back into their offices and helping restore critical communications operations. The team's innovative efforts in negotiating the contract's structure are projected to save the government up to \$20 million annually. Concurrently, the PEO, EIS Contracting Team assessed risks associated with rebuilding and recovering Wedge 1, negotiating contract

terms and conditions while pricing the numerous courses of action and changes. PEO Kevin Carroll and Team Leader Hari Bezwada accepted the award on behalf of the PEO, EIS Team.

The PEO, EIS Team from the Product Management Office, Defense Message System was recognized in the program management category and achieved the radical redesign of the Army's Tactical Message System — taking it from concept through test in just 6 months. The result was program transformation to a reliable, on-time system that will directly benefit soldiers in the field. The redesign also saves more than \$85 million in life-cycle costs for the Army. PEO Kevin Carroll and Team Leader Catherine Doolos accepted the award for the PEO, EIS Team.



Pamela Poole and BG Stephen V. Reeves accept their award for the M45 Chemical Biological Mask from Bolton.

The M45 Chemical Biological Mask Team, Joint Program Executive Office for Chemical and Biological Defense, was recognized for achievements that directly benefit soldiers in the field. The M45 Team was recognized in the category of program management for incorporating new technologies and designs to address the previous mask's performance limitations via innovative partnerships with parts vendors and other product improvement strategies. Their efforts



Bolton presents Stephen Mapley with the ARMS Team's DAE Certificate for innovative acquisition reform policies that will save Army acquisition plants approximately \$40 million.

reduced life-cycle costs by more than \$2.6 million. PEO BG Stephen V. Reeves and Team Leader and Systems Manager Pamela Poole accepted the award for the M45 Chemical Biological Mask Team.

The Armament Retooling and Manufacturing Support (ARMS) Team was recognized in the industrial property management category. The ARMS Team used innovative acquisition reform policies to save the Army approximately \$40 million by attracting commercial tenants into Army acquisition plants. The ARMS Team lowered facility disposal costs, created and sustained more than 3,000 jobs and provided approximately \$395 million in economic impact to local communities. Team Leader Stephen Mapley accepted the award for the ARMS Team.

The DAE Certificate of Achievement can be awarded at any time of the year at the DAE's discretion and is the appropriate award to highlight and reward individuals and teams that have made outstanding contributions to the acquisition system through innovative acquisition management techniques.

CATHERINE ANDERSON is a Program Analyst with Science Applications International Corp. supporting ASC's Force Structures Division at Fort Belvoir, VA.

# Advanced Collaborative Environment for Developing and Testing System-of-Systems

LTG John S. Caldwell Jr.

**LTG Caldwell was the keynote speaker for the Army Test and Evaluation Command's Test Technology Symposium 2003 on June 25, 2003. His remarks to an audience of acquisition leaders and testers from the Army, Navy, Air Force and industry identified the concept by which we must develop and test our emerging system-of-systems through an advanced collaborative environment.**

Networking and integrating the Army's "system-of-systems" is crucial to the success of future military operations.

Because this concept is somewhat new to us, it is rewarding to see the entire defense community pulling together to make it happen. In June, I had the opportunity to address the *Army Test Technology Symposium 2003* to share my thoughts on our current acquisition programs and to see how the test and evaluation (T&E) community is preparing for new ways of doing business. Army testers, materiel developers, combat developers and industry technologists attended the symposium. Representatives from the Air Force and Navy acquisition agencies also shared their knowledge on distributed testing. Using modeling, simulation and networking technology tools, these agencies worked together to create realistic joint battlefield testing scenarios supported by data-sharing

networks. These, in turn, supported tests and experiments at distributed geographic locations. Using the combined knowledge and tools from

these agencies, we will develop, test and evaluate emerging weapons and communication systems that will fight together on future battlefields. This advanced collaborative environment will begin integrating the components and systems as they mature.

## Army Future Force

As the Army's lead agency for future force materiel acquisition, we must provide our troops in the field with affordable, world-class weapon systems and contracting services, years before any adversary can achieve comparable technological capability. We have quality people, a teamwork mindset and a drive for success that enables us to accomplish our mission. The Army's goal is to system engineer and field the unit of

No other nation in the world could have fielded the exceptional military capabilities that our U.S. forces in Iraq have demonstrated in a totally collaborative environment.

action (UA) as a unified entity, instead of treating the units as separate and individual platforms with separate development programs. By testing the combined capabilities of the system-of-systems and their enabling systems as a unit, we will be able to quantify and understand the astounding capabilities that a UA brings to the Future Force.

## Change in Mindset

When I was project manager (PM) for the Abrams Main Battle Tank program, there was very little integration between the component development and T&E communities. We also had separate viewpoints and minimum interaction among programs, even when we were within the same program executive office (PEO) organization. Fortunately, things have changed for the better and we have forged a truly integrated team. No other nation in the world could have fielded the exceptional military capabilities that our U.S. forces in Iraq have demonstrated in a totally collaborative environment. However, we must err on the side of caution, as suggested by BG Marvin K. McNamara, Commanding General, U.S. Army Developmental Test Command. In his remarks at the June symposium concerning our joint efforts during *Operation Iraqi Freedom*, he stated "That was



great ... that was then ... this is now; we can't rest on our laurels." What Army leadership is requiring for the future force far exceeds our recent accomplishments in Iraq.

**User/Developer Team Guidance**

Considering how we are developing our new capabilities, there are two pieces of guidance I offer based upon my experience as a PM. *First*, never allow gaps to develop between the materiel and combat developers. The U.S. Army Training and Doctrine Command represents the user and must be there every step of the way. *Second*, find the best people for each job and go out and hire them, wherever they are. The Future Combat Systems (FCS) program is a great model for this concept because there has been unprecedented user, developer and T&E networking and integration from the program's outset. As the FCS program develops, I am convinced that the development process must be integrated smoothly and not handled as a completely separate process. The acquisition process must be a continuing team effort with full participation by the PM, materiel/combat developers and testers. The process must include integrated systems engineering.

**FCS as the Model**

We are in the late stages of source selection for FCS, with 23 procurement packages on the street. We will have nearly \$15 billion in the research, development, test and evaluation phase — and will need every nickel to properly source FCS. There are many components and agencies involved requiring all

of our networking and integration abilities to meet our milestones. Accordingly, FCS requires a lot of inspection, analysis and second guessing from all levels. The PM and the PEO will have the opportunity and the flexibility they need to illustrate the great benefits of the system-of-systems approach.

I envision the FCS program standing as the advanced collaborative environment model for years to come. To achieve this success, there are four major concepts that will be stressed during FCS development and testing:

- An Army unit dedicated solely to FCS combat and materiel development, testing and experimentation.
- Integration of testing and distributed testing.
- Use of a Lead Systems Integrator (LSI) approach.
- Design and testing in an advanced collaborative environment.

We have received favorable comments from the developing contractors about these concepts and the FCS development approach. We shall continue to work creatively with them under this process. This means acquiring the people needed to get the job done right; involving the user in the design; and creating virtual models of the equipment, enabling modification as prototype components

and systems are developed. A factor in selecting the Boeing Co. as LSI was its understanding and demonstrated capability in this type of development process. The collaborative effort will include a major role by our newly organized Research, Development and Engineering Command.

**Commitment to Soldiers**

We must ensure that our troops have the best that money and technology can provide in the shortest possible time. The Acquisition Corps is ensuring all weapons and systems delivered to the troops meet user specifications. Because we are in a research, development and test environment, we must recognize that no system will ever be 100-percent perfect, and know there will always be room for improvement. When you push the edge of technology

and the operational environment, there will always be a "glitch" here and there. We have the obligation to get our systems as close as possible to what our warfighters and their operational commanders need, but as soon as we get them close to what they need, we must get it into their hands.

Army PEOs and PMs are effectively integrating testing into their programs as a continuing life-cycle process. Emerging systems and system components will be immersed

The acquisition process must be a continuing team effort with full participation by the PM, materiel/combat developers and testers. The process must include integrated systems engineering.

into distributed networks as a part of advanced collaborative environments. Modeling and simulation will assist in creating battlefield realism enabling soldiers to train as they will fight. Wherever possible, these collaborative environments will include joint service communications and weapon platforms or simulations.

Our "bottom line" is to understand how to test and evaluate equipment to ensure that the capabilities the end-user requested are actually incorporated into the systems we design, build and field. Through the advanced collaborative environment, end users will be involved in every step of the process. The cooperation of program managers, materiel developers, combat developers and testers is already evident and the payoff in combat effectiveness will be significant as we build the FCS.

LTG JOHN S. CALDWELL JR. is the Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology and Director, Acquisition Career Management. He has a B.S. degree from the U.S. Military Academy and an M.S. degree in mechanical engineering from Georgia Institute of Technology. In addition, he has attended the Industrial College of the Armed Forces, the U.S. Army Command and General Staff College and the Defense Systems Management College Program Management course.



## Army Laboratories Support Pentagon Reconstruction

*Wedge 1 Renovation Saved Lives*

Dr. Georgine K. Glatz,  
Dr. Robert L. Hall and  
Dr. Paul F. Mlakar

### September 11 Crash

**A**t 9:37 a.m. on September 11, 2001, terrorists flew an airliner into the first story of the Pentagon. The impact occurred in the renovated portion of the building approximately 140 feet to the south of the boundary between the renovated section and the next section to be renovated. The aircraft sliced through the building into the original section. This impact, coupled with the immediate, fast-spreading fire caused by airplane fuel, claimed the lives of all 64 people aboard the aircraft and 125 occupants of the Pentagon.

Figure 1.



Figure 1 presents an exterior view of the extent of damage from the crash, including a collapsed portion of E-Ring (the Pentagon is characterized by five concentric rings designated A to E from inside to outside) at the point of impact, beyond which the impact destruction from the decelerating aircraft continues. The subsequent devastation from the fire is also evident. The superior performance of the improved window system, a concept developed through Army research that had been incorporated during the renovation, is apparent in the right-hand portion of Figure 1.

### **Army Laboratories Respond**

Immediately following September 11, the U.S. Army Corps of Engineers (USACE) led a focused study to examine protective measures for the Pentagon for a range of potential threats and threat levels that included airblast from explosive detonations; fire hazards; and chemical, biological and radiological (CBR) weapons. The focus was general protection

for all building occupants, rather than localized protection for specific critical assets. This study considered measures to improve protection alternatives for the Pentagon for a range of potential threats and threat levels. Available previous and current studies and designs were also examined. This included an assessment of the effectiveness of previous Wedge 1 renovations (the renovation of the Pentagon is proceeding in sequential segments designated Wedges 1 through 5). The organizations participating in the study were the USACE Engineer Research and Development Center, USACE Protective Design Center, Soldier Biological Chemical Command, Army Research Laboratory, Air Force Research Laboratory, Defense Threat Reduction Agency, National Institute of Standards and Technology, Naval Facilities Engineering Services Center, Pennsylvania State University and the Pentagon Renovation's Building Performance Evaluation Task Force. This study resulted in a number of options to improve the efficiency or performance

of protective measures for the Pentagon. Some of the options are based on detailed technical analyses, while others are based on expert judgments and extrapolations by experienced engineers.

The original exterior E-Ring walls and windows, as well as the retrofits provided during the Wedge 1 renovation, were evaluated. Other window and wall retrofit options were developed and evaluated for potential use in the area of the Pentagon that must be rebuilt, as well as for the future renovation of Wedges 2 through 5.

Options for improving the survivability of E-Ring walls range from enhancing the window retrofits throughout the Pentagon with a polycarbonate layer to replacing the exterior masonry wall with reinforced concrete — similar to the Phoenix reconstruction project (described later in this article).

The September 11 plane impact caused fire in both Wedges 1 and 2.



Figure 2.

provided personnel, equipment, materials and consulting services for the rescue and recovery efforts at the crash site. More than 800,000 square feet of nearby office space was leased to relocate the 4,600 Pentagon tenants displaced by the attack. Roughly 10,000 tons of debris was removed to stabilize the structure and to permit the rescue and recovery efforts to continue safely.

Just 3 days after the attack, the Pentagon Renovation Program appointed the team responsible for reconstruction and awarded multiple cutting-edge, high-dollar contracts to begin rebuilding the Pentagon and move forward with the rest of the renovation.

The reconstruction team adopted the name “The Phoenix Project,” with the image of the mythical bird rising from the ashes of the Pentagon as its logo and, as its motto, the phrase “Lets Roll” — the words of Todd Beamer, one of the heroes aboard Flight 93, which crashed in Pennsylvania on September 11, 2001.

The Phoenix Project encompassed the 400,000-square foot area damaged by the terrorist attack and involved complete demolition of the C-, D-, and E-Rings between Corridors 4 and 5 (the rings of the Pentagon are traversed by 10 Corridors, designated 1 through 10). By working 24 hours a day, 7 days a week, the demolition was accomplished in 4 weeks. Following the fast-paced demolition, the actual Pentagon reconstruction began Nov. 19, 2001. The team’s challenge was to complete the E-Ring for occupancy by Sept. 11, 2002. The C- and D-Rings were completed, on-schedule, Feb. 6, 2003.

However, the fire spread much farther in Wedge 2. This demonstrated the need in Wedges 2-5 for the fire safety improvements incorporated in Wedge 1 renovations, which included the addition of a highly effective sprinkler system. The review of conditions in the renovated Wedge 1 and the then unrenovated Wedges 2-5 resulted in identifying several options to improve egress, such as adding Class A fire detection and alarm systems. An effective fire suppression system should include strategically placed floor-to-ceiling partitioning to control rapid spread of fire and smoke. Additionally, limiting fuel load by reducing the combustibility of construction materials, interior finishes and exposed insulation will control fire intensity. Interior finish material and exposed insulation should be specified to have a maximum flame spread rating of 25 and a maximum smoke developed rating of 50 (*American Society for Testing and Materials 84 Test Surface Burning Characteristics*). The Army laboratories study also

points out other improvement options based on analysis of threat scenarios, current fire protection levels, sprinkler system modeling and hydraulic calculations.

The Pentagon renovation and reconstruction (Figure 2) provided an opportunity to improve the CBR hardening of the Pentagon at a cost significantly less than that associated with providing CBR hardening independent of the renovation and reconstruction effort. A CBR hazard to the Pentagon can result from a variety of intentional or accidental releases of material, internal and external, as well as airborne and waterborne. Depending on the threat type and magnitude, the hazard duration can be from a few minutes to a number of days. The Army laboratories study provided the Pentagon with suggested CBR upgrades to be incorporated during the renovation.

### **The Phoenix Project**

Within minutes following the attack, the Pentagon Renovation Program

In the wake of the terrorist attacks, the Pentagon Renovation Program integrated and balanced sustainable design with force protection measures to further improve the safety of the Pentagon and its occupants. Various government and industry experts researched effective ways to ensure the safety of Pentagon personnel and the continuation of the defense mission at the Pentagon. As described above, the Army laboratories focused on improving protective measures for the Pentagon for a range of potential threats and threat levels. The Building Performance Evaluation Task Force, led by the Renovation Program's Chief Engineer, addressed fire suppression and rescue activities, building operations, human factors, fire protection and architectural and engineering systems. Force protection enhancements to the Pentagon were made according to existing industry standards. Certain adjustments were made where mission criticality and other factors affecting occupant safety and critical building system

survivability demanded more stringent standards.

### Technology Transfer

Following the September 11 terrorist attack on the Pentagon, the American Society of Civil Engineers established a building performance study team to examine the damaged structure and make recommendations for the future. The Army laboratories and the Pentagon Renovation Program participated with the team in this technology transfer effort. The team members reviewed available information on the structure and the crash loading. They analyzed the essential features of column response to impact, the residual frame capacity and the structural response to the fire. Plausible mechanisms for the response of the structure to the crash were established. While the crash was a terrible tragedy, certain details of the Pentagon's original design mitigated this devastation. The findings and recommendations regarding these design details are now a basis to improve the safety of all buildings in which

our citizens work and live. They are published in the American Society of Civil Engineers' *The Pentagon Building Performance Report, 2003*.

DR. GEORGINE K. GLATZ is the Chief Engineer of the Pentagon Renovation Program. She has a B.S. from the Czech Technical University and from the University of Maryland, an M.S. from the University of Colorado and a Ph.D. from the University of Maryland.

DR. ROBERT L. HALL is the Chief of the Geosciences and Structures Division at the USACE Engineer Research and Development Center. He holds a B.S. from Auburn University, an M.S. from Mississippi State University and a Ph.D. from Oklahoma State University.

DR. PAUL F. MLAKAR is the Senior Scientist for Weapons Effects and Structural Dynamics at the USACE Engineer Research and Development Center. He has a B.S. from the U.S. Military Academy and an M.S. and Ph.D. from Purdue University.

### 9-11 Anniversary Message From the Secretary and Chief of Staff of the Army

Two years have passed since the terrorist agents of hatred and fear committed their attack on America on September 11, 2001. On this second anniversary of that day, we pause to remember and honor the innocent men, women and children who perished in those senseless acts of terrorism in New York City, Washington, DC, and Pennsylvania.

Our observances on September 11 also serve as a reminder of the heroes — Soldiers, Sailors, Airmen and Marines — who have lost their lives in operations in the war against terrorism. We will not forget, and will long honor, their devotion to this country and the principles we hold dear.

Soldiers are fighting today on behalf of our Nation — they are a critical component of the Joint Team, prosecuting the war on terrorism. In 120 countries around the globe, our Soldiers are serving bravely on the frontiers of freedom, and they and their families set the standard every day for selfless service. For more than 228 years, the Army has never failed the American people, and it never will.

We can all be justifiably proud of the Army's achievements in fighting terror and bringing liberty to the oppressed. The Taliban

and al Qaeda are no longer terrorizing the citizens of Afghanistan. The brutal regime of Saddam Hussein has been forcibly removed. *Operations Enduring Freedom* and *Iraqi Freedom* are vital parts of this Nation's unyielding campaign to destroy international terrorism and to restore global stability.

We pause today to honor those lost two years ago, those lost in the long days since September 11, and all of their families. The war on terrorism has demonstrated that our Nation and our Army are up to the task thrust upon us. We acknowledge the enduring contributions of the Army during the past two years, and our commitment remains constant. When the Nation calls, we will fight and win decisively.

We are proud of you, our Army family — Soldiers, civilians, retirees, veterans and your families, and you are always foremost in our prayers and in our actions. Thank you for your service, for your sacrifices and for your steadfast devotion to duty. Your courage, dedication to duty and selfless service to the Nation are the hallmarks of the United States Army.

God bless each and every one of you and your families, God bless our magnificent Army and God bless America.



## Virtual Proving Ground Transforms Test and Evaluation

Michael Cast

**T**he war in Iraq underscores the urgent need for U.S. forces that are rapidly deployable, able to operate in urban areas and rural terrain, are light but lethal and prepared to conduct a full spectrum of operations — from combat to humanitarian aid. Former Army Chief of Staff GEN Eric K. Shinseki emphasized these requirements when he officially announced plans to transform the Army at the Association of the United States Army's October 1999 annual conference.

The Army Test and Evaluation Command (ATEC), headquartered in Alexandria, VA, and its subordinate organizations, are working together to pinpoint the inevitable technical problems with developmental systems and ensure the Army fields systems that meet rigorous performance standards. At Aberdeen Proving Ground (APG), MD, the Army Developmental Test

Command (DTC), its Aberdeen Test Center (ATC) and Army Evaluation Center elements are working beyond normal duty hours to meet this challenge, as is the Operational Test Command at Fort Hood, TX.

### Development of Interim and Future Systems

As the Army modifies its force configurations, doctrine, training, logistics and military hardware, it must acquire existing and even futuristic warfighting systems, some of which pose a real challenge to human ingenuity. Army scientists and engineers, in partnership with defense contractors, are tackling the technical difficulties and are using commercially available "off-the-shelf" sources already under development by defense contractors.

As the century began, the Army was building an "interim force" to meet its near-term military objectives,

which meant establishing, equipping and training rapid-reaction brigade combat teams at Fort Lewis, WA. In May 2000, the Army program manager responsible for equipping the brigades had commercial contractors bring a variety of wheeled and tracked armored vehicles to ATC for an evaluation. Based on several performance criteria, the Army's source-selection board chose the Light Armored Vehicle III, an 8-wheeled armored vehicle manufactured in Canada, as the basis for the Army's new Stryker interim armored vehicle. Stryker variants and configurations, the Brigade Combat Team's operational mainstay, have undergone rigorous trials at DTC sites throughout the United States.

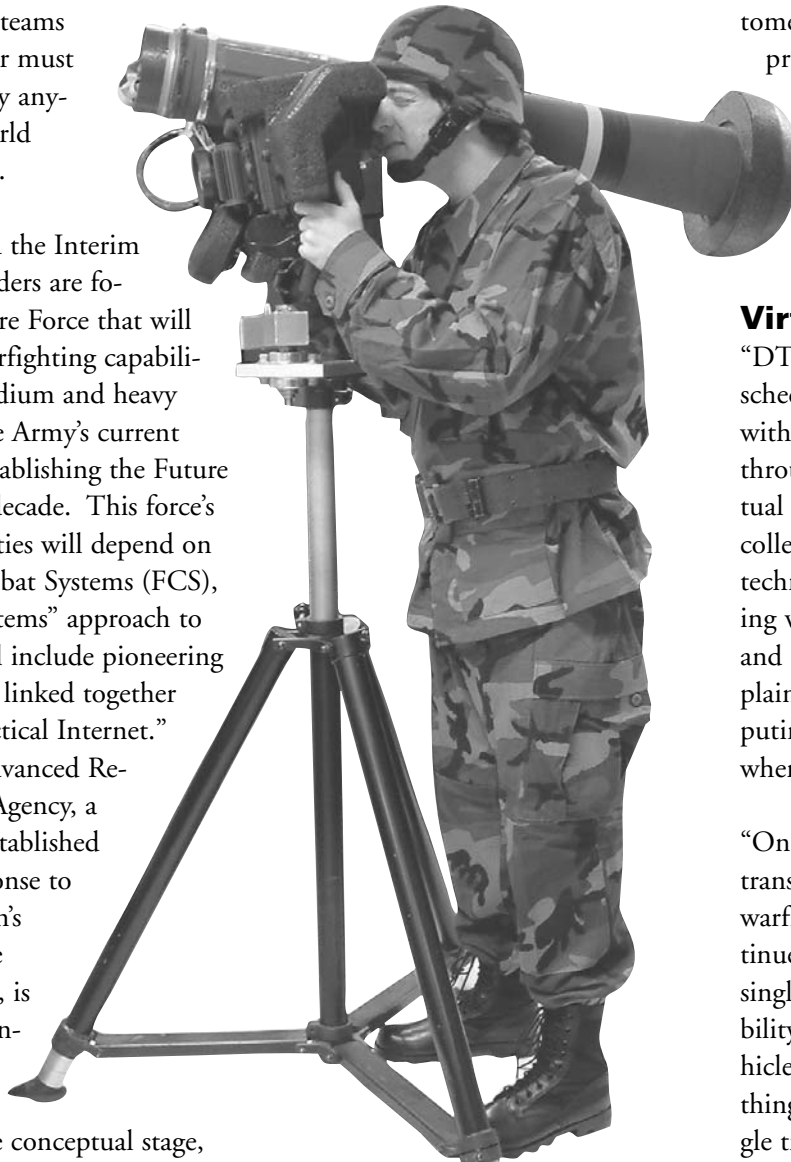
Test results confirm that the Stryker can move faster than tracked vehicles, consumes less fuel, requires a smaller logistic support

base and is designed to cover the terrain that is becoming the Army's new battlefield. Its light weight, when compared to the 70-ton Abrams main battle tank, also makes it suitable for transport by C-130 cargo aircraft, which can land on dirt airstrips. The Army views this capability as a "key performance parameter" because brigade combat teams using the Stryker must be able to deploy anywhere in the world within 96 hours.

Looking beyond the Interim Force, Army leaders are focused on a Future Force that will combine the warfighting capabilities of light, medium and heavy Army units. The Army's current plans call for establishing the Future Force within a decade. This force's combat capabilities will depend on the Future Combat Systems (FCS), a "system-of-systems" approach to combat that will include pioneering weapon systems linked together through the "tactical Internet." The Defense Advanced Research Projects Agency, a DOD agency established in 1958 in response to the Soviet Union's launching of the Sputnik satellite, is the research sponsor for FCS. Much of FCS is still just at the conceptual stage, but scientists, researchers and industry giants such as Boeing are collaborating closely to make it a reality. The Army's current goal is to equip the first Future Force unit with FCS for initial operational capability by the end of calendar year 2010.

## Transformation of Test and Evaluation

FCS concepts include robotic reconnaissance vehicles and sensors, a weapons platform that will perform the function of a main battle tank, networked fires from various ground and air weapons platforms and advanced 3-D targeting systems that



operate on land and in the air. Systems reliability will depend heavily on state-of-the-art hardware and software technologies and the correspondingly sophisticated technologies needed to test them realistically.

To meet this challenge head on, said Dr. C. David Brown, Test and Evaluation Director for FCS, "The Army is developing innovative test and evaluation capabilities hand-in-hand with the Army's current transformation. DTC is continually striving to improve its test technologies so it can capture the best data possible for test customers and Army evaluators who prepare system evaluation reports to help military and civilian officials decide whether to field, modify or cancel new or upgraded systems," Brown continued.

## Virtual Proving Ground

"DTC is striving to streamline test schedules, cut costs and keep pace with the Army's transformation through initiatives such as the Virtual Proving Ground (VPG), the collective term for DTC test center technologies that integrate live testing with computer-aided modeling and test simulation," Brown explained. "High-performance computing capabilities at APG and elsewhere make the VPG possible."

"One of the integral parts of Army transformation is a distributed warfighting capability," Brown continued. "FCS is not going to be a single system where all of its capability is integrated into a single vehicle or item. You can't get everything at a single test center at a single time, so we have to be able to link together multiple test centers and multiple capabilities across the country — to include contractor capabilities, traditional operational test sites and our technical test sites, typically our ranges — all at once. We have to be able to stimulate

some sort of scenario across them, and that's where VPG comes in."

"But we also have to be able to collect data and save time, in a distributed fashion," Brown reiterated. "That means we must have smart sensors and instrumentation systems on these various pieces of a system, and we need to be able to reconfigure and control them from afar, because no longer will the tester, the people interested in data, data collectors or anyone else in the chain be with the system. They could be thousands of miles away."

"They also need to be able to query instrumentation and get the data," Brown continued. "The data have to be sent right off the system as rapidly as possible, or almost instantly get into some sort of what we call 'wire-neutral' communication system, via satellite links, cellular links or high-speed data links. That's where the Virtual Information System, Integrated ONline comes in."

### **Virtual Information System, Integrated ONline**

This test and evaluation support program — known as VISION for short — is a system developed at ATC that uses state-of-the-art data-collection technologies, a digital data library accessible to test customers and other authorized users via the Internet and a full range of communications technologies to link it to remote test sites. VISION is designed to provide quick access to information about testing, enabling test customers to make decisions affecting a system's acquisition sooner than was possible in the past. Brown noted that VISION

provided data that helped the source-selection board decide on the type of vehicle that would become the Stryker, and it has continued to support Stryker testing as well as a variety of other tests across ATEC and DTC.

"The VISION system was developed primarily to capture and share test data on vehicles such as trucks, Humvees and tanks because ATC is the Army's primary developmental tester for these types of systems," said Dr. Samuel Harley, an ATC scientist who was instrumental in developing the program. "But VISION can also be configured for use on missiles, aircraft and other types of systems under test to support the full spectrum of testing conducted by DTC," Harley added.

### **Intelligent Instruments**

VISION employs a variety of "intelligent" instruments known as the Advanced Distributed Modular Acquisition Systems, developed by the team at ATC for collecting such diverse test data as engine fluid temperatures, power output, engine speed, shock and vibration, stresses and strains on gears and equipment, gun accuracy and other types of data that can be used to pinpoint problems and support evaluations. "These collection devices are made small enough in size, large enough in processing power, low enough in power consumption and robust enough to function for extended periods in any harsh environment in which the military might operate," Harley explained.

"They share a common device architecture, making it relatively easy to add new devices as new requirements surface," he continued.

"Some Army officials want to embed ruggedized data-collection devices into equipment when it is manufactured to get diagnostic information from the developmental phase through operational testing to actual use in combat."

ATC is using the VISION program to continue its development of data-collection instrumentation and working to integrate developmental and operational testing. "On Stryker testing, we're approaching this from a common instrumentation suite," Harley noted. "The Stryker is really the first weapon system that does use the entire suite of capabilities. We will use the same instrumentation for developmental and operational testing."

VISION is a work in progress as the ATC team continually strives to improve its ease of use and usefulness to testers, test evaluators and customers. "We've got a plan laid out and are going through a spiral development effort so that we keep adding capabilities as time goes on," Harley said. "That will be complete in another 5 or 6 years. There are some complementary efforts going on at other test centers. We would like to see cooperative efforts on this front increase," he concluded.


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# TeleEngineering Support to *Operation Iraqi Freedom*

Dr. Larry Lynch and Rhonda Taylor



**A** rmy transformation and the concept of lighter, more lethal and smaller footprint-deployed forces, are receiving great assistance from the U.S. Army Engineer Research and Development Center (ERDC). ERDC, the consolidated Corps of Engineers (COE) research laboratories, developed and implemented the concept of TeleEngineering to provide deployed soldiers a “reach-back” engineering analysis capability for planning and executing deliberate and contingency missions.

Military engineers work to repair a bridge in Iraq using solutions provided by ERDC.

During *Operation Enduring Freedom (OEF)* and *Operation Iraqi Freedom (OIF)*, TeleEngineering became a critical component in solving engineering challenges by providing direct access to CONUS-based subject matter experts (SMEs) in the ERDC, COE districts and divisions, DOD, other government agencies, academia and private industry.

### **TeleEngineering Tools**

ERDC researchers, in support of TeleEngineering operations, have developed important tools to provide the necessary support in the very short time frames required by the deployed engineer for mission completion. A successful tool, the satellite-based TeleEngineering Communications System enables deployed personnel to send and receive data and to conduct video teleconferences in a secure or non-secure manner. Support can be obtained through TeleEngineering over any available communications infrastructure that meets the user's requirements — telephones, facsimile machines, computer networks (e-mail)

and video-conferencing systems. However, remote areas often lack modern communications infrastructure such as phone lines, data lines and Integrated Services Digital Networks. These problems led ERDC researchers to develop a deployable, versatile communications system capable of supporting a wide range of voice and data services on a global basis.

The Deployable TeleEngineering Communications System is a critical communication component when existing infrastructure is unavailable, damaged or nonexistent. Compact and highly mobile, the system combines a suitcase-sized satellite terminal with a laptop, camcorder and roll-around secure video-conferencing unit. It can send and receive computer files, voice communications, video stills and 2-way interactive video conferencing. The COE significantly expanded TeleEngineering capabilities prior to *OEF* to include the deployment of Corps military and civilian personnel for on-site expertise to facilitate a direct link to

CONUS experts. This expanded capability is called Field Force Engineering (FFE).

TeleEngineering communications kits were integral to the FFE initiative that linked the COE with forward-deployed troops during *OEF*, and the TeleEngineering concept once again proved its worth during *OIF*.

### **OIF and TeleEngineering**

On March 19, 2003, when President George W. Bush gave the order for coalition forces to hit a compound where it was believed key Iraqi officials were meeting, *OIF* began. Although military leaders had been planning the operational details of the campaign for months prior to the air strike, ERDC assisted those efforts through TeleEngineering by providing airfield, bridge and infrastructure assessments and by evaluating water control structures, water system management issues and port restoration requirements. ERDC also worked directly with soldiers

## **Another TeleEngineering Tool Used Extensively in Iraq**

Another tool developed through TeleEngineering is the Automated Route Reconnaissance Kit. A critical mission conducted by engineers, infantry scouts and Special Forces teams is mounted route reconnaissance, which is a time-consuming and labor-intensive activity. The Automated Route Reconnaissance Kit allows more accurate and detailed data to be collected along the route, permitting recon teams to focus on dismounted reconnaissance objectives and other critical mission aspects.

The kit incorporates and integrates accelerometers, global positioning satellite technology, a laser range

finder, digital camera, audio technology and touch-screen computer into a collection sensor package that significantly reduces the time required for a platoon to conduct route reconnaissances. The kit also contains analysis software that automatically calculates the radius of curvature and slope of routes being reconnoitered. These two calculations require a significant amount of time and are critical pieces of information for the maneuver commander to use in selecting main supply routes or maneuver corridors. Four kits were used in planning missions prior to *OIF*, and at least two were actually used during operations.

on the ground in surrounding countries to provide immediate technical assistance on problems encountered in-theater.

Some of the issues encountered before and during military operations were:

*Dam breach analysis.* ERDC military hydrology experts looked at worst-case scenario flooding if a massive controlled release was initiated at certain dams or if they were breached by expedient demolitions to determine how the flooding would impact maneuverability and operations downstream.

*Gap crossings and cross-country mobility.* Engineers provided military planners with solutions for potential irrigation canal, ditch and trench crossings that had been set ablaze with burning oil. ERDC researchers also provided maneuver units with analysis concerning cross-country movements in the area of interest to determine if specific vehicles could travel from point-to-point.

*Bridge upgrade specifications.* Soldiers in-country gathered information on bridge damage in several locations and provided the data to ERDC through TeleEngineering communications equipment. SMEs analyzed the data and photos and determined the types of traffic the bridges could sustain, as well as the upgrades necessary to sustain traffic if damage to the bridges increased.

## TeleEngineering Examples

During one such mission, the ERDC TeleEngineering Operations Center (TEOC) received a phone call via satellite from a soldier with the 54th Engineer Battalion. A bridge on the

Euphrates River had been damaged, and the engineers needed help. The engineers agreed to provide the TEOC measurements and photos, but were delayed for 15 minutes while they dealt with Iraqi snipers.

Once the bridge data and photos were received by the TEOC, SMEs quickly outlined several courses of action. A field-expedient solution was provided just 2 hours later. The 54th Engineer Battalion's soldiers were impressed that they were able to get a technical solution so quickly using the assets they had at hand.

Another example of TeleEngineering support came after U.S. forces seized control of the Baghdad International Airport. Engineers at the TEOC in Vicksburg, MS, received a call at 10:30 p.m. local time, asking for COE assistance to help get water and electricity to the airport. TEOC engineers set up communications between the military unit at the Baghdad Airport, the headquarters unit in the rear, the lead infrastructure assessment team at the Corps Mobile District's 249th Prime Power Engineer Battalion, the TransAtlantic Programs Center and the ERDC. Within 45 minutes, pictures and blueprints started coming in from Iraq and discussions were quickly initiated to provide the answers the U.S. forces needed. As a result, the airport's water and electricity were restored in a minimal amount of time.

## Success Continues

Today, as military and civilian personnel work to rebuild Iraq and restore water, power, food and other services to the Iraqi people, TeleEngineering continues to play a vital role. Soldiers with the 864th Engineer Battalion accidentally broke a

natural gas pipeline while doing restoration work. They called the TEOC in Vicksburg. Working with the Corps Mobile District, the TEOC developed a workable solution in short order.

From daily video teleconferences that allow military leaders in Iraq to communicate with each other from various locations and with SMEs in the United States, to receiving and processing data received over secure networks, TeleEngineering continues to provide solutions for problems in the field from thousands of miles away.

The 130th Engineer Brigade commander summed up the sentiments of many engineers concerning the TeleEngineering capability and deployable TeleEngineering communications equipment. "We need one in every engineer battalion throughout the Army, *period*. Buy it. Don't discuss it; don't do a staff study . . . just buy it."

TeleEngineering is a huge success story for the U.S. military deployed around the globe, and will continue to evolve and become more integral to future operations.

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RHONDA TAYLOR is the TeleEngineering Operations Center Director at ERDC. She has a B.S. in geology from the University of Southern Mississippi.



## Conference Attendees Interact With Fort Lewis Warfighters

Meg Williams

**The 2003 Acquisition Senior Leaders' Conference set out to make a difference for conference attendees in many ways. Conference host Claude M. Bolton Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology/Army Acquisition Executive (ASAALT/AAE), changed the conference scope to more accurately reflect the audience invited. The 300-plus leaders who attended the Aug. 12-14 event comprised Senior Executive Service members, senior acquisition leadership within the Army's program executive officers; program, project and product managers; and acquisition commanders.**

The conference was purposely held near Fort Lewis, WA, so that attendees could interact with warfighters and learn about their experiences with newly fielded equipment. Attendees were able to climb into Stryker vehicles, work the flight control training system of a UH-M Black Hawk, pop the hood of a 1097 Humvee to get a good look at an Under-the-Hood Power System that provides electricity to a tactical operating center and handle the latest tools fielded to soldiers by the Rapid Equipping Force.

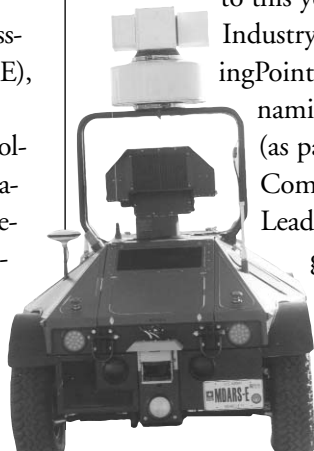
The Fort Lewis setting also allowed Product Manager, Physical Security Equipment to demonstrate the Battlefield Anti-Intrusion System (BAIS). People walking across a field were detected by geoseismic/acoustic sensors placed in the ground. The sensors alerted the Mobile Detection Assessment Response System (MDARS-E), which automatically drove to the walkers and sent video images to soldiers remotely monitoring the situation. BAIS showed potential as a security and patrolling device that allows soldiers to observe areas from a safe distance out of harm's way. These displays and, interaction

with Fort Lewis soldiers, helped convey this year's conference theme, *Strengthening Our Link With the Warfighter*.

COL Mary Fuller, ASC Director, wanted the conference to be more interactive while the briefings were presented as well. "This will not be death by viewgraph," she promised. Presenters often stopped to take questions during briefings so that the audience could be involved along the way instead of holding questions until the end. This approach facilitated an open dialog and allowed for more lively sessions and different viewpoints.

Inviting industry members to speak during the conference and adding an exhibit component was also new to this year's conference.

Industry partners BearingPoint, General Dynamics and Boeing (as part of the Future Combat Systems/Lead Systems Integrator team) set up displays.



Government exhibitors included the U.S. Army Model & Simulation Office; Army Environment Center; U.S. Army Test & Evaluation Command; U.S. Army Communications-Electronics Command; Defense Contract Management Agency; Joint Program Executive Office, Chemical & Biological Defense; Program Executive Office (PEO), Ammunition; PEO, Aviation; PEO, Combat Support & Combat Service Support; PEO Command, Control & Communications Tactical; PEO, Enterprise Information Systems; PEO, Intelligence Electronic Warfare & Sensors; PEO, Simulation, Training & Instrumentation; and Product Manager, Counterintelligence/Human Intelligence Management Systems.

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# Army Leaders Report on Army Transformation

Meg Williams

**LTG John S. Caldwell, Jr., Military Deputy, Assistant Secretary of the Army for Acquisition, Logistics & Technology moderated a panel on Synchronization and Integration of Army Transformation, at the Acquisition Senior Leaders' Conference, Aug. 12-14.**

Panel members included LTG John M. Riggs, Director, Objective Force Task Force; LTG Steven W. Boutelle, Chief Information Officer/G-6; LTG Charles S. Mahan, Jr., Deputy Chief of Staff/G-4; Don Tison, Deputy Chief of Staff/G-8; and Don Damstetter, Deputy Assistant Secretary for Plans, Programs and Resources.

Caldwell began the panel discussion with remarks on how far Army acquisition has come — and how it leads. “When we started the digitization of the battlefield and LTG Boutelle put together the first Central Technical Support Facility, we made sure that we involved real users the entire time. When we went to Fort Lewis, you heard sergeant first classes and warrant officers talking about this stuff. Years ago, no one would have believed that this would happen. We, the Army, really taught the Defense Department how to do this type of business,” Caldwell explained.

“Army acquisition is moving into a new collaborative environment involving the user community, the materiel community, the Pentagon and virtual environments,” Caldwell continued. “We’re increasing the degree we are going to have to synchronize and integrate.”

“If transformation is about anything,” Riggs added, “it’s about beginnings, not endings.” He advised those assembled that the way to do business in the future must not be vertical stovepipe processes, but rather horizontally integrated organizations. The Objective Force Task Force was chartered to look across the Doctrine, Training, Leader Development, Organization, Materiel and Soldiers process in a holistic manner.

Transformation planning must include network connectivity. “The network is almost a utility — like electricity,” Boutelle said. “And system-of-systems is a grid. So if you bring a program in and tell me you don’t need ‘electricity,’ I’m going to start peeling back the onion. You may not need it today, but you better start thinking about your requirements over the next 5 to 10 years.”

Boutelle cautioned the project and product managers assembled to work with the Army Architecture Integration Cell to plan network needs. Connectivity must be engineered early in the systems development process. If you get to the initial operational test and evaluation period and you haven’t done this — it’s too late and too costly to backtrack.

When asked about spiral development — another important part of integration and synchronization for transformation — Tison said that programs must be testable and provable to satisfy the U.S. Army Test & Evaluation Command requirements and the costing side of the house. “What’s important is that you understand how the engagement works and where the resources are,” he said.

From Damstetter’s perspective, synchronization is a major planning consideration for future operations. “How do you fit in Joint warfare?” he asked. “I don’t see it going away and frankly I think it’s good. As we move toward Future Combat Systems and Joint warfighters — if we [the Army] don’t do it, the Office of the Secretary of Defense is going to do it for us and we’re going to lose.”

One of the key enablers of transformation is the term “Responsible Official for Sustainment.” It means that sustainers will have visibility into logistical requirements early in the development process. “Ad hoc sustainability must give way to non-ad hoc processes,” Mahan stated.

The 5-person panel also answered questions from the audience. One participant asked what were the major challenges facing acquisition commanders in the immediate future.

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# REVITA



## The Acquisition Workforce

**LTG John S. Caldwell Jr.**

A key Acquisition Support Center (ASC) initiative is revitalizing the acquisition workforce. To address this workforce-related issue, ASC is developing and implementing an organization Communication and Outreach Plan (COMPLAN). This far-reaching effort extends beyond the acquisition community, clearly articulating the Acquisition, Logistics and Technology Workforce's (AL&TWF) critical role in supporting the warfighter.

The COMPLAN is aligned with the U.S. Army Acquisition Workforce Campaign Plan (Campaign Plan) and its three strategic objectives — strengthening the link with the warfighter, providing a clearly defined environment that encourages and offers career development at all levels and aligning the acquisition workforce with Army transformation.

# ALIZING



The COMPLAN identifies key target markets and outlines specific messages for each market. A variety of media are used to ensure that appropriate messages are clearly articulated to each specified target market. These media include the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT) Web site; ASC Web site, briefings, conferences and tradeshow; ASC Newsletter; *Army AL&T* [Acquisition, Logistics and Technology] magazine and other military, operational career field, government and commercial sector publications and newsletters. The COMPLAN also includes a comprehensive branding strategy using the aforementioned media to establish ASC and the Army Acquisition Corps (AAC) as the Army's principle acquisition resource.

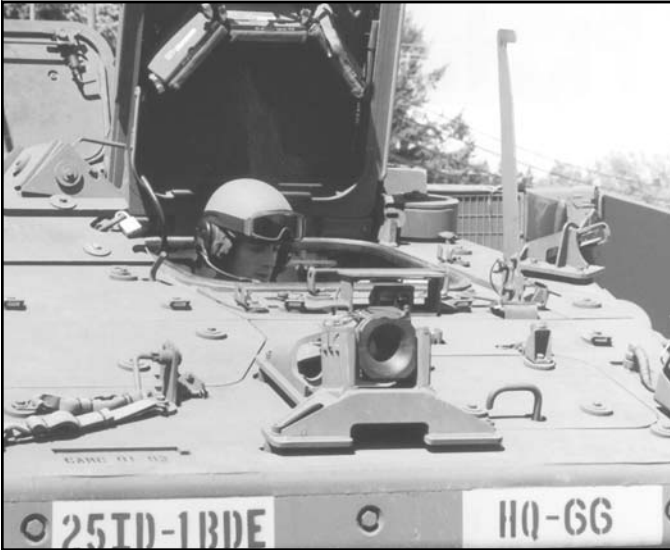
The Campaign Plan is a dynamic initiative launched to ensure that the acquisition workforce is properly sized and trained, and equipped with the right tools at the right time to support the Army's transformation now and in the future. As the Army changes to meet the emerging and dynamic threat of terrorism and urban warfare, our workforce must adapt accordingly. We are also at a critical time when we expect to face a talent drain, with as

many as 50 percent of our workforce expected to be eligible to retire over the next 5 years. We must turn these challenges into opportunities that strengthen our link with the warfighter.

Because both plans are dynamic documents, they will be updated and revised to reflect the latest status of each initiative as often as necessary. The ultimate goal for both plans is to convey that the acquisition community directly supports the warfighter and is working tirelessly behind the scenes to provide state-of-the-art equipment, weapons and systems that are more lethal, survivable and sustainable on the battlefield, regardless of the mission or threat.

## Campaign Plan

We have all heard the time-tested maxims "communication is a two-way street" and "actions speak louder than words." Our **first** strategic objective — to strengthen the relationship between the acquisition workforce and the warfighter — requires two-way communication between the warfighter and acquisition workforce professionals who do the research, development, testing, evaluation, contracting, logistics, fielding and sustainment



Strengthening our link with the warfighter means providing him with the equipment and weapon systems he needs when he needs them. Here a Stryker Brigade Combat Team soldier gets ready to put the 19-ton Stryker interim armored vehicle through its paces during a demonstration at Fort Lewis, WA.

of all warfighting systems. It is vital that we personally interface with warfighters to ensure that their requirements are successfully being met quickly and cost-effectively. To facilitate this information exchange, ASC, an ASAALT field operating agency, will increase public, Army and warfighter awareness of the AL&TWF's mission, role and relevance and how we acquire the systems and equipment that support the warfighter's critical wartime and peacetime missions, as well as their day-to-day security activities around the globe.

ASC has updated its Web site and *Army AL&T* magazine and will continue to brand the AAC within the Army. I have encouraged program managers (PMs) and other acquisition community professionals to meet on a more regular basis with their operational users — battalion and brigade commanders. This collaboration will provide PMs a better appreciation of the challenges warfighters face when identifying systems' requirements and articulating those requirements into meaningful dialog or specifications that can be acted upon by the acquisition community.

Many AL&TWF civilians are not fully aware of the warfighter's role in contingency operations. To further this appreciation, a hands-on "operational" experience program for civilians is being established to facilitate better understanding of how the systems they develop are integrated into actual tactics, techniques and procedures. During Phase I, ASC is exploring the development of an "Army 101" course, or in conjunction with

existing Army courses, providing an opportunity for hands-on participation by acquisition workforce civilians. My office and ASC are committed to promoting the AAC and its systems at high-level conferences, including the Acquisition Senior Leaders' Conference held Aug. 12-14, 2003, in Seattle, WA, and the annual Association of the United States Army (AUSA) convention to be held Oct. 6-8, 2003, in Washington, DC.

I encourage all AL&TWF members to visit this year's AUSA Conference. Many program offices and contract providers will attend this prestigious event, proudly displaying their equipment, services and talents that are so critical to wartime success and peacetime maintenance. The annual AAC Ball will be held at the Hyatt Regency in Crystal City (Arlington), VA, on Sunday, Oct. 5, 2003. This year's theme is "*To the Soldier*" and is a special tribute to the Army warfighter. At the AAC Ball, we will also announce the winners of the Acquisition Commander, Product Manager and Program Manager of the Year awards for 2003. Please honor our soldiers by attending this important event.

Our *second* strategic objective is to ensure that we provide a clearly defined environment that encourages and offers career opportunities and leader development at all levels. ASC continues to aggressively identify, refine and offer educational, training and experiential opportunities for the entire acquisition workforce. ASC is responsible for providing the programs that develop our workforce to perform in their current positions and prepare them for future positions of increasing responsibility and leadership. These programs include the Acquisition Tuition Assistance Program, opportunities in the Acquisition Education, Training and Experience (AETE) catalog, the Competitive Development Group (CDG) Program, Senior Service College (SSC), Naval Postgraduate School (NPS), the Acquisition Career Experience Program, the Rotational Development Assignment Program (RDAP) and mandatory Defense Acquisition Workforce Improvement Act (DAWIA) functional courses offered by the Defense Acquisition University (DAU). DAWIA requires that acquisition personnel obtain appropriate certification (which includes DAU training) for their position within 18 months of assignment to an acquisition position. Acquisition workforce readiness through essential education, training, certification and job experiences ultimately ensures the viability, credibility and authentication of our workforce in



procuring, developing, designing, testing and fielding the necessary equipment, weapons and communication systems for our soldiers in the field.

There are several important initiatives underway to assist in this important training effort. The Intermediate Learning Education (ILE) course will replace the Command and General Staff College (CGSC) in FY05. The Army is transforming the way it trains leaders and the AAC must follow suit. We are taking a close look at how we can best grow our future acquisition leaders. The Army Acquisition Basic Course (AABC), taken upon accession into the AAC and prior to ILE, has moved to Huntsville, AL, and replaces the Materiel Acquisition Management course. AABC will provide equivalencies for ACQ 101, ACQ 201, CON 101, CON 104, LOG 101, IRM 101 and TST 101, providing a solid cross-functional base for newly assigned acquisition officers to take with them to their first assignments. AABC is also intended to train civilian AAC interns. The course is exportable to the field and will reduce costs while also increasing its frequency and accessibility for potential students.

However, AABC *is not* a leadership course. AABC provides functional training only to prepare AAC candidates to perform entry-level acquisition duties. The

Army is developing ILE core curriculum and complementary intermediate acquisition leadership training for the middle years in the acquisition career life cycle where assessed officers and post-intern civilian leaders are expected to assume duties that include leading teams, sections, divisions and directorates to provide the Army's materiel and service solutions. At this stage, leader development is essential in developing confident, competent leaders that are continual learners, modernizers and motivators that are focused on constant improvement and innovation and can produce timely, cost-effective solutions. The Army needs lieutenant colonels, colonels and their civilian equivalents that can visualize, steer, motivate, build and act independently on intent with a minimum amount of guidance from the field. Ultimately, we are designing a core curriculum that consists of education, training and leadership opportunities that will enable us to groom acquisition professionals that directly support warfighters and their operational commanders on the battlefield.

Additionally, efforts are underway to obtain a separate military occupational specialty (MOS) for noncommissioned officers (NCOs) performing acquisition work. The intent is to establish career growth potential from staff sergeant to sergeant major. Career tracks for acquisition officers are constantly being reviewed to ensure they reflect current trends and talents. The same must be done for selected NCO MOS if we are to strike an appropriate balance between the operational Army and the Army acquisition community.



Dan Bernard (right), Pathfinder ACTD contractor, discusses Unmanned Aerial Vehicle Systems (UAVS) innovations with Bunny Greenhouse, U.S. Army Corps of Engineers Contracting Director. LTC Andrew Ramsey (back), UAVS Project Manager, discusses the program with another field demonstration attendee.

Last year, Assistant Secretary of the Army for Acquisition, Logistics and Technology Claude M. Bolton Jr., Army Acquisition Executive, commissioned an independent task force (TF) to address challenges facing the Army's civilian program manager (PM) community.

This TF focused primarily on the civilian PM selection process, related assignment activities and post-PM utilization opportunities as it identified a proposed solution implementation plan. The TF identified more than 25 initiatives covering such areas as leadership, PM career model development, post-utilization assignments, personnel policy and procedures, training, the environment, incentives and selection boards. The TF's goal was to investigate ways in which to motivate more civilians to apply for PM positions; how to best use PMs following their tours; and determining the most appropriate assignments for participants completing other high-level activities such as SSC, NPS, CDG Program and acquisition-specific long-term training (LTT) events. The TF also identified several misperceptions about these programs that might possibly deter the best applicants from applying. The TF proposed viable solutions to address these perceptions, and metrics have been identified that will track any changes in the number of civilian selectees, the quality of post-utilization assignments and follow-on survey results. I am pleased to report that many of these initiatives have already been implemented. (Please see the related article on Page 8.)

In place since 1997, the CDG Program is a premier ASC initiative designed to provide civilian acquisition workforce leadership development opportunities. Began in 1997, it provides professional development opportunities to a select group of GS-13s (and broadband/payband equivalent levels) that are board-selected annually. The CDG Program will eventually include a "PM

Track" with the necessary program executive office (PEO)/PM assignments and training to develop critical leadership competencies for future civilian PMs. The CDG Program also integrates required HQDA staff assignments, LTTs and other high-profile assignments such as Future Force and Future Combat Systems (FCS) to support Army transformation endeavors.

Our *third* and final strategic objective is to align the acquisition workforce with the Army transformation. To ensure synergy, our institutional base — including schools, training, services, organizational structures and business practices — must change to support the Future

Force and FCS mission requirements. At the same time, DAWIA directs us to provide our workforce with unique opportunities to ensure their technical competence, operational expertise and leadership skills.

ASC offers several advanced education and training opportunities to individuals who demonstrate the potential to assume senior leadership positions within the Army. These include the SSC Fellowship Pro-

gram at the University of Texas-Austin, Industrial College of the Armed Forces, Training With Industry and NPS. With a strong emphasis on continuous career development, coupled with quality education, career-broadening experiences and leadership training, ASC also competitively selects military and civilian applicants to participate in learning events such as the School of Choice degree program, advanced leadership training and educational/academic programs that may produce degrees at institutions of higher education. Ultimately, these opportunities will provide AL&TWF members with career-broadening opportunities through developmental assignments and operational experience. The CDG Program and RDAP will enable future leaders to develop cross-functional skills to directly support warfighters and their senior mission and operational commanders.



Two-way communication between warfighters and program managers (PMs) ensures that warfighters' requirements are being successfully met quickly and cost-effectively. PMs gain a better appreciation of the challenges warfighters face when identifying systems' requirements and articulating those requirements into logical design and production specifications.

## Defense Department Initiatives

One of the most exciting activities underway within the DOD acquisition community is the Civilian Acquisition Workforce Personnel Demonstration Project. Title VI, *Civil Service Reform Act*, 5 U.S.C. 4703, authorizes the Office of Personnel Management to conduct demonstration projects that experiment with new and different personnel management concepts to determine whether changes in personnel policy or procedures would result in improved federal personnel management. The project is designed to provide an encouraging environment that promotes the growth of all employees and improves the local acquisition managers' ability and authority to manage the acquisition workforce effectively. This demonstration involves streamlined hiring processes, broadbanding, simplified job classification, contribution-based compensation and appraisal systems, revised reduction-in-force procedures, expanded training opportunities and educational sabbaticals. Since its inception on March 28, 1999, more than 3,800 Army acquisition employees have converted to this ASAALT demonstration project, 9 of 12 PEOs, ASC, the Army Test and Evaluation Command and several Army Materiel Command subordinate activities, including the Army Materiel Systems Analysis Activity, Aviation and Missile Command, Tank-automotive and Armaments Command, Army Contracting Command Headquarters, Contracting Command Korea, Military Traffic Management Command's Acquisition Center, Medical Command's Health Care Acquisition Activity and National Guard Bureau Chief Information Office.

In addition, DOD is reviewing lessons learned from the department's science and technology laboratory demonstration projects and the acquisition workforce demonstration project in its development of a best-practices demonstration project. This best-practices demonstration project would be the basis for the recently proposed DOD National Security Personnel System sent to Congress for consideration in FY04. The AAC and ASC have played critical roles in developing this model personnel system.

## Filling the Gaps

As previously mentioned, more than 50 percent of the acquisition workforce will be eligible to retire during the next 5 years, and with those retirements a wealth of institutional knowledge will depart. We must devise innovative methodologies to capture this institutional knowledge before it disappears. We are exploring Web-based

alternatives such as collaborative "virtual knowledge centers" to provide timely and responsive answers to concerns from the PEOs/PMs and other acquisition professionals. This will allow both new and seasoned acquisition personnel to leverage the knowledge and skills available within the AL&TWF to respond when new or repetitive challenges present themselves. The acquisition community must also effectively recruit and retain individuals with the critical skills, at the right levels and at the right time if we are to successfully support Army transformation and the warfighter. The Army's Human Resource Performance Plan must identify what gaps that we can expect when, and then ASC must develop proactive, aggressive recruiting and retention strategies to fill those gaps as we continue to attract and retain the best and brightest acquisition professionals the Army has to offer.

The AL&TWF consists of 11 civilian career fields and 5 officer specialties. We have civilian and military acquisition professionals going head-to-head for board-select program manager positions. Implementation of the Army's Acquisition Workforce Campaign Plan is critical for the success of our workforce, the Army and DOD. Equipping our warfighters is AAC's number one priority, and we cannot be effective without shaping our workforce and developing leaders to meet the challenges of an ever-changing, technology-driven future. These are exciting times as we embark on a new chapter in the Army's history. We cannot afford to fall behind the education and training power curve and we cannot fail the warfighters who count on our timely support. Through innovative technology, research, testing and development, creative education and training initiatives for our workforce and gaining a thorough understanding of our end-users' missions and motivations, we can acquire tremendous new capabilities so our warfighters can fight with greater lethality, survivability and sustainability regardless of where the battlefield or mission takes them.

LTG JOHN S. CALDWELL JR. is the Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology and Director, Acquisition Career Management. He has a B.S. degree from the U.S. Military Academy and an M.S. degree in mechanical engineering from Georgia Institute of Technology. In addition, he has attended the Industrial College of the Armed Forces, the U.S. Army Command and General Staff College and the Defense Systems Management College Program Management course.

## Continued From Page 29

“We are at war and transforming,” Caldwell said. “We are deployed all over the world and the challenge is to be responsive to current commanders deployed and to our own future transformation.”

“We could sustain everything we’ve got with every dollar we’ve got and not have anything for the future,” Riggs responded. “A better question to ask is ‘How are we going to balance the resources we have available?’”

MEG WILLIAMS is a Senior Editor/Writer and provides contract support to the Acquisition Support Center through BRTRC’s Technology Marketing Group. She has a B.A. from the University of Michigan and an M.S. in marketing communications from Johns Hopkins University.

## Army Acquisition Corps Task Forces Embedded in Iraqi Theater

Meg Williams

**‘Justice and McCoy’ was a refrain heard often during the Acquisition Senior Leaders’ Conference, Aug. 12-14. If you wanted to hear how the Army Acquisition Corps (AAC) went to war and helped warfighters succeed in Operation Iraqi Freedom, you needed to hear what Justice and McCoy had to say.**

**B**oth colonels commanded forward-deployed task forces with embedded combat acquisition soldiers in the tactical units. COL Nickolas G. Justice commanded the Information Management Task Force (TF). He is Project Manager for Force XXI Battle Command Brigade and Below (FBCB2), Program Executive Office, Command, Control and Communications (Tactical). COL Curtis L. McCoy, Project Manager, Bradley Fighting Vehicle Systems, Program Executive Office, Ground Combat Systems, commanded the Combat ASAALT - Southwest Asia TF Operations Center, or CAT Force for short.

When they first deployed, impressions of the AAC were less than optimal: “When I got over to theater we didn’t have a good rap,” McCoy said.

“The first time I met MG Thurman he said to me, ‘You’re one of those drive-by fielding type of PMs.’”

Justice further explained that to MG Thurman “drive-by fielding” means that you leave him with the equipment. It doesn’t mean that you failed to complete your new equipment training (NET) or that you failed to bring all your equipment to the field. “What we as Project Managers consider a proper fielding doesn’t cut it with him,” Justice said. “He told me ‘It’s your equipment, you need to stay here and make it work.’ What he was telling me is a story about building confidence in the Army that what we in acquisition do is great.”

The acquisition personnel in theater quickly changed this perception by learning to think like soldiers — what

Justice referred to as “getting in the same foxhole as the warfighter.” We built command centers, we brought Blue Force Tracking to the theater and we partnered with the Army Materiel Command (AMC), said Justice. They also provided NET, maintenance and operational support, and gave battle damage assessments to combatant commanders in the fight.

Acquisition’s value-add to warfighters was its engineering expertise. “We brought engineering skills to the table no one else had,” Justice said. “AMC is supply. When they look at us, it’s as engineering talent.”

Besides its agility in engineering, the CAT Force excelled in accelerated fielding, bringing the PATRIOT Advanced Capability-3 (PAC-3) missile system, the Bradley M2A2 ODS (*Operation Desert Storm*), the FBCB2 Blue Force Tracking, the Multiple Launch Rocket System (MLRS) M270A1, the command and control vehicle and Battle Control Vehicle weapon systems to the Iraqi theater.



Proudly wearing the Army Acquisition Corps patch are, from left, COL Curtis L. McCoy, COL Nickolas Justice, MAJ Jonas Vogelhut and MAJ Rod Mentzer who deployed in support of *Operation Iraqi Freedom*. (photo by Richard Mattox)

“Abrams, Bradley, Black Hawk, Apache and MLRS form an army of excellent platforms,” said McCoy. “Where did those platforms come from? They came from us! It offends me when I hear Abrams and Bradley referred to as ‘Legacy Force.’ Abrams and Bradley are the future force.”

McCoy also took issue with the press’s coverage of PATRIOT missiles. “The PATRIOT is king to me,” he said. In tag team format, Justice finished his story. “We were in the Command Center when the air defense system alarm went off,” said Justice. “We are standing here and so are our young soldiers because the PATRIOT worked.” The PATRIOT recorded a 100-percent probability of kill during combat.

Justice praised the young soldiers — majors and noncommissioned officers — who comprised the two TFs. “We’re underutilizing our officers,” he said. “Take advantage of these kids and give them more work to do than Powerpoint™ slides. I also used young master sergeants. I’d go anywhere with them.”

MAJ Jonas Vogelhut was an officer embedded with the 3rd Infantry Division. His mission was to install FBCB2 on 180 2nd Brigade tanks. His first challenge was to field a piece of equipment that soldiers didn’t think they needed.

“Their initial response was, we don’t need it — we’ve got map boards and we know how to use stickies,” Vogelhut said.

Vogelhut installed systems and trained soldiers to use them. When soldiers had missions, acquisition team members were there to answer questions. Vogelhut rode on the battlefield and saw firsthand the results of soldiers using the equipment he had installed.

“When the division started the process of the speed move to Baghdad, the division could move faster in the breach lanes because they knew where everyone was,” said Vogelhut.

Justice and McCoy reeled off a list of equipment that performed well during the war including the new Joint Service Lightweight Integrated Suit Technology, the Javelin (which operated at a 96-percent operational

rate during combat), the Long Range Advanced Scout Surveillance System (LRAS3) (which helped distinguish between children playing and enemy targets) and Interceptor Body Armor. They praised the Mobile MOUT (Military Operations in Urbanized Terrain) facility, which was fielded within 38 days of receiving funding. Additionally, the Army’s mountain training solutions were so good that Navy Special Operations Forces were trying to get access to use these training solutions.

The two colonels suggested that AMC and ASAALT partner during future contingencies to ensure mission success and to better support soldiers. They also suggested that this organizational relationship be refined and formalized in support of future Joint Task Force missions.

Near the end of their presentation, McCoy turned sideways to the audience and pointed to his Army Acquisition Corps patch. “We issued this patch to all task force members over there and I’m proud to wear this patch,” he said.

MEG WILLIAMS is a Senior Editor/Writer and provides contract support to the Acquisition Support Center through BRTRC’s Technology Marketing Group. She has a B.A. from the University of Michigan and an M.S. in marketing communications from Johns Hopkins University.

# Industry Leaders Make First Appearance at Acquisition Senior Leaders' Conference

Meg Williams

**Conference host Claude M. Bolton Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology/Army Acquisition Executive introduced the four industry panelists by saying, "I've yet to find anyone in those program executive offices who are actually building our Strykers and Black Hawks."**

**"We depend heavily on our industrial base — organic or industrial — to build our world-class fighting forces," he added.**

**B**olton explained that in the last 15 years, especially since the Berlin Wall fell, consolidations and mergers in the defense industry have been commonplace. He asked panelists to talk about competition in their industries and how their companies



Simon T. Honess, Vice President, Homeland Security, General Dynamics Land Systems.

can help the Army with issues of obsolescence in the systems.

Panelists included Roger A. Krone, Senior Vice President,

Army Systems, Boeing; Dr. William H. "Bud" Forster, Vice President, Land Combat Systems, Northrup Grumman Corporation; William W. Hansen, Vice President, Army Programs, Civil Agencies & Technology Services, Lockheed Martin; and Simon T. Honess, Vice President, Homeland Security, General Dynamics Land Systems.

Ten years ago Boeing employed 280,000 people and less than 10 percent of its revenue came from defense programs. Since then it has moved its headquarters from Seattle to Chicago and decreased its number of employees to 145,000. Military contracts now make up the majority of its revenues.

To maintain its competitive edge, Boeing focuses on pleasing its customers. "Our ultimate customer is not in the five-sided building," Krone said. "It's a W4 maintaining



Roger A. Krone, Senior Vice President, Army Systems, Boeing.

a Chinook in blowing winds of sand."

Keeping such demanding customers satisfied requires that Boeing hire people who used to be warfighters, deploying its employees overseas to be with customers, spending time at the National Training Center at Fort Irwin, CA, and at the Joint Readiness Training Center at Fort Polk, LA.

"General Dynamics has a transformation story, much as these other corporations and the Army have," said Honess. "In the 1980s, before the Berlin Wall fell, General Dynamics was doing \$10 billion in business each year with 50,000 employees. After the wall fell, it had 13,000 employees doing \$3.5 billion in business per year."

"We decided not to keep businesses we weren't number one or number two in," Honess clarified.

“Now, we’re at \$16 billion a year and 64,000 employees. Then, we manufactured tanks and submarines. Now we produce information technology systems and marine systems. Were it not for us getting into information technology, we couldn’t relate to a Lead Systems Integrator type of environment.”

General Dynamics links to warfighters in three ways: first, by having a vision that aligns with the national security of the United States and the U.S. Army; second, by recognizing that the environment changes, industry players change and ways of doing business change; and third, by performing well.



Dr. William H. “Bud” Forster, Vice President, Land Combat Systems, Northrup Grumman Corp.

“We must practice agility in terms of competing and then teaming with our adversaries to be collectively aligned with the warfighter,” Honess offered.

General Dynamics uses a balanced scorecard to judge how its customers think they are aligned with the company. Also, as an organization it works very hard to matrix its engineering and production processes with its product centers. Its managers must understand what warfighters need.



William W. Hansen, Vice President, Army Programs, Civil Agencies & Technology Services, Lockheed Martin.

Northrop Grumman completed a true transformation, according to Forster. Through careful acquisitions and plotted moves, it has turned itself around without losing money or customers, a considerable feat given the economy.

Northrop Grumman’s project managers adopt an Army unit and talk to its customers face-to-face. “Getting involved earlier in the requirements and acquisition processes is key to successful contracts,” Forster said. His company also employs technical representatives to keep connected to warfighters in the field.

As a retired Army lieutenant general and former Military Deputy, Assistant Secretary of the Army for Research, Development and Acquisition, Forster applauded the task force ASAALT sent to Kuwait.

“The acquisition cell in Doha was a great step in getting the Army Acquisition Corps (AAC) and the people who can solve those issues forward,” he said. “That needs to be continued and expanded in a peacetime role.”

In his opinion, the Defense Acquisition Workforce Improvement Act has built a wedge between the AAC and the rest of the Army. “Maybe it’s time to do another legal review

of it,” Forster said. “If you need legislative relief, go and get it.”

Lockheed Martin is what remains from 17 former defense companies, Hansen told listeners. It is a \$26 billion a year company and the Army’s business is 15 percent of that. “To transform itself, Lockheed Martin has changed the way it goes through the requirements process and how it supports the warfighter,” Hansen continued. “To remain competitive, Lockheed Martin sometimes brings back retired employees. It also educates its engineers in management so that they can relate better to the warfighter through the Army’s acquisition professionals.”

“The warfighter is the greatest national resource this country has,” Hansen praised. “Industry today is also a national resource — better than anything else in the world — and we want to support you!”

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## FROM THE ACQUISITION SUPPORT CENTER DIRECTOR



This is a special issue of *Army AL&T* magazine. First, if you've already read this far, you have seen the extensive layout and re-design we've infused into the magazine for you. Our intention is to make

*Army AL&T* a premier Army publication — a must read for anyone in the Army who is interested in how we develop weapons and communication systems and use technology to directly benefit our warfighters in the field.

Second, we are giving this issue to everyone who visits our booth at the 2003 Association of the United States Army (AUSA) Convention in Washington, DC, Oct. 6-8. The Acquisition Support Center's booth highlights how the acquisition community successfully supports our warfighters — from the current force's Legacy Systems to the Future Combat Systems being developed for tomorrow.

We are extremely proud of the hardworking members of our program executive offices and their numerous accomplishments during *Operation Enduring Freedom* and *Operation Iraqi Freedom*. Many Army Acquisition Corps members deployed to Kuwait, Iraq and Afghanistan, and they are sharing many valuable lessons learned concerning maintaining and sustaining warfighters' equipment and communication systems on the battlefield and contracting for critical services and support in-theater.

This year's AUSA Convention theme is "*The Army — At War and Transforming*." As acquisition professionals, we are dedicated to being the best leaders possible, managing streamlined organizations and being conscientious stewards of limited resources. We contribute process improvements wherever possible in Army acquisition and those improvements are very important to the Army's transformation. Every day, acquisition professionals work to make a difference in the lives of warfighting commanders and their soldiers.

The annual Army Acquisition Corps Ball was held Sunday, Oct. 5, 2003, at the Hyatt Regency Crystal City in Arlington, VA. This year's theme was "*To the Soldier*." At this year's celebration, the Honorable Claude M. Bolton Jr., Army Acquisition Executive and Assistant Secretary of the Army for Acquisition, Logistics and Technology, presented the 2003 Product and Project Managers and Acquisition Commanders of the Year Awards. Visit our Web site at <http://asc.rdaisa.army.mil/> for this year's awards recipients.

**COL Mary Fuller**

Director

Acquisition Support Center

### AABC Graduates 36 Students

Thirty-six students graduated from the fast-paced, 8-week Army Acquisition Basic Course (AABC) June 27, 2003. The distinguished graduate was CPT Jake E. Crawford III. Paul Bogosian, Deputy Program Executive, Aviation, spoke at the ceremony.

This graduate-level course is designed to provide a broad spectrum of knowledge pertaining to the materiel acquisition process. It covers legal and regulatory policies and objectives that shape the acquisition process and the implementation of these policies and objectives by the U.S. Army. Functional areas presented include project management, contracting, test and evaluation, acquisition logistics and information technology. Course graduates are eligible for a wide range of acquisition workforce positions.

The course proponent is LTG John S. Caldwell Jr., Army Director of Acquisition Career Management.

The Academic Council on Education will evaluate AABC for graduate credit and equivalency with 10 existing Defense Acquisition University courses.



Congratulations to the following AABC graduates:

Alessio, Paul E. CPT  
 Bolshazy, Michael S. CPT  
 Bowser, Charles W. CPT  
 Chandler, Sandra M.  
 Clark, Michael D.  
 Crawford, Jake E. III CPT  
 Davis, Gary J. II CPT  
 Drazenovich, John A. CPT  
 Gastan, Gregory J. CPT  
 Green, Shedrick  
 Hatchett, Barry M. MAJ  
 Heyland, William P. CPT  
 Howald, Charles O. CPT  
 Hur, Jang W. MAJ (Korea)  
 Hwang, Sung H. LTC (Korea)  
 Jackson, Shannon C. CPT  
 Kirk, Eric D. MAJ  
 Klopotoski, Dean T. CPT  
 Lackovic, Christopher J. CPT  
 Lloyd, Bruce A. CPT  
 Lucas, Shawn P. CPT  
 Magras, Patrick G. MAJ  
 McWhorter, Rodney S. CPT  
 Parker, John P. CPT  
 Peacock, Ossie L. Jr. CPT  
 Pearson, Mollie A. CPT  
 Pennington, Stephanie T. CPT  
 Prowell, Kerry S. CPT  
 Purgaj, Franc (Slovenia)  
 Roberts, Joseph W. CPT  
 Root, Jason P. CPT  
 Shanholts, Connie E. CPT  
 Simpson, Jeffrey S. CPT  
 Stover, Howard J. MAJ  
 Traxler, Mike E. MAJ  
 Whitmark, Christopher W. CPT

Additional information about the Army Acquisition Basic Course is available at <http://www.almc.army.mil/AMD/Huntsville/index.asp>.



## PERSCOM Notes



### FY04 COL/GS-15 PM/AC Slate

The U.S. Total Army Personnel Command recently released the following FY04 colonel (COL)/GS-15 project manager (PM)/acquisition command (AC) slate.

NAME	SLATE
Abercrombie, Henry E.	Distributed Common Ground System-Army
Bonheim, Michael E.	Defense Contract Management Agency (DCMA) Springfield
Burnett, Donald J.	Nuclear, Biological and Chemical Defense Systems
Carson, Peggy R.	DCMA Phoenix
Colon, Angel L.	Warfighter Information Network-Tactical
Coutteau, Charles G.	Unit of Action Combat Systems
Crizer, Scott H.	Close Combat Armaments Center-U.S. Army Research, Development and Engineering Center
Economy III, Anas T.	Aberdeen Test Center
Fierko, Francis X.	DCMA Raytheon-Burlington
Fuller, Peter N.	Brigade Combat Teams
Goddette, Timothy G.	Force Projection
Gray, Myra S.	Objective Force Warrior
Grubb, Susan K.	DCMA Detroit
Hansen Jr., Richard D.	Soldier Warrior
Harris, Earnest D.	Precision Fires Rocket and Missile System
Jones, Kermit C.	DCMA Long Island
Kendrick III, Robert	Principal Assistant Responsible for Contracting (PARC)-Germany
Kreider, Stephen D.	Commander, Yuma Proving Grounds
Leyva, Gabriel F.	DCMA Chicago
Mahanna, Cory W.	Utility Helicopters
Ralph III, James R.	Training Devices

Rider, Mark D.	Maneuver Ammunition Systems-Direct Fire	Jacobsen, Scott	DCMA Cleveland
Scarborough, Jess A.	Tactical Exploitation of National Capabilities Program	Jones, Walter	Missiles Platforms
Sullivan, Christopher C.	Army Aviation Technical Test Center	Kelleher, John	Mobile Electric Power (Med)
Szerszynski, Robert	Measurement, Electric Power and Protection	Lazar, John	DCMA London, Ontario
Vaughn, John K.	Lower Tier	Leaphart, John	Digital Communications Switched Systems-CONUS
Walters, Stephen	DCMA San Francisco	Lindsay, Michael	DCMA Indianapolis
Willey, Jeffrey D.	PARC-Korea	Marion, Robert	DCMA Phoenix-Mesa
		Martin, Jose	In-Flight Interceptor
		Mason, William	Communication Systems
		Morton, Dwayne	Joint Tactical Radio Systems
		Nagel, James	Ground/Air
		Nichols, Marvin	Test Modernization Digital Equipment
		Noble, Earl	Tactical Operations Centers-Platforms
		*O'Donell, Warren	Aviation Mission Equipment
		Peterson, Kevin	Defense-Wide Transmission Systems
		Rand, Jaimy	Line of Sight/Beyond
		Riggins, David	Light Tactical Vehicles
		Reubens, Shirley	Contracting Command-Fort Hood
		**Ruiz, Gabriel	Digitized Training
		Schleder-Kirkpatrick, Lisa	Air & Command Tactical Trainers
		Smith, Earle	Digital Communications Switched Systems-Pacific
		Smith, Todd	Heavy Tactical Vehicles
		Solesbee, Carol (ARNG)	DCMA-Saudi Arabia
		Tamilio, Douglas	Small Unmanned Aerial Vehicle
		Tarcza, Kenneth	Construction Equipment/Heavy Materiel Equipment
		Thomas, Robert	West Desert Test Center
		Trulock, Troy	Large Caliber
		Wood, Kelvin	Unmanned Ground Vehicle
		Wright, Kenneth	Patriot Advanced Capabilities III
		Young, Reed	DCMA General Dynamics-Pittsfield
		***Zoppa, Robert	Multi-Spectrum Sensor
			Robotic Unmanned Sensors
			Enterprise Logistics Systems
			Contracting Command-Qatar

**FY04 LTC/GS-14 PM/AC Slate**

The U.S. Total Army Personnel Command recently released the following FY04 lieutenant colonel (LTC)/GS-14 product manager (PM)/acquisition command (AC) slate.

NAME	SLATE		
Baez, Jose	Defense Contract Management Agency (DCMA) St. Petersburg		
Ballew, Mark	DCMA Boeing-Philadelphia		
Barracough, Brett	Tactical Exploitation of National Capabilities Program-Field Support		
Bernritter, Travis	Joint Vaccine		
Bond, George	Cold Region Test Center		
Brewer, Carlton	Infrared Countermeasures		
Bushey, Douglas	DCMA Lockheed Martin-Dallas		
Carrick, Kenneth	Enhanced Position Location Reporting System		
Cole, William	Excalibur		
Contreras, Andres	M2/M3 Bradley Fighting Vehicle System		
Daniels, Debra	Wiesbaden Regional Contracting Center		
Day, James	Non-Line of Sight		
Dedecker, Craig	Army Training and Doctrine Command Acquisition Center		
Dietz, James	Target Identification Meteor Sensors		
Flanagan, Michael	M1A2		
Fouse, Scott	Interim Armored Vehicle Combat Support Systems		
Hess, John	Contracting Command-Kuwait		
Hinds, John	FCS-Technology		

Note:  
 \*FY03 Revalidated  
 \*\*FY03 Reslated principal  
 \*\*\*Unslated

## FY03 LTC Promotion Board Results

The FY03 Lieutenant Colonel (LTC) Promotion Board results were released in July 2003. This was the first LTC Promotion Board under Officer Personnel Management System (OPMS) III. The selection rate for Army Acquisition Corps (AAC) officers in the primary zone was 80.2 percent (an increase from 72.3 percent from FY02), while the selection percentage for the Army competitive category was 79.6 percent. Selection rates among the four career fields were as follows:

	Primary Zone	Above Zone	Below Zone
Operations	79.6%	6.4%	6.5%
Operational Support (AAC/Foreign Area Officer)	75.5%	10.2%	4.3%
<b>*AAC Only*</b>	<b>80.2%</b>	<b>11.4%</b>	<b>6.0%</b>
Information Operations	75.0%	12.0%	7.2%
Institutional Support	75.0%	12.7%	5.8%
Total Army Competitive Category	78.0%	7.9%	6.3%

The FY03 LTC Promotion Board reviewed the files of 111 primary zone AAC officers and selected 89. Additionally, 10 above-the-zone AAC officers (11.4 percent) were selected and 7 below-the-zone AAC officers (6.0 percent) were selected. A review of files for those officers selected for promotion by the FY03 LTC board revealed the following trends.

### Command Staff College (CSC)

Seventy-two percent of the primary zone AAC officers selected attended resident CSC. Twenty-seven percent of the primary zone AAC officers selected completed CSC through nonresident studies. Seven percent (8 officers) in the primary zone did not complete either resident or nonresident CSC, and none of these officers was selected for promotion. There was an anomaly in that one nonselected AAC officer had attended resident CSC.

### Company Command Evaluations

Company command evaluation reports appeared to carry weight with the board, but overall file strength and CSC were the major determining factors for promotion selection. The majority of AAC officers selected for promotion had at least one above-center-of-mass (ACOM) Officer Evaluation Report (OER) as company commanders. These reports generally had either clear ACOM senior rater profiles and/or strong, exclusive senior rater comments on potential.

### Consistent COM(+) Performance and Job Progression

Another important trend was consistent COM(+) performance throughout the officer's career. AAC officers selected for promotion generally had consistent COM(+)/ACOM OERs.

Additionally, officers who were favorably considered demonstrated clear evidence of increased responsibility from one assignment to the next and diversity in acquisition assignments.

### OER (DA Form 67-9)

Analysis clearly showed that the board placed the most emphasis on the current OER (DA Form 67-9) and little on the previous OER form. The average number of current OERs for primary zone officers considered was 4.4. The primary zone officers selected for promotion had an average of 2.6 ACOM OERs. This substantiates the position that a COM report is not a "career ender." However, there is a significant difference between a single COM report and a COM file. Officers considered for promotion who did not have any ACOM OER reports were not selected for promotion.

### Bottom Line

The board seemed to take into consideration the "whole person," including performance, qualifications (positions held, schools attended, etc.) and Army needs such as AAC requirements. However, a COM(+) file, consisting of strong COM reports coupled with ACOM reports, seemed to be critical for selection. Generally, a file with one ACOM for every two COM reports and CSC completion had a very high selection rate.

Congratulations to the following AAC officers selected for promotion to LTC. (Note: An asterisk indicates below-the-zone selection. Five names were not available at the time this article went to print.)

\*Alexander, Scott E.  
 Ambrose, Matthew H.  
 Anderson, Thomas J.  
 Bagley, Michael J.  
 Banks, Douglas T. III  
 \*Bassett, David G.  
 \*Blanco, James A.  
 Bochonok, Jeffrey T.  
 Boruff, William M.  
 Bosse, Scott P.  
 Bosworth, Brian E.  
 Burden, Patrick W.  
 Chicoli, John A.  
 Chyma, Timothy D.  
 Cook, Thomas S.  
 Copeland, Kenneth D.  
 Cummings, Brian P.  
 Daus, Cliff A.  
 Davis, Christopher P.  
 DiMarco, Andrew J.  
 Downs, Jimmy E.  
 Driver, Charlotte D.  
 Elliott, Steven M.  
 Evensen, Kenneth C.  
 \*Field, William E.  
 \*Flanders, Thomas P.  
 Fletcher, Robert E.  
 Foster, Stephanie L.  
 Fox, Christine A.  
 Frulla, Kurt A.  
 Fuller, William S.  
 Garcia, Joseph G.  
 Gordon, Velma W.  
 Grein, Alfred J.  
 Griffin, Gene E. Jr.  
 Grigsby, Robert E.  
 Grubbs, Albert L.  
 Guthridge, George A. III  
 Haider, Ruth A.  
 Hallinan, James G.  
 Harper, Victor R.  
 Heilig, Donald M. Jr.  
 Hicks, Mark A.  
 Hill, Paul M.  
 Hirniak, Justin A.  
 Hirschman, Keith A.  
 Homsy, Samuel C.  
 Hood, Thomas G.  
 Hubner, Michael W.  
 Jarrett, Robert R. II  
 Jimenez, Ramon  
 Johnston, Robert J.  
 Jones, Deisy  
 Jones, Jeannette J.  
 Kivett, Ryan B.  
 Laase, Gary L.  
 Lane, Edward J.  
 Larrabee, Patricia M.  
 Lemondes, John Jr.  
 MacDonald, Andrew J.  
 McDermott, Paul A.  
 McVey, Wade L.  
 Mitchell, James C.  
 Moore, Paul Jr.  
 Myers, Yewston N. III  
 Nikituk, Marko J. E.  
 Olson, Keith  
 Pershing, David R.  
 Pincoski, Mark J.  
 Pope, Joseph K.  
 Pulford, Scott A.  
 Puthoff, Frederick A.  
 Raftery, Brian W.  
 Rankin, James A.  
 Reed, Stephen S.  
 Rettie, Craig L.  
 Riley, Donald D.  
 Robertson, Daniel S.  
 Rohall, David J.  
 Rush, Christian E.  
 Schaefer, Craig P.  
 Schutter, Jeffrey D.  
 Slade, William C.  
 Smythe, Daniel R.  
 Solomon, Norman E.  
 Spenard, Arthur E.  
 Steiner, Leonard T. Jr.  
 Stewart, Lewis E.  
 \*Stoddard, Kevin P.  
 Sweat, Kenneth F.  
 Tate, Wade S.  
 Theodoss, Michael D.  
 Thies, Dennis  
 Visconti, Albert J.  
 Voigt, Jeffrey R.  
 Wellborn, Robert M.  
 \*Wells, Charles A.  
 Wiley, Danny A.  
 Williams, Julian R.  
 Winbush, James O. Jr.  
 Womack, John S.

## NEWS BRIEFS

### Accounting for Contractors on the Battlefield

Having contractors on the battlefield is not a new concept. In fact, the military has been using contractors since the American Revolution. As recently as *Operation Iraqi Freedom* (OIF), DOD civilian employees and contractors are providing more combat support and combat service support functions than ever before. This is partly because of the downsizing of the military following *Operation Desert Storm* and the growing need for contractors to provide initial or lifetime support for high-tech weapon systems. Contractors are also being used for activities ranging from laundry services and aircraft maintenance to satellite tracking and data acquisition.

With the increased use of contractors in garrison and contingencies, the Army recognized the need to account for its contractors and their movements. Thus, the Army Materiel Command Logistics Support Element-Southwest Asia (AMC LSE-SWA) took the lead to create a contractor coordination cell (3-C) to help account for Army contractors in support of the Coalition Forces Land Component Command (CFLCC) and their movements during *OIF*.

"The number of contractors on the battlefield in this theater of operation is more than 4,500, and I believe we have captured about 85 percent of the total number," said 3-C Chief Rudy Chavez. More than 160 companies are represented, most of which are in Kuwait and Iraq. Personnel numbers range from more than 1,000 to as few as 6 employees to a company.

Chavez stated that contractors need support, not management. He added that they look for structured and communicated policies and well-defined rules of engagement to focus on mission accomplishment, which is the key to mission success.

Contractors seem to like the new accountability cell. Jim Halbert, Area Manager for the Logistics and Environmental Support Corp. Inc. (LESCO), said that the new cell gives him a single point of contact if he needs assistance. In the past, he had to run around to find the person with the right answers. LESCO has 15 employees in Kuwait and Iraq performing maintenance and logistics work for the U.S. Army Forces Command to support the Biological Integrated Detection Systems. Halbert said that the 3-C team solved LESCO's passport and visa issues as well.

"Using contractors on the battlefield is a plus because in some cases, we have not planned, prepared or identified other resources or capabilities within DOD. These contractors are an asset who can be used quickly and have the necessary expertise and, in some cases, the tools and parts," said Chavez.

In addition to his duties as 3-C Chief, Chavez is a Logistics Assistant Representative (LAR) with AMC and has supported Army exercises and contingency operations in the Balkans, Egypt and at the National Training Center (NTC) at Fort Irwin, CA. In explaining the history of 3-C, Chavez said that he noticed the high number of civilian participants during these exercises and wondered what management office accounted for all the contractors, especially with the 4th Infantry Division Capstone Exercise in 2001.

Chavez said that the logistics assistance office for the 4th Infantry Division supported unit equipment readiness with about 25 LARs, but units training on the new digital systems required a larger number of contractors. After observing that contractor accountability was nearly nonexistent, it was recommended that tactical commanders on the ground have a single agent to account and control movement of contractors.

These lessons learned resulted in AMC taking the lead to account for contractors during Millennium Challenge, a joint exercise at NTC. AMC put together a support operations cell that integrated with the companies to coordinate and monitor movement of the contractors supporting the exercise. The support cell also had a help desk that quickly solved many system problems via telephone or



telemaintenance, which is a video-communication process. Chavez's team quickly recognized that a contractor support cell was critical to the mission's success and recommended expansion of a support operations cell to each of the logistics assistance offices and logistics support elements in garrison and during contingencies.

In December 2002, BG Vincent Boles, Commanding General, AMC LSE-SWA, took the lead in establishing guidelines for contractor accountability, and 3-C was created in early February 2003.

A team of six Army civilians began the contractor accountability work and quickly expanded to a five-computer network system. The team identified shortfalls in contractor accountability at the CONUS Replacement Center (CRC) and at the Air Port of Debarkation (APOD). As a result, a 3-C representative was placed at the CRC and the APOD to coordinate advance contractor movement processes with the logistics assistance office.

The team also surveyed contractors in theater at the Army and Air Force Exchange Service, the dining facilities and the health clinic and "shook the bushes" to validate accountability. The team's analysis showed that one-third of those surveyed were not listed in any database. A 3-C representative was also sent with each one of the six logistics support elements in Iraq to work with the unit's personnel office. Contractor personnel status reports were provided to the 3rd Personnel Command and the 377th Theater Support Command Personnel Office through AMC LSE-SWA's personnel office.

The 3-C team used CFLCC's contractor on the battlefield policy to leverage data. The policy outlines the applicability, definitions, responsibilities and procedures for requesting, processing, tracking and accounting for U.S. contingency contractors supporting CFLCC operations and/or systems.

The 3-C team also worked with a program management cell from the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology located at Camp Doha. This cell was responsible for working contractor deployment processes and coordinating accountability of contractors with AMC LSE-SWA. The 3-C team used many of the program management cell accountability processes to develop its own.

AMC's 3-C also used the Civilian Tracking System (CIVTRACKS), a Web-based tool for maintaining accountability of civilian personnel deployed to a theater of operations. To establish accountability, contractor employees must report to the appropriate reception station when arriving in-theater. CIVTRACKS is a good accountability program, but to be effective, it must be a mandatory requirement in statements of work.

The 3-C team also issued chemical protective suits, protective masks, helmets and body armor and assisted contractors with the immunization process. The biggest challenges were the legal interpretations of immunization and visa requirements. The team became the contractor's support element by helping them to complete deployment requirements.

Chavez concluded that the 3-C structure and foundation is important to both the Department of the Army and AMC. In addition, if the lessons learned are written in doctrine, it will improve contractor on the battlefield accountability and movement processes.

*This article was written by Bob Whistine, a Public Affairs Officer (PAO) for AMC's Joint Munitions Command (provisional) who previously served as the PAO, AMC LSE-SWA.*

## ECBC Demonstrates Air Filtration System

On July 28, 2003, the U.S. Army Edgewood Chemical Biological Center (ECBC), Aberdeen Proving Ground, MD, unveiled a new air filtration system that promises improved protection for both warfighters and civilians. The system is the first of its kind designed to protect against biological and chemical agents as well as toxic industrial chemicals. It uses regenerative filters that do not require renewal like conventional filters. Because of the system's low-maintenance and environmental adaptability, it has many possible military and homeland defense applications.

Developed by ECBC under a Cooperative Research and Development Agreement with Domnick Hunter Ltd., the Chemical Biological (CB) Regenerative Air Filtration System can be installed in shelters, buildings, vehicles, ships or anywhere protection is needed against chemical or biological warfare agents.



The CB Regenerative Air Filtration System (example at inset) can be integrated into future generations of military equipment such as this Abrams tank.

Currently in the testing phase, the CB Regenerative Air Filtration System is completely modular, scalable and multipurpose. Equipped with two filter beds, the self-cleaning system absorbs chemical and biological agents and toxic industrial chemicals with one filter bed while simultaneously cleaning the other filter bed with high-pressure, high-temperature air. The self-contained cleansing process and automatic rotation of filters eliminates the need for regular filter changes and associated system shutdown and

minimizes the logistics footprint for operators. The CB Regenerative Air Filtration System will be able to operate maintenance-free for extended periods.

ECBC is the Army's principal research and development center for chemical and biological defense technology, engineering and services. For information about ECBC, go to <http://www.ecbc.army.mil> or call (410) 436-3610.

## Future Warrior Returns With Changes

Nothing works on Future Warrior, and that's the way it's supposed to be. The uniform ensemble, first assembled in 1999 at the U.S. Army Soldier Systems Center, Natick, MA, was redesigned for 2003 to better depict technology decades from reality for soldiers.

While the Objective Force Warrior (OFW) soldier weapon platform prepares for fielding within the decade, Future Warrior is set apart as a mostly visionary tool for researchers, said Cheryl Stewardson, Integrated Protection Functional Area Leader for the Natick Soldier Center's OFW program.

Future Warrior was reintroduced at the May 22, 2003, opening of the Institute for Soldier Nanotechnologies, a new partnership between the Army and Massachusetts Institute of Technology (MIT). The Army wanted to showcase now the concepts it is working on for the future. Seeing those concepts on a human form helps determine how technologies might be used and their limitations.

During the past 3 years, scientists and engineers have experimented with concepts to determine their feasibility with OFW. What's out of bounds for OFW ended up on Future Warrior.

Looking menacing in an all-black, custom-fit uniform from head to toe, Future Warrior is portrayed by Sgt. Raul Lopez, Liaison Sergeant with the Operational Forces Interface Group. Replacing the modified motorcycle helmet used in the previous Future Warrior concept, the custom-designed helmet Lopez

wears is leaner and incorporates several features representing upcoming technology. A blue-tinted visor signifies agile eye protection against tunable lasers, while inside a new projection display technology based on the Joint Strike Fighter helmet is now more accurately shown.

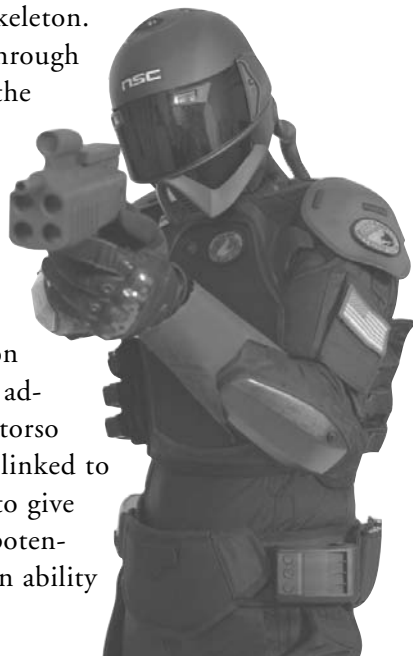
Although there are sensors available now for thermal and image intensification, making them small enough, fusing the images and projecting them onto the visor was a real leap. Openings at the top of the helmet fit in with the idea of a 3-D audio and visual sensor suite. They restore natural hearing lost in an encapsulated space and enhance long-range hearing. Cameras enhance vision from the sides and behind. A smaller halo on the helmet represents a tracking system for friendly and enemy forces. By reshaping the helmet, Future Warrior has an expanded field of view.

Protection against chemical and biological agents is more realistic with a respirator tube that attaches to the back of the helmet and connects to a low-profile air purifier that forces cool air into the helmet for comfort and visor defogging. "It was envisioned to come down very sleek into the body," Stewardson said, "but we couldn't find a material to do it in the short time we had to put this concept prototype together."

Another major change in the uniform is the addition of protruding, interconnecting black plastic pieces on the legs that represent a lower-body exoskeleton.

It will connect through the boots up to the waist and enable the wearer to carry up to 200 pounds.

Above the waist, MIT's research on nanomuscles for advanced arm and torso strength may be linked to the exoskeleton to give Future Warrior potentially superhuman ability to move or carry.



A flexible display on the forearm of Future Warrior glows when switched on and draws attention to the simulated touch-screen keypad for information input and output for tasks such as navigation, physiological status monitoring and command communication. The display is connected into a compact computer worn on an armored belt around the waist.

Attached to the arm is a slim box representative of the remote control unit for any system that might be used, such as a robotic mule or unmanned aerial vehicle.

Found near the top of the torso front and back are what look like quarter-sized buttons built into the fabric depicting a nanostructure sensor array to detect weapons of mass destruction, friendly or enemy lasers or weather.

"The sensors could trigger a response in the uniform to open or close the fibers depending on temperature or precipitation," Stewardson said.

Black was chosen as the color to clue observers that it's the future, she said, although the aim is for a uniform that's invisible. Speaking of stealth, much of the futuristic capability can't be shown at least in part because of nanotechnology.

Along the black stretch fabric are custom-fitted plastics and foams that take the place of liquid body armor that will instantly solidify when struck. "All the parts are much harder than we wanted. We haven't figured out how to portray (liquid armor)," Stewardson said.

Through nanotechnology, multifunctional materials will be able to transport power and data. The materials will also be able to fend off chemical and biological agent attacks, self-decontaminate and become waterproof.

"I believe nanotechnology is going to give us much more than we can even envision today. This is just a sampling," Stewardson said.

In many ways, the revised Future Warrior is the same. A microturbine will provide power for items such as the microclimate conditioning system for heating and cooling.



The weapon remains a fire-and-forget system using soft-launch seeking missiles. A transdermal nutrient delivery system provides the nourishment to get through a battle. It's still going to be a moving target for researchers, shedding workable technology for the next greatest thing.

"There's always going to be a Future Warrior," Stewardson said. "In the soldier business, you can never rest on your laurels. Somebody is always out there to beat you."

For more information regarding the Soldier Systems Center, go to <http://www.natick.army.mil>.

### Auto-ID to Transform Military Logistics

Information never before obtained about supplies and equipment will be available to the military through the next generation of Radio Frequency Identification (RFID) technology known as Auto-ID.

The DOD Combat Feeding Directorate at the U.S. Army Soldier Systems Center, Natick, MA, has joined nearly 100 companies and 5 international research universities as sponsors of the Auto-ID Center founded in 1999 at the Massachusetts Institute of Technology (MIT).

The center is developing technology based on non-proprietary, global standards that will create an affordable solution for the Defense Department and commercial industry worldwide. The Combat Feeding Directorate calls this initiative "Global Asset Visibility." Auto-ID will automate the global supply chain.

The Universal Product Code, a bar code of lines and numbers used to identify objects, has existed since the 1970s for logistics management, but the technology is limited.

During *Operation Desert Storm*, the military did not know what was in 25,000 of the 40,000 containers sent overseas. Containers today can be tracked with RFID tags, which have greatly improved the logistics situation for *Operations Enduring Freedom* and *Iraqi*

*Freedom*. Still, Auto-ID offers more. Tags with microchips are now seen in all kinds of products. Industry sees RFID as a replacement for the bar code, and Auto-ID takes it a step further.

The technology is based on the Electronic Product Code (EPC), a 96-bit code capable of identifying more than 80 thousand trillion, trillion unique items. An electronic tag containing an EPC on a microchip wirelessly stores and transmits data to a reader. The EPC serves as an address directing users to an Internet site where managed levels of information on the item are found.

Information retrieval is possible using the Object Naming Service, which associates the EPC with an item. It points to a server that uses the Physical Mark-Up Language to distribute and represent related information such as shipping instructions, inspection schedules, location, expiration dates or technical manuals. Savant software technology manages data flow and provides an interface to legacy systems.

Auto-ID will provide real-time visibility. Accurate automated inventories will eliminate the need for manual counts, which ultimately reduces the supply chain footprint and associated costs.

Furthermore, EPC tags will allow automatic manifests to be written to containers. In addition, sensor integration will provide the capability to monitor the status of an item, pallet or container by detecting variables such as temperature, vibration, rough handling or chemical or biological contamination that could affect product quality. Initially the tags will be used to track rations, but may eventually be used to track vaccines, medical supplies and other temperature-sensitive items.

One possible use for the technology is reading a temperature profile from a container or pallet tag that translates complicated data using a shelf-life model, developed by MIT for the Combat Feeding Directorate. The model will allow food inspectors to determine the condition of Meals, Ready-to-Eat or Unitized Group Rations using a simple, color-coded system — green for "issue," yellow for "limited inspection" and red for "100-percent inspection."

Corporations plan to track items such as disposable razor blades or laundry detergent bottles, but the Combat Feeding Directorate is interested in tracking at the case, pallet and container level.

The Combat Feeding Directorate is conducting DOD's first Auto-ID technology demonstration this fall at the Defense Distribution Depot, San Joaquin, CA. Other participants include Alien Technology Inc., OatSystems Inc., the Defense Logistics Agency (DLA) and Oak Ridge National Laboratory.

The demonstration will simulate rations being tracked from an assembler or depot to general and direct support supply points in a field setting with distribution to individual units. Preliminary testing and a shakedown were conducted in the spring, and follow-up testing for the fall demonstration is ongoing.

Demonstration goals are automatic, real-time tracking and visibility at the supply points; automatic inventories to units issued; capturing historical product temperature data; and automatic tracking and updates of container inventories.

Results and lessons learned from the demonstration will help set the framework for a proposed 2005 DLA Advanced Concept Technology Demonstration (ACTD). Additionally, EPC technology is proposed as an expansion of a current Navy-conducted RFID ACTD.

Although combat rations are the demonstration product, any military item, including ammunition and spare parts for vehicles, can be tracked under the program to help warfighters ultimately get what they need when they need it most.

For more information about the Combat Feeding Directorate and the Soldier Systems Center, go to <http://www.natick.army.mil>.

## Keeping Warfighters Warm

Trigger fingers, as well as the rest of the hands, will be ready to react wrapped under the Modular Glove System

developed by the Special Operations Forces (SOF) Special Projects Team at the U.S. Army Soldier Systems Center, Natick, MA.

Project Officer Stephanie Castellani said that the glove system brings a significant change in hand protection to the SOF community. She said it's a great improvement because the SOF branches have never had anything baseline that they've all agreed to, and the system lays the groundwork for future improvements with new materials and technology.

Most importantly, the gloves pass the "trigger test." Equipment Specialist Richard Elder said that function is the first priority because soldiers must be able to manipulate their weapon systems. He said that safety used to be the primary concern, but if soldiers can't shoot, they'll toss their gloves for something else. Special operators will no longer need to buy gloves on the commercial market to find a product that works for them.

Starting as a science initiative in 2001, the program later transitioned to a fielding initiative. During testing, special operators from different services wore the modular gloves while mountaineering, skiing and snowshoeing on a glacier in Alaska.

Eight companies submitted a glove system through the Small Business Innovative Research Program, but the glove system from Outdoor Research in Seattle, WA, was chosen. It's composed of a Nomex® contact liner, intermediate wet/dry glove and extreme wet/dry glove with a removable insulation liner. Comfort ranges from minus 20 F to 45 F depending on which individual glove or combination is worn. In all, there are five ways to dress with the glove system.

The Nomex contact liner was designed for the first layer. It's constructed of a Malden Mills Polartec® Power Stretch® fleece with Nomex. In addition, Pittards PLC soft, flame-resistant leather lines the palm and fingers, providing a lightweight, flexible glove with an acceptable grip and abrasion resistance. It is good alone at temperatures above 40 F or when handling hot weapons.

The intermediate wet/dry glove worn with or without the Nomex contact liner protects from 10 F to 45 F. Except for the palm, the glove's shell is made with three types of Cordura® Gore-Tex® laminate materials for waterproofing

and windproofing while providing moisture vapor transfer and abrasion resistance. Alpen-Grip, a proprietary polymer material with a slightly rubbery feel is used for the palm to complete waterproofing and high-abrasion resistance while retaining flexibility. Attached inside the glove is a waterproof liner coated with brushed polyester to improve moisture wicking. Even when the intermediate glove is worn over the contact liner, tactility is still acceptable. This is partly because of the glove's shape (curved fingers and tapered fingertips).

In colder climates, the extreme wet/dry glove protects from minus 20 F to 20 F worn in combination with the Nomex contact liner or intermediate glove.

The same AlpenGrip palm with Cordura Gore-Tex material for the shell, waterproof liner with brushed polyester coating and curved, "box-cut" fingers with an articulated thumb for dexterity are found in the extreme glove.

What's different is a lengthened top portion of the shell to protect the wrists and a removable Moonlite Pile insulating insert. Pocket heaters can be placed into either the intermediate or extreme glove, but the extreme glove insert has a pocket on top designed specifically for that purpose. The extreme glove also uses hook and loop fasteners at the wrist and forearm for a snug fit.

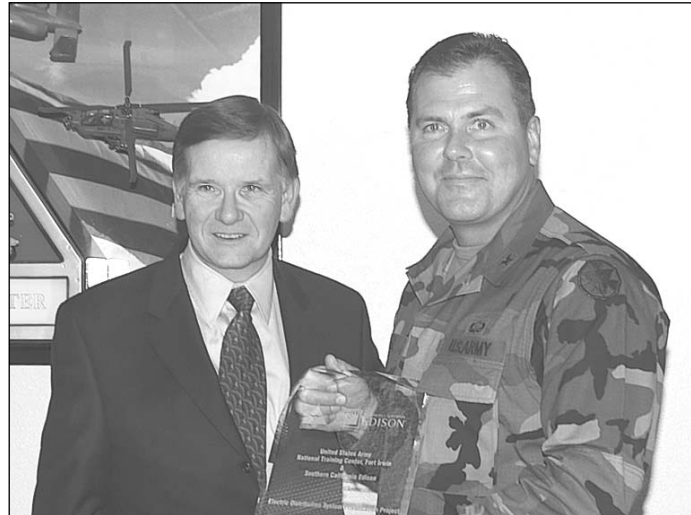
It's a bit bulkier, but the additional bulk is needed for the extra warmth. Fielding of the modular glove system was scheduled to begin with the 10th Special Forces Group at Fort Carson, CO, in September 2003. The glove system will be sold commercially, enabling conventional forces to purchase the item.

For more information about the Modular Glove System and Soldier Systems Center, go to <http://www.natick.army.mil>.

### **Fort Irwin's Electrical System Privatization**

In response to a DOD-mandated initiative, Fort Irwin, CA, embarked on the journey to privatize its electrical system. On Dec. 2, 2002, after several months of analysis and hard work, Fort Irwin's negotiation team

of representatives from the National Training Center's (NTC's) Acquisition Command (Army Contracting Agency Southern Region (ACA-SR)), Directorate of Public Works (DPW), Staff Judge Advocate, U.S. Army Corps of Engineers Los Angeles District, and consulting firm Bearing Point conducted negotiations with Southern California Edison (SCE). Upon completion of negotiations, a final agreement was reached.



Alan J. Fohrer, CEO Southern California Edison, presents BG Joseph F. Fil Jr., NTC/Fort Irwin Commanding General, a plaque during a visit to Fort Irwin earlier this year.

On March 31, 2003, on Fort Irwin's behalf, the NTC Acquisition Command and SCE signed a 50-year contract to privatize the Fort Irwin electrical system, which incorporated an innovative approach to be used with the resulting credit. The \$8.5 million credit will be used over the 50-year period to upgrade the current electrical system, which is inadequate. The credit will be used to fund more than a dozen sorely needed projects (estimated at \$3.5 million) and used by the installation to offset the cost of SCE's annual added facility charge. These upgrade projects will improve Fort Irwin's electrical system by bringing it up to state and federal standards while simultaneously making it more cost efficient to operate. This innovative approach of using a credit to fund electrical projects and to offset a contractor's annual added facility charge is the first of its kind. In fact, several other organizations, including the Office of the Secretary of Defense, desire to model their electrical system privatization process after Fort Irwin's.

SCE was scheduled to take full responsibility for ownership, operation, maintenance and repair of the

electrical system on Aug. 1, 2003. The sale of the electrical system will allow vast improvements, including replacing poles and redoing the military substations and meter-switch cabinets. These upgrades will save Fort Irwin about \$178,000 the first year and \$545,000 each subsequent year for the remainder of the 50-year contract.

SCE, based in Rosemead, CA, is working with the military at several Navy and Marine Corps bases. However, this service agreement will be the first for SCE under the new privatization mandate. Once SCE takes over, the upgrades and improvements should be completed within 15 months. All work will be handled from the SCE Barstow office; however, during the first few years of the contract, representatives will be on post 5 days a week. In addition, the current installation support services contractor, Johnson Controls Inc. (JCI), will continue to receive all work orders and determine if the work requires SCE to be contacted. SCE hopes to make a seamless transition and anticipates no adverse effects to Fort Irwin residents.

On April 24, 2003, the NTC Acquisition Command hosted a very successful Electrical Privatization Kick-off Meeting. The purpose of this meeting was to coordinate and facilitate the transfer of ownership between Fort Irwin and SCE. In attendance were representatives of NTC's ACA-SR, DPW, SCE and JCI. During the meeting's morning session, teaming efforts began on behalf of all parties, which allowed the team to cover a number of issues and answer any new questions. In keeping with the teaming concept, follow-on meetings began in May as part of the efforts to ensure the lines of communication remain open.

In essence, Fort Irwin's privatization efforts have, by use of the \$8.5 million credit to offset the annual facilities cost, improved Fort Irwin's electrical system and provided the ability to fund more than a dozen needed projects. This innovative approach maximizes the best overall value for the National Training Center to continue to meet its mission.

## AWARDS

### ECBC's Emanuel Receives TOYA Award

Dr. Peter Andrew Emanuel, a Scientific Advisor for the U.S. Army's Edgewood Chemical Biological Center (ECBC), Aberdeen Proving Ground, MD, was named one of this year's Ten Outstanding Young Americans (TOYA). The U.S. Junior Chamber will present the awards at a ceremony in Anaheim, CA, held in conjunction with its annual meeting. The TOYA Awards Program recognizes young people who are the best, brightest and most inspirational leaders in America.

Emanuel began his career as a National Research Council fellow focused on developing humane alternatives to animal use in making antibodies for pathogen detection kits. As an ECBC Scientific Advisor, he continued his work and developed expertise in polymerase chain reaction (PCR) detection of biological warfare agents, resulting in more than 150 PCR tests being used by DOD.

A central theme of his scientific career has been to protect the nation by bringing the best research out of the lab and into the field. In 1998, he began building the Critical Reagent Repository (CRT) to archive and distribute all the detection reagents used to identify biological warfare agents. In 2002, he became Program Director of the nationwide program. Working together with other biodefense community members, he has helped accelerate the introduction of new technologies and foster increased scientific interchange.

He has been active in training soldiers and mentoring young scientists. Interactions with troops in the field led to the development of the Biological Sampling kit, which filled a need for hazardous material teams and has been patented and commercially licensed for the first-responder community.

After September 11, 2001, Emanuel initiated development of an automated robotic system to test the environment for biological warfare agents in the Washington, DC, area. The Automated Biological Agent Testing System (ABATS) triples the throughput of samples at one-third the cost of the traditional manual analysis operations. The ABATS is now being activated on an around-the-clock basis to protect the homeland.

Emanuel's achievements have garnered numerous recognitions including the Joint Program Office for Biological Defense Medallion for his contributions to the CRT Program. He is an active speaker in national and international scientific forums, has authored more than 25 publications and has secured 3 patents.

### **RDECOM's Chappelle Receives 2003 Roy Wilkins Renown Service Award**

Gregory Chappelle, Research Scientist, Engineer and Educator for the U.S. Army Tank-automotive and Armaments Command's (TACOM's) Research, Development and Engineering Command, has received the National Association for the Advancement of Colored People (NAACP) *2003 Roy Wilkins Renown Service Award*. This prestigious NAACP award is presented annually to Americans who have distinguished themselves by contributing to military equal opportunity programs and policies. The award salutes those who continue to struggle for equality in the Armed Services.

Chappelle won the award for his educational outreach efforts with middle school students during the past year as well as his 10 years of diligent and proactive work with the Nation's historically black colleges and universities/minority institutions (HBCUs/MIs) and inner city middle schools. He was directly responsible for identifying numerous HBCUs/MIs to be awarded more than 2.5 million dollars of U.S. Army and DOD science and engineering research contracts. In addition, he recruited more than 25 minority scientists and engineers into the federal civilian service.



Pictured from left to right: Greg Chappelle with BG Vincent Brooks and TACOM's Leonard Sanford.

Chappelle is the recipient of the 1995 U.S. Black Engineer of the Year National Special Recognition Award. He conducted outreach programs to assist in mathematical and science education of students within the Nation's inner cities from 1990 to 2000 and from 2002 to 2003. From October 2002 through March 2003, Chappelle advised and taught three eighth-grade students who subsequently won a Regional 2nd Place U.S. Army Ecybermission Science, Mathematics and Technology Competition Award of \$9,000. Chappelle is a teacher, scientist and engineer who has shown excellence in his efforts to produce more American scientists and engineers of all ethnicities and genders.

### **Did You Know?**

New platforms like the M270A1 Multiple Launch Rocket System (MLRS) changed the accuracy, speed and depth at which targets could be attacked during *Operation Iraqi Freedom*. It gave the V Corps Artillery Headquarters the capability to fire GPS-aided missiles and influence battles at significantly greater ranges and accuracy. The MLRS launcher provided counterfire, suppression of enemy air defenses and destruction of light and personnel targets, while delivering large volumes of firepower in a short time against critical, time-sensitive targets. Thanks to advanced logistical support from the Army Materiel Command, the M270A1 maintained an operational readiness rate in excess of 90 percent throughout the war.

**"The MLRS provides the Army an all-weather, indirect, area fire weapon system to strike high-payoff targets at all depths of the tactical battlefield."**

— MG Larry J. Dodgen,  
Commanding General  
U.S. Army Aviation and  
Missile Command



## WORTH READING

### **How Wars Are Won The 13 Rules of War - From Ancient Greece to the War on Terror**

**Bevin Alexander**  
Crown 2002

*Reviewed by Scott Curthoys, a Counterintelligence Analyst contracted to a federal agency and retired Army Military Intelligence and Foreign Area Officer.*

The now famous photograph of a Special Forces soldier on horseback in Afghanistan (probably with a laptop in the saddlebag) has been heralded by some as a symbol of the way America will fight future wars. These arbiters of the future envision military operations carried out by small units, enabled by advanced technology, working with local fighters and creating effects out of proportion to their numbers. Bevin Alexander, in his newest book *How Wars Are Won*, places himself squarely in the camp of these “visionaries.”

The events of September 11, 2001, Alexander claims, dramatically changed the face of war. Instead of standing militaries equipped in a manner that mirrors the United States, America now faces a new kind of adversary that uses new types of weapons, follows different tactics and embraces unrecognizable ethics. Alexander argues that we are witnessing a “true revolution in warfare” resulting from the combination of accurate, powerful weapons and the realization that modern conventional armies can be defeated by guerrilla methods. He writes that the “Traditional fire-and-maneuver tactics of individual military units, whether infantry, artillery, armor or a combination of the three, are now out of date.” Old military structures, as represented by regiments, battalions and companies, will fade away. In their place, Alexander argues, will be swarming pods and clusters of troops, working with aerial pods, and emulating guerrilla tactics in an effort to defeat terrorists and guerrillas. The commanders in this new structure will use techniques and principles that have proven successful since ancient times. In *How Wars Are Won*, Alexander attempts to elucidate what he considers to be

the key rules of war and identify the ones likely to be most relevant in future combat.

Alexander devotes a chapter to each of his 13 rules, organized into an introduction, historical examples and a section called “Implications for the Future.” Several of the author’s rules parallel the war principles found in Joint Publication 3-0, *Doctrine for Joint Operations*. The experienced reader will recognize economy of force in the author’s discussion on “holding one place and striking another” and economy of mass when he writes about “landing an overwhelming blow.” Despite teasing several of his rules out of the better known principles, Alexander still offers the soldier food for professional thought.

Two rules especially stand out in light of recent operations in Afghanistan and Iraq. The first is “blocking the enemy’s retreat.” Although Alexander gives his treatment of this rule a cautionary orientation (lines of communication and withdrawal will be cut, so only use units of a size that can be supplied or evacuated), the failure to block Al Qaeda and Taliban forces from withdrawing into Pakistan in late 2001 gives strong credence to this being a maxim for victory against unconventional foes. In “driving a stake in the enemy’s heart,” Alexander argues that future battlefield victory will depend on air attacks against an enemy’s centers of power followed by a swift occupation of the enemy’s heartland by small, select forces. Alexander even offered a suggestion for defeating Saddam Hussein by inserting a force into southern Iraq to seize the oil fields. Deprived of its source of wealth, the author opined, Hussein’s regime would collapse. Needless to say, it wasn’t that easy, but coalition forces did drive a stake into the heart of Hussein’s regime by quickly seizing key points around Baghdad, followed by the capital itself.

Many readers might leap to each chapter’s end where the author discusses future implications inherent in each rule. However, it is through the historical examples in these chapters that the reader gets a sense of the author’s real strength — his understanding of military history. Examples include battles such as Quebec (1759) and the Kum River Line (1950), and some campaigns like Italy (1796-97) and the Schlieffen Plan (1914). Alexander seems to milk each historical vignette to provide context for his rules. Some are very applicable, such as MG William T. Sherman’s march across Georgia (1864-65) and MG Winfield

Scott's march to Mexico City (1847) as examples of "driving a stake in the enemy's heart." Other examples, primarily from battles less familiar to most, require the reader to stretch his imagination.

The book is marred by two faults. The first is Alexander's penchant for unsupported, matter-of-fact pronouncements of his opinion. For example, he states that "Rommel was the only true military genius to emerge in World War II." In addition, he asserts that U.S. victory in the Pacific in World War II was achieved by air power alone. There are undoubtedly several soldiers, sailors and marines who might disagree. What is more unforgivable is the occasional editing error, especially errors concerning historical fact. At one point, Alexander misidentifies the commander of the 8th Army in Korea in 1950.

Although this book is not destined to be a military classic and despite the occasional injection of jarring opinion, the book is a solid read and a good addition to any professional bookshelf.

### **Technology and War: From 2000 B.C. to the Present**

**Martin van Creveld**

The Free Press, New York, 1991 (Revised)

*Reviewed by Geoffrey French, a Counterintelligence Analyst with General Dynamics and former Logistics Specialist for the U.S. Marine Corps Reserve.*

Innumerable authors have written about various aspects of how war has influenced technological development or how a certain technology had an effect on a battle, campaign or war. Each example demonstrates that the two phenomena are clearly intertwined, but no single example illuminates the entire relationship between the two. Few authors try to explain the relationship, in part, because it is highly complex. War certainly pushes technology, and many have argued that technology can push war. This barely scratches the surface, however. Indeed, even the purest civilian technology affects war, and war touches and affects so many parts of life that its influence can be

seen on seemingly unrelated technology. Although the topic is daunting, Martin van Creveld treats it comprehensively and in detail in his book *Technology and War: From 2000 B.C. to the Present*.

Van Creveld, a historian and lecturer at the Hebrew University of Jerusalem, approaches the topic by several paths. First, he looks at the relationship over time, which is the foremost way that the relationship becomes clear — changes in technology can be so profound that they make war at one point in history quantitatively distinct from war at another. In the book, van Creveld divides military history into four epochs. The first two epochs are obvious: the age of tools, where human and animal muscle provide the force behind all technology deployed in battle; and the age of machines, where gunpowder becomes the more important source of energy in battle in small arms and artillery.

The second two epochs represent growing complexity: the age of systems and the age of automated war. The age of systems refers to the time after 1830, when railroads and the telegraph linked people and places as never before. In this period, a military's strength was a product not of the hardware it employed, but of how well its hardware was integrated into a system. As a quick example, at the onset of the invasion of France, the French army had more tanks that were superior to those of the Germans, but had not integrated them as well into strategic thought or military organization. The final epoch, the age of automation, follows 1945 when systems of machines required computerized or automated control to quickly and accurately react to battlefield environments.

In each section, van Creveld addresses the means and trends in battle on land and sea (and air, when appropriate) as well as the infrastructure of warfare. This latter topic allows the author to pursue such phenomena as the impact of paper supply on war (imagine leading an army without the ability to write instructions or refer to a map). By examining the technologies that improved logistics and administration, he shows how technologies thought to have purely civilian usefulness can make a profound impact on the battlefield.

The final chapter of each section explores technology to an even greater degree of abstraction. It looks at trends across time that are closely related to technology, but

tangential in many ways. These subjects include professionalism in the military and the use of irrational aspects of technology such as aesthetic designs, which can become so elaborate as to interfere with the actual function of a weapon system.

The result is a remarkably thorough book that examines innovations and trends from a number of different perspectives. The author masterfully compares events across history to show patterns and examine theories such as whether a certain technology favors the offense or defense. Readers should keep in mind that *Technology and War: From 2000 B.C. to the Present*, like many of van Creveld's other books, requires a certain level of military history knowledge. He does not describe battles or events in detail, but rather refers to them, depending on the reader to understand them, their context and significance. The result is concentrated writing, rich from his ability to compare battles and commanders from the Americas to Asia an authoritative work on a complex topic.

## CONTRACTING COMMUNITY HIGHLIGHTS



**W**elcome to a new segment from the Deputy Assistant Secretary of the Army for Policy and Procurement (DASA(P&P)). I am pleased to introduce this informative section that will highlight the Army's new contracting policies and initiatives as well as showcase some of the Army's accomplishments within the contracting community. Each issue will offer a feature article, a section recognizing our contracting professionals and information regarding career development opportunities.

This issue's feature article, "Contractors Accompanying the Force — The Clause," is about a topic that has gained a lot of attention in recent months. As contractors increasingly deploy with our soldiers, our contracts must include the necessary language to cover logistical, operational and contractual issues. An Army Federal Acquisition Regulation Supplement (AFARS) clause was

written to provide top-level instructions for deploying contractors and to increase consistency in Army contracts on this issue. The AFARS clause was scheduled for publication in the *Federal Register* as an interim rule in late August.

**Contracting Professionals.** It was my pleasure to attend the *2003 Acquisition Senior Leaders' Conference* in Seattle, WA, which was attended by more than 300 acquisition professionals. A conference highlight was Assistant Secretary of the Army for Acquisition, Logistics and Technology Claude M. Bolton Jr. presenting the Secretary of the Army Awards for Excellence to contracting professionals. Congratulations to the following award recipients:

- MAJ Willard G. Zbaeren - U.S. Army Japan (U.S. Army Pacific Command), 9th Theater Support Command, Okinawa, Japan
- Yvonne S. Land - U.S. Army Materiel Command, Anniston Army Depot, Anniston, AL
- MAJ Scott F. Bruner - Directorate of Contracting, Fort Campbell, KY
- Phyllis Y. Poyhonen - U.S. Army Space and Missile Defense Command (SMDC), Huntsville, AL
- Dr. James J. Rich - U.S. Army Corps of Engineers (COE), Baltimore District, MD
- Lynn M. Selfridge - SMDC, Huntsville, AL
- MAJ Stephen J. Conaway - U.S. Army Forces Command (FORSCOM), Fort Drum, NY
- Pamela Runyon - U.S. Army Contracting Command Europe, Grafenwoehr, Germany
- Brigade Combat Contracting Team - U.S. Army Tank-automotive and Armaments Command (TACOM), Warren, MI
- Residential Communities Initiative and Project Development Team - COE, Washington, DC
- Team Award for Installation Contracting Center - Fort Hood Contracting Command, Fort Hood, TX
- Team Award for Installation Contracting Satellite - Fort Campbell, KY
- COL Charles J. Guta - FORSCOM, Fort McPherson, GA
- Kathleen T. Walk - U.S. Army Communications-Electronics Command (CECOM), Fort Monmouth, NJ
- Barbara G. Maxwell - Army Contracting Agency, Fort Dix, NJ, and 63rd Regional Support Command, Directorate of Contracting, Los Alamitos, CA



**Developmental Assignments.** DASA(P&P) is fortunate to have personnel from CECOM, TACOM, the Army Aviation and Missile Command and the Defense Contract Management Agency (DCMA) in developmental assignments. These professionals bring a great deal of insight and hands-on experience as well and they add “field” perspective to HQDA. Our developmental assignment personnel are fully engaged in Army priorities from contractors accompanying the force to contracting in Iraq and chemical demilitarization (chem demil). Sharon Wisniewski, who did an excellent job of writing and championing the AFARS language, wrote our feature article. Linda Fowlkes and Mike Dudley are actively engaged in our chem demil efforts. Ken Tedeschi continues to be instrumental in our contracting support to the Coalition Provisional Authority in Iraq. I have asked my staff and the Acquisition Support Center to ensure that we provide meaningful opportunities, challenging work and career-broadening experiences to the acquisition workforce. For information on developmental assignments, go to <http://asc.rdaisa.army.mil/docs/programs/cp/FY04CPDAnnoucement.PDF>.

We are pleased to have this regular column in *Army AL&T* magazine. If you have procurement, awards and recognition or developmental assignment articles that you would like published in this column, contact Emily Clarke at [emily.clarke@saalt.army.mil](mailto:emily.clarke@saalt.army.mil) or Linda Fowlkes at [linda.fowlkes@saalt.army.mil](mailto:linda.fowlkes@saalt.army.mil).

Quotable quote: “Each act is an act of self-definition.”  
-Anonymous

### Welcome to COL Kim C. Leach

The Office of the Secretary of the Army for Acquisition, Logistics and Technology staff welcomes back COL Kim C. Leach, who left us to command DCMA Long Island, NY, and now returns as the Deputy to DASA(P&P) Tina Ballard. Leach comes with a wealth of contracting and managerial experience, and we’re very pleased to have him back!

## Contractors Accompanying the Force – “The Clause”

Frustration is something contractors, logisticians, program managers (PMs), contracting offices, field units and headquarters staff share when dealing with issues related to sending contractors to an area where hostile actions are taking place. A recent General Accounting Office report, news articles and a Brookings Institution book provided further evidence of problems when contractors deploy with soldiers. There was confusion about many aspects of sending contractors to Iraq: How do combat commanders know who the contractors are, what they’re doing and what are the unit’s responsibilities for protecting them? Does the field unit provide food and shelter to contractor personnel? What about transportation, equipment and medical support?

How do we get the answers to these and many other questions into the contract now? The common response to that question is, “Create a clause,” but that is neither fast nor easy. The pursuit of a clause and another tool being finalized will help you answer many of these questions in your requirements documents, planning and contracts.

The Army Procurement and Industrial Base Policy Office took the lead in responding to persistent requests from the field and contractors for an Army or DOD “contractors on the battlefield” clause. A 14-page draft clause from what was then the Army Materiel Command’s (AMC’s) Operational Support Command provided a great start. While the field wanted a clause with a lot of detail, the draft contained operational data that Army and DOD Headquarters believed belonged in the statement of work (SOW). The clause also needed to address all Army elements such as the National Guard Bureau, Corps of Engineers and Army Intelligence and Security Command.

It took 3 months working with all Army contracting organizations and logistics, systems and legal representatives to pare down the clause to 3 pages of higher-level policy. The trick was nailing down that policy, starting with the name. Everyone knew this subject as “contractors on the battlefield,” but we weren’t sending contractors to the actual battlefield. The intent was to have them accompany the force, not be soldiers themselves.

The clause and other documents such as Army Regulation 715-9 are therefore known as *Contractors Accompanying the Force (CAF)*.

Most of the clause's "meat" is logistics and personnel policy and much was evolving from draft regulations, general officer messages and daily lessons learned. The clause was being written while we were at war, fielding systems and deploying contractors. Key players were addressing daily deployment problems that focused on getting contractors and soldiers to Iraq. After vetting the clause with Army members and a few contractors, we finally agreed on content and proceeded through channels to DOD.

Getting the language nailed down was only half the battle. We believed that, even though President George W. Bush declared the war in Iraq over, we still urgently needed the clause because we continued to write contracts that required contractors to accompany the force in a potentially hot zone. We began to process the clause for publication in the *Federal Register* as an "interim rule with request for comments" so it could be used while we collected and addressed public comments.

There were new challenges almost daily. It was a complicated path to determine which kind of *Federal Register* notice or rule we needed to use and who had the authority to process it. We experienced system problems, an annual report that caused a moratorium, research of a dozen laws to ensure compliance and proper reporting to Congress and an Office of Management and Budget review "wait" period. Another 3 months ticked by.

Like most compromises, we ended up with an Army clause that met everyone's basic concerns, but it didn't contain all the issues that everyone wanted. However, in true American fashion, we found another solution: What we took out of the clause, we used as the basis for a guidebook. A smaller working group with representatives from the U.S. Army Combined Arms Support Command, AMC, the Army Contracting Agency and the Army Procurement and Industrial Base Policy Office created a guidebook that offers information to help contracting officers, PMs and other requirements writers decide which road to take on 20 issues. It also offers template contract language that can be copied into the SOW, either tailored or "as is."

The Army Procurement and Industrial Base Policy Office is working to help solve ongoing operational, logistical and contractual system support problems. It takes time, diligence, manpower, expertise and a great deal of cooperation from many offices to get a contract clause in place, even when everyone agrees it's urgent. But here's help now. The Army *CAF Guidebook*, which also contains the text of the Army Federal Acquisition Regulation Supplement (AFARS) clause, is online at [http://dasapp.saalt.army.mil/Ind\\_base\\_policy/SAALPP\\_index.htm](http://dasapp.saalt.army.mil/Ind_base_policy/SAALPP_index.htm). It is still in draft format as of this writing while we address comments, but it should be finalized by early September 2003. You may use it now in draft format because it's a guide. Once it is published in the *Federal Register*, you can use the AFARS clause. The Defense Procurement and Acquisition Policy Office is also working on a Defense Federal Acquisition Regulation Supplement clause, and there is a draft CAF DOD Directive in the works that you can look forward to in the future.

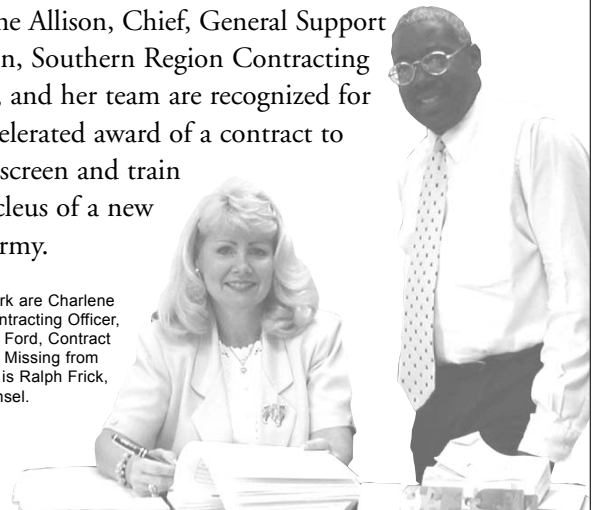
*This article was written by Sharon Wisniewski, a Procurement Analyst on a developmental assignment in the Army Procurement and Industrial Base Policy Office, Arlington, VA. Her home base is the U.S. Army Tank-automotive and Armaments Command, Warren, MI. She holds an M.A. from Central Michigan University and is a long-time member of the National Contract Management Association.*

## Contracting Successes

### Army Contracting Agency Southern Region.

Charlene Allison, Chief, General Support Division, Southern Region Contracting Center, and her team are recognized for the accelerated award of a contract to enroll, screen and train the nucleus of a new Iraqi Army.

Hard at work are Charlene Allison, Contracting Officer, and Heven Ford, Contract Specialist. Missing from the picture is Ralph Frick, Legal Counsel.



This competitive best-value award, estimated at \$48 million, was made in fewer than 30 days without protest using a letter request for proposal and letter contract. The accelerated schedule was due to an urgent and compelling need to begin recruitment of potential trainees in Iraq on or about July 1, 2003.

**Joint Munitions Command and PM, ACWA.** AMC's Joint Munitions Command, in partnership with the Program Manager, Assembled Chemical Weapons Alternatives (PM, ACWA), is recognized for awarding a competitive best-value contract valued at more than \$1 billion for the chemical demilitarization (chem demil) project at the Blue Grass Army Depot, Richmond, KY. The competitive best-value effort encompassed full technical, management, past performance, cost and small business utilization evaluations that were completed in about 60 days. Contracting Officer Emil Maslanka and his team are overcoming many challenges as the chem demil project design phase is initiated.

**The Force XXI Battle Command Brigade and Below (FBCB2).** FBCB2 is recognized for meeting its overall program goals to digitize the battlefield and continue to fulfill urgent mission requirements. Using the Alpha contracting process, Contracting Officer Alex Matejka and Contract Specialist Michael Doelling awarded an unpriced instrument for \$13.6 million in just a few days. It was for urgent requirements to support *Operation Enduring Freedom* - Command, Control, Communication and Computers. These efforts will increase situational awareness and significantly aid tracking U.S. Military Forces in-theater. As a result of the Alpha contracting team's efforts and use of creative contract incentives, the Army will realize reduction in costly proposal preparation time and overall cycle time.

**Looking for Career Broadening Opportunities?  
Then Look No More!**

The Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT) is offering developmental assignments for all DA employees who are GS-12 and Level III certified in the Contracting and

Acquisition Career Program (CP-14). Assignments are for 6 months to 1 year. The formal developmental program is run through the Contracting Career Program Office, which funds travel and temporary duty costs.

Currently, the ASAALT has three developmental employees who will be happy to share their experience with you. Please contact Linda Fowlkes at [linda.fowlkes@saalt.army.mil](mailto:linda.fowlkes@saalt.army.mil).

For Contracting Career Program Office information, contact Sally Garcia at (703) 704-0112, or for Competitive Professional Development Program details, go to <http://asc.rdaisa.army.mil/docs/programs/cp/FY04CPDAnnoucement.PDF>.

## In Memoriam

The Army Acquisition Support Center (ASC) staff is saddened by the sudden death of our colleague and friend, Gregory Zyto. In his position as Acquisition Data Management Specialist, Greg was a valuable member of the acquisition community. He had more than 18 years of dedicated service with the U.S.

Army Soldier Support Command, the U.S. Total Army Personnel Command and the Army Acquisition Executive Support Agency (now ASC). He joined civil service after serving in the Army as an Avionics Equipment Maintenance Supervisor and Administrative Supervisor. He retired from the Army as a Master Sergeant in 1984. Mr. Zyto consistently earned high praise for his distinguished achievements within the government and ASC. He was a great American whose expertise, professionalism and commitment to duty provided each and every one of us a great example. He will be sorely missed here in the ASC family.



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