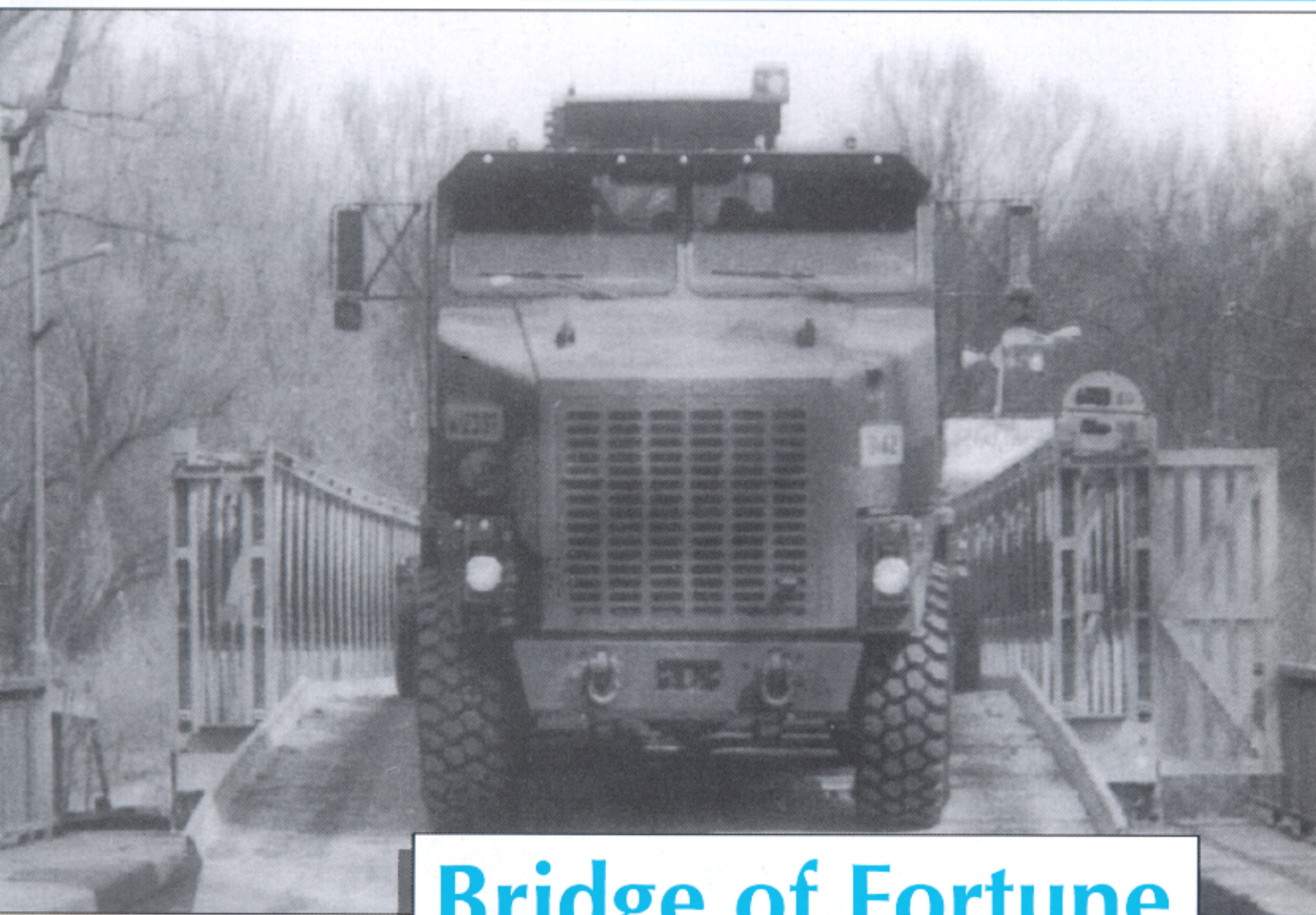


ARMY LOGISTICIAN

MAY-JUNE 1997



Bridge of Fortune

- Also in this issue—
- In Search of Focused Logistics
 - A Velocity Management Update
 - Force Provider Deploys to Bosnia

ARMY LOGISTICIAN

PROFESSIONAL BULLETIN OF UNITED STATES ARMY LOGISTICS

PB 700-97-3
MAY-JUNE 1997

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Mission: *Army Logistician* (ISSN 0004-2528) is the Department of the Army's official bimonthly professional bulletin on logistics, prepared at the Army Logistics Management College and published by the Army Combined Arms Support Command, Fort Lee, Virginia. Its mission is to publish timely, authoritative information on Army and Defense logistics plans, programs, policies, operations, procedures, and doctrine for the benefit of all logistics personnel. Its purpose is to provide a forum for the exchange of information and expression of original, creative, innovative thought on logistics functions.

Disclaimer: Articles express opinions of authors, not the Department of Defense or any of its agencies, and do not change or supersede official Army publications. The masculine pronoun may refer to both genders.

Submissions: Articles and information on all facets of logistics operations and functions are solicited. Direct communication is authorized and should be addressed to: EDITOR ARMY LOGISTICIAN/ALMC SUITE C300/2401 QUARTERS RD/FT LEE VA 23801-1705. Phone numbers are: (804) 765-4761 or DSN 539-4761; FAX (804) 765-4463 or DSN 539-4463; e-mail alog@lee-dns1.army.mil. Articles may be reprinted with credit to *Army Logistician* and the author(s), except when copyright is indicated.

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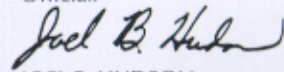
The bridge over the Sava River between Gunja, Croatia, and Brcko, Bosnia, became known as the "bridge of death" when it was bombed and over 80 refugees died. An assault float bridge served as a replacement, but deploying U.S. forces needed something stronger to carry vehicles like the heavy transporter system shown on the cover. The building of a new bridge and its hopeful renaming as the "bridge of fortune" symbolize the peacekeeping mission of Operation Joint Endeavor. See the story on page 24.

This medium is approved for the official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

By Order of the Secretary of the Army:

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03267

Coming in Future Issues—

- A 'Fix Forward' Vehicle for the Battlefield
- Reconstitution in Hungary
- Bag Water for Joint Endeavor
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- Total Quality Leadership for Logistics
- A Transportation Platoon at the NTC
- Force XXI Division Logistics
- Apache Automated Phase Maintenance
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ARMY'S 1998 BUDGET IS SMALLER

The Army's request for \$60.4 billion for fiscal year 1998 went to Congress on 6 February. The request is for \$2.3 million less than the fiscal year 1997 budget. If approved, the \$60.4 billion appropriation will include—

- \$25.7 billion for military personnel. The 1998 request includes funds for a 2.8 percent pay raise for military personnel. The budget continues to support an active component force of 495,000 and an Army National Guard end strength of 367,000. The Army Reserve will be reduced by 3 percent to 208,000.
- \$20.7 billion for operations and maintenance (O&M). The O&M budget will fund, among other things, numerous training rotations through the National Training Center, Joint Readiness Training Center, and Combat Maneuver Training Center.
- \$6.7 billion for procurement. The 1998 budget continues the upgrades of the M1 Abrams tank and the M2/3 Bradley fighting vehicle and allows for continued procurement of Longbow Hellfire and Army tactical missile systems. It provides for first-year procurement of the brilliant anti-armor submunitions and Patriot Advanced Capability-Level 3 missiles, a second year of production of the Javelin, and modifications to the Multiple Launch Rocket System and Stinger and TOW missiles. Funds are requested for modifying AH-64 Apache helicopters to the Longbow Apache configuration and procuring 18 UH-60 Black Hawk helicopters. Continued production of the family of medium tactical vehicles, smart munitions, communications systems, and command and control programs such as the enhanced position location reporting system data radio are planned.
- \$4.5 billion for research, development, test, and evaluation (RDT&E). Major RDT&E efforts proposed for 1998 include the RAH-66 Comanche helicopter, the Crusader vehicle, several missile systems, battlefield communications system hardware and software, the joint surveillance target attack radar system (JSTARS), all-source analysis system software, and all Force XXI initiatives beginning in 1997.
- \$1.3 billion for Army family housing. Funds are requested for some new construction, whole-neighborhood revitalization through replacement construction or major renovations, and operating, maintaining, and repairing 133,000 military family

housing units worldwide.

- \$700 million for military construction. This amount will fund several key programs, including barracks renewal in the continental United States and Germany, barracks construction in Korea, strategic mobility and pre-positioning capability site improvements, and facilities to meet mission, training, and readiness requirements
- \$400 million for base realignment and closure (BRAC). The budget includes \$83.1 million for construction to support BRAC III and IV actions.
- \$400 million for the Defense Environmental Restoration Act. The Army's commitment to the environment is demonstrated by funding requests in several categories. Funds will pay for environmental compliance, hazardous waste disposal, conservation of natural and cultural resources, and pollution prevention at Army installations worldwide.

ARMY AFTER NEXT: MOBILITY OF THE PAST, TECHNOLOGY OF THE FUTURE

The Army of the future may have to rely on smaller, more mobile combat units equipped with fewer, more effective weapon systems if it is to maintain the maneuverability of the past, experts say.

"The Army After Next Project: Emerging Impressions," a draft report of a study by the Office of the Deputy Chief of Staff for Doctrine, Army Training and Doctrine Command (TRADOC), calls for reducing fixed logistics resources, which will allow Army combat units to maneuver quickly around the theater. To achieve the mobility of the past, however, the Army will have to obtain the technology of the future. "We think [more efficient] technology should get into fighting vehicles: weapons that don't rely on huge stocks of cased ammunition and communications equipment that is smaller and requires less power," says Colonel Bob Killebrew, TRADOC's Assistant Deputy Chief of Staff for Doctrine.

As the Army moves to more precise, next-generation munitions, it will need far fewer of them, which would allow the Army to buy fewer systems and automatically reduce stockpiles.

The need for a more maneuverable force is attributable in part to the Army's inability to identify precisely its most likely future threat. Therefore, the Army must be flexible enough to respond quickly to any situation. Based on a study of recent spending patterns of other countries, the Army predicts that, for the next 20 to 30 years, no nation will attempt to match the United States in military might, but potential adversaries instead will rely on a more "asymmetrical strategy," such as using biological

weapons, terrorism, or missiles to deny American forces access to critical areas.

The Army After Next project is designed to help plan the force after the year 2010. The project began in January 1996 and is a follow-on to the Army's Force XXI concept, which modernizes the current force up to the year 2010.

ALMC OFFERS COURSES ON INTERNET

The Army Logistics Management College (ALMC), Fort Lee, Virginia, now offers instructor-assisted training on the World Wide Web. The Web version of the Defense Reutilization and Marketing Property Accounting course offers training in modules. Module I focuses on property accounting for property management branch employees. Module II, which will be on the Web this fall, covers property accounting training for all other functions, including

reutilization, transfer, donation, and marketing.

A pilot Web course, Property Accounting for the Property Management Branch, is being conducted from March to May. Students may proceed at their own pace, and they may contact the ALMC course instructor for assistance at any time. The course will be available to all students this summer. Other ALMC Web courses available this spring are Orientation to the World Wide Web and Orientation to the Defense Personal Property Reutilization and Marketing Program.

The Web courses were developed by Kim Mackey, an instructor at ALMC, for students from the Defense Reutilization and Marketing Service (DRMS). DRMS is a primary level field activity of the Defense Logistics Agency. DRMS headquarters is in Battle Creek, Michigan, and 180 field offices are located worldwide. For more information, call Ms. Mackey at (804) 765-4283 or DSN 539-4283, or send e-mail to—mackeyk@lee-dns1.army.mil.

ARMORED AMBULANCE TESTED FOR FORCE XXI



□ This 30-ton, \$2.5 million armored treatment vehicle (ATV) will move wounded soldiers from the battlefield to the hospital while protecting them from ballistic, environmental, and biochemical warfare. The prototype ATV is equipped to provide medical care and treatment "on the move." The ATV can transport as many as 6 patients and 3 crewmen (2 medics and a driver) at a speed of 45 miles per hour. A team led by the Army Medical Materiel Development Activity, Fort Detrick, Maryland, developed the ATV prototype that is currently being tested. It is scheduled to take part in Force XXI advanced warfighting experiments this year.

ODCSLOG LIMITS MEAL TICKET USE

The Army Office of the Deputy Chief of Staff for Logistics (ODCSLOG), Transportation Policy Division, has issued a policy directing all travelers to avoid using meal tickets whenever possible. The Defense Finance and Accounting Service (DFAS), Indianapolis, Indiana, charges \$11.04 to process each meal ticket and \$24.92 to record International Merchant Purchase Authorization Card (IMPAC) transactions. Installation transportation offices and others who make travel arrangements are encouraged to find alternatives, such as using one meal ticket for groups of two or more or asking bus companies to arrange for the meals of riders. Questions concerning alternatives to the use of meal tickets can be directed to the Office of the Assistant Secretary of the Army (Financial Management and Comptroller) at (703) 693-6562. For more information on the meal ticket use policy, call Jeff McKenzie, ODCSLOG, at (703) 614-4375 or DSN 224-4375.

ARMY SUPPORTS SMALL BUSINESS

The Army awarded more contracts and more money to small businesses in fiscal year 1996 than in previous years of the Department of Defense Small Business Program. Small business prime contractors received 29.5 percent of the Army's contracts, amounting to \$8.1 billion out of \$27 billion. Awards of \$2.6 billion were given to disadvantaged small businesses, and \$800 million went to women-owned small businesses, setting new records in both categories. In the subcontracting program, 64 percent, or \$1.6 out of \$2.5 billion, went to small businesses. Secretary of the Army Togo D. West, Jr., said "This unprecedented level of success in the Army's small business program demonstrates the strong commitment the Army has to this program and represents the hard work of many people in the acquisition community."

NEW PREPO SHIP LOADED

The Army loaded combat equipment and supplies on a new type of Navy ship in Charleston, South Carolina, in February. The U.S. Naval Ship *Gordon* is the first of five converted large, medium-speed, roll-on-roll-off (LMSR) ships designed to deliver an Army heavy brigade task force with great speed to a military crisis. By June 1998, four more LMSR's will complete the same process at Charleston. The new ships are assigned to the Army's pre-position afloat program that enables the Army to project a force in days rather than weeks. Pre-positioned ships are loaded with military equipment and ready to deploy to any location on short notice. Soldiers then will be deployed on aircraft to link up with the equipment at military trouble spots. Currently, the Army has 870,000 square feet of cargo space on 14 older ships. By the year 2003, 2 million square feet will be available on 16 ships. For more information, call Major Steve Shappell at (703) 697-7589.

(Continued on page 48)

(Continued from page 1)

**MTMC COMMANDS
TO CONSOLIDATE**

The Military Traffic Management Command (MTMC) will form a continental United States (CONUS) command headquarters by consolidating the Eastern and Western Commands. The CONUS command will be one of three subordinate commands, including the European and Pacific commands, under MTMC headquarters. The new command is tentatively scheduled to locate at Fort Eustis, Virginia. The command will have 472 civilian and military personnel who will manage water terminals in the Americas and Caribbean and the Defense freight railway interchange fleet and perform other CONUS traffic management functions. The reorganization is a result of the 1995 Defense Base Realignment and Closure Commission recommendation to close Oakland Army Base, California, and Bayonne Military Ocean Terminal, New Jersey. The CONUS command should be operational by fiscal year 2001.

**ARPERCEN ON
INTERNET**

Army Reservists now have quick access to the Army Reserve Personnel Center (ARPERCEN) in St. Louis, Missouri, from anywhere in the world. To improve customer service and speed the flow of information, ARPERCEN established a home page on the Internet's World Wide Web. Army Reserve soldiers and prospective reservists can obtain new and updated information on topics such as officer and enlisted personnel management, boards, promotion lists, and the Active Guard Reserve by visiting the ARPERCEN web site at <http://www.army.mil/usar/arpercen/arpercen.htm>.

**BASOPS INFO
AVAILABLE**

A bibliography of studies on base operations is available to authorized persons. Write to—USALMC, ATTN DLSIE ATSZ ADL, BLDG 12500, 2401 QUARTERS ROAD, FORT LEE, VA 23801-1705, send e-mail to—dlsie@lee-dns1.army.mil, or call (804) 765-4007 or DSN 539-4007.

**NATO ADDRESSES
CODIFICATION**

The eighth annual North Atlantic Treaty Organization (NATO) symposium on codification will be held at the Princess Resort, San Diego, California, 13 to 15 May. Logistics experts from around the world will attend and provide insight on international codification initiatives. One of the goals of the annual event is to strive for global standardization of key codification processes. For more information, call the symposium sponsor, the Defense Logistics Services Center, Battle Creek, Michigan, at (616) 961-4847 or DSN 932-4847, fax to DSN 932-4670, or send e-mail to gwilliams@dlsc.dla.mil.

EP CATALOG UPDATED

The third edition of the Defense Logistics Agency's Environmental Products (EP) Catalog is now available. The 1997 edition groups more than 800 national stock number (NSN) items into 17 broad categories, including aqueous cleaners and degreasers, aircraft cleaning compounds, spill control products, natural resource conservation products, and recycled plastic lumber. The EP catalog contains advice on placing orders, an extensive list of points of contact, and instructions for obtaining material safety data sheets on CD-ROM. The catalog can be found on the Defense Supply Center-Richmond home page at www.dscr.dla.mil. Military and civilian personnel can browse the catalog, download the data base, and place orders for items while on line. To request hard copies of the catalog, call (800) 352-2852 or DSN 695-5699. For more information, send e-mail to—sperez@dscr.dla.mil, or call (804) 279-6054 or DSN 695-6054.

AAFES SUPPORTS RELIEF EFFORT

The Army and Air Force Exchange Service (AAFES) has reactivated a small exchange store in Guam in support of Operation Pacific Haven. The operation is a joint relief effort conducted by the U.S. military that entails evacuation of 4,000 Kurds from Iraq to avoid retaliation for working with the U.S. Government and international humanitarian agencies. The refugees are being housed at Andersen Air Force Base while awaiting processing for political asylum in the United States. Within 4 days of receiving the request, the Guam AAFES team opened the convenience store to sustain the refugees and the U.S. troops who are there to help with the relief effort. (See related story on page 27.)



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In Search of Focused Logistics

The Logistics Directorate of the Joint Staff is for implementing Focused Logistics, one of the

In May 1996, the Chairman of the Joint Chiefs of Staff, General John M. Shalikashvili, released Joint Vision 2010 (JV2010). JV2010 was designed to be the operational template for the evolution of the Armed Forces of the United States. It has four primary tenets: Dominant Maneuver, Precision Engagement, Full Dimensional Protection, and Focused Logistics. Judicious application of technological innovation and information superiority are billed as critical enablers of the Joint Vision process.

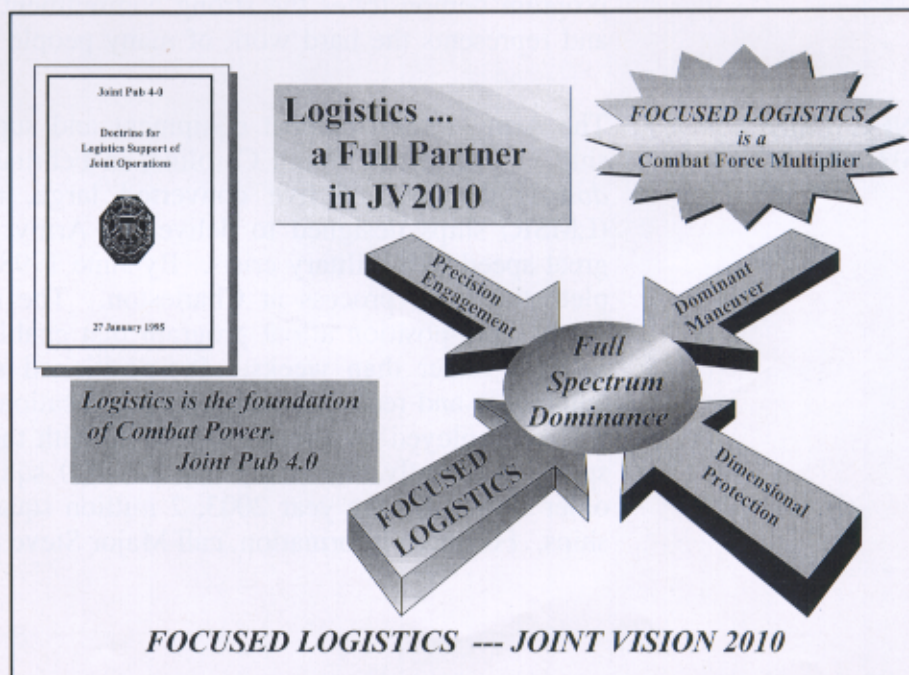
A major initiative of the scope of JV2010 is bound to attract some criticism. Critics have voiced concerns that maneuver, strike, protection, and logistics are hardly "new operational concepts" and that there is an overemphasis on technology in place of the human element.

Under JV2010, objectives will remain fundamentally the same. What will change is how those objectives will be achieved. It is an indisputable fact that soldiers, sailors, airmen, and marines—not technology—win wars. All the technological sophistication

in the world is of little value without high-quality, trained people. However, technology enables the warfighter to accomplish the mission with increased precision and lethality and at less cost in human, political, and monetary capital. Technology goes a long way toward improving the quality of life of the warfighter by enabling him to complete tasks more effectively and efficiently and allowing him to work "smarter," not "harder."

Focused Logistics, a full partner in JV2010, takes an elementary issue—providing combat support to the warfighter—and launches a search for the best possible way to achieve that objective. The impediments most often cited for developing Focused Logistics are downsizing, the changing threat environment facing our Nation, technology, and new political and fiscal realities. What gets little attention is the recognition by logisticians in all the services that we can do our jobs better and that we are not satisfied with the level of support we provide to the warfighter. We know that we can work more efficiently and, most

□ Focused Logistics is one of the four primary tenets of Joint Vision 2010.



by Lieutenant General John J. Cusick, USA,
and Lieutenant Colonel Donald C. Pipp, USAF

developing an action plan tenets of Joint Vision 2010.

importantly, that we have the opportunity and the high-caliber people to make a genuinely evolutionary change in how we do business.

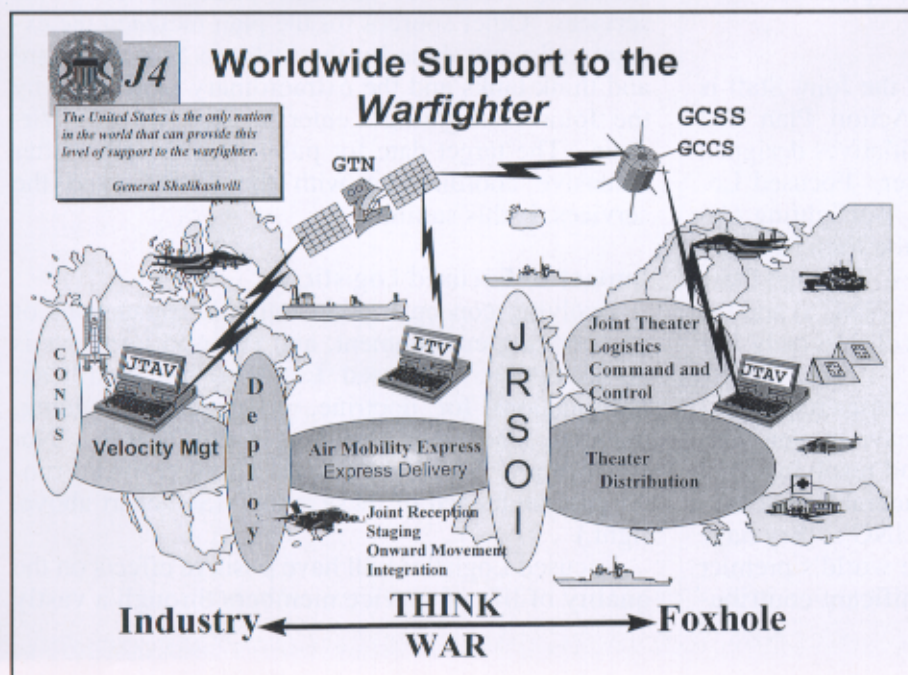
The chart below (right) illustrates how we foresee providing logistics support to joint operations. There is not a single point on this chart where innovative practices are not being developed or implemented by each of the services. The Air Force's Lean Logistics program and the Army's Velocity Management program are literal springboards for making quantum improvements in logistics support. Through accelerated movement of assets through transportation and repair cycles, support has improved at less cost, and confidence is building that the "system" will work when needed.

Advances in strategic lift, both sea and air, will go a long way toward providing deployability—a vital element of our future military strategy. The Department of Defense's senior leadership has campaigned successfully for acquisition of C-17 aircraft and roll-on-roll-off (RORO) ships. The Air Force's Air Mo-

bility Express (AMX), with its integrated use of commercial carriers, is but one example of the innovations that are providing the United States with an unprecedented strategic force-projection capability. While the elements of Joint Reception, Staging, Onward Movement, and Integration (JRSOI), Theater Distribution, and Joint Logistics Command and Control (Joint LOG C2) have yet to be finalized, there is unanimous agreement on the need to more clearly define roles and responsibilities in these critical elements of force projection; near-term resolution is probable.

Supporting the entire network from source of supply to point of need will be the Global Combat Support System (GCSS). GCSS is designed to do for the logistician what the Global Command and Control System (GCCS) does for the operator. GCSS will facilitate access to critical resource data anytime and anywhere throughout the world and will not require a specific hardware suite to make it all happen. Developments in Joint Total Asset Visibility (JTAV) and Intransit Visibility (ITV) will culminate in a quantum leap in the effectiveness and efficiency of logistics support to the warfighter by providing critical resource information throughout the strategic, operational, and tactical levels of any military engagement.

Each of the services has methods for ensuring logistics connectivity and resupply to deployed forces. The problem often stems from the fact that these methods vary by service and sometimes by unit. GCSS will provide logisticians much-needed visibility of critical resources in factories and wholesale locations, in transit to and from the theater, and in stor-



□ Providing worldwide support to the warfighter will integrate all of the innovative practices shown at left. The services are making progress in implementing each one.

□ The Joint Staff Logistics Directorate (J4) is developing the Focused Logistics Action Plan (right). The Joint Warfighting Capabilities Assessment (JWCA) process has led to significant successes in improving logistics support (center). Focused Logistics will affect doctrine, organization, training, material, leadership, and people (far right); the Global Combat Support System (GCSS) provides a common thread through these areas.

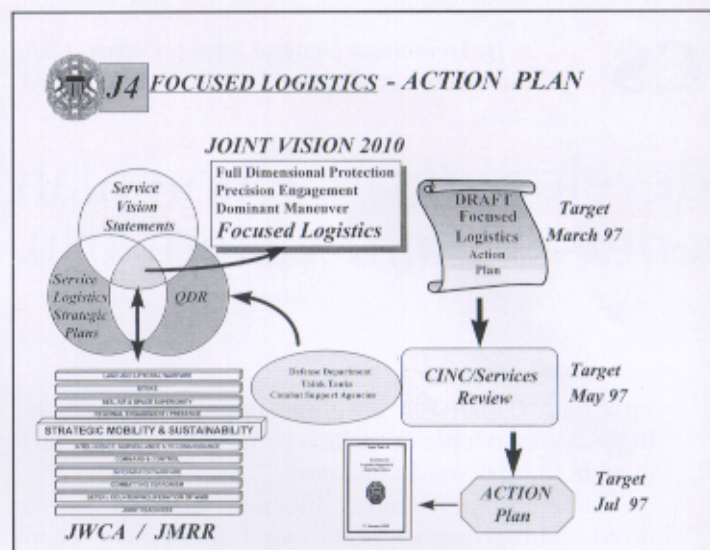
age at units both in and out of the theater.

The days of multiple requisitioning of an item, in the hope that at least one will arrive when needed, will become a thing of the past. The logistics footprint of the future will be a more precise balance between "just in time" and "just in case=just enough." Developments in automatic information technology (AIT) that will provide automated tracking of assets throughout the world are just now beginning to emerge. Incorporating AIT requirements into the acquisition process could provide worldwide visibility of assets throughout their life cycles. All of these efforts are indeed noble, but they are of little consequence unless conscious efforts are made to monitor their progress through to completion.

Focused Logistics Action Plan

The Logistics Directorate (J4) of the Joint Staff is developing a Focused Logistics Action Plan that identifies a host of joint logistics initiatives designed to improve support to the warfighter. Focused Logistics takes its cue from the Joint Warfighting Capabilities Assessment (JWCA) and the Joint Monthly Readiness Review (JMRR) processes. Through these processes, the commanders in chief (CINC's) and the services identify issues that they feel adversely impact their capabilities.

While the JWCA and JWRR processes require intensive management, they already have proven their worth as vehicles for channeling and resolving joint issues. They have resulted in considerable cost savings and improved support to the CINC's, they have contributed to our goal of being the world's premier deployer, and they have made significant contribu-



tions to joint logistics operations. (See chart above, center.)

While JWCA and JMRR together are a key element in developing the Focused Logistics Action Plan, there are others. Strategic planning guidance, such as the National Military Strategy (NMS), the Joint Strategy Review (JSR), JV2010, and the ongoing dialog of the Quadrennial Defense Review (QDR), served as the baseline for developing the Focused Logistics Action Plan. Meanwhile, service vision statements and the strategic logistics plans of the CINC's, the services, and the Office of the Secretary of Defense (OSD) were reviewed for common themes and innovative concepts; the intent was to draw from the many talents of strategic planners across the services. Other sources for the plan included the exceptional work done by the Defense Science Board and think tanks and the extraordinary work done by the Joint Warfighting Center at Fort Monroe, Virginia. The target date for publishing the plan, after extensive coordination with the CINC's and the services, is this summer.

Impact of Focused Logistics

Evolving concepts affect multiple dimensions of an operating environment, and Focused Logistics is no exception. Focused Logistics has significant ramifications for doctrine, organization, training, material, leadership, and people (DOTMLP). Not surprisingly, GCSS provides a common thread running through each of these areas. (See chart above, right.)

Focused Logistics will have positive effects on the quality of life of service members through a vastly



Recent JWCA Successes

Wartime Medical Requirements

Smart Card



\$18.2M for FY98

STRATMOB En Route Fuels Infrastructure

C-17 Acquisition



JLOTS Causeway Systems



Reduction of 4000+ beds from POM96

Army estimate - Expect similar savings from other Services

Spend \$65.53M Save \$272M Status on investment in 1.54 years

PDM II directs \$19.1M for FY98 projects and \$15.3M for FY00 planning and design

Full funding for STRATMOB fleet of 120 aircraft

MOA for joint Army/Navy SS3 causeway

Savings

Savings

Support to CINC's

Premier Deployers

Joint Logistics

improved work environment; developments in computer-based training; increased use of more reliable modeling and simulations; development of state-of-the-art decision tools; improved medical readiness; increased asset visibility; and better SMART card technology. Logistics organizational structures will be streamlined as we right-size the logistics footprint and make genuine progress in such vital areas as logistics command and control and theater distribution. Logistics doctrine is being reviewed and modified as necessary to keep pace with rapid developments and provide overarching guidance on traditional as well as developing capabilities.

The Focused Logistics Action Plan will be a concise publication presenting joint logistics issues of highest concern to the CINC's and the services as identified through the JWCA process. It will give logisticians a concise overview of key issues and of projects being developed on behalf of the joint logistics community. It will provide metrics, to the extent possible, for projects and programs identified in the plan. It will be a think piece for the CINC's and the services to use in developing and reviewing their own strategic logistics plans.

The Focused Logistics Action Plan will be a living document. As such, it will be subject to changes, additions, and deletions as events dictate. The utility and effectiveness of the plan will not be determined by how many screens, pages, or graphs can be produced. Its effectiveness will be determined by validated progress on identified programs. Focused Logistics is not the latest "fad," which will pass with the introduction of a new regime. It is a plan of action,

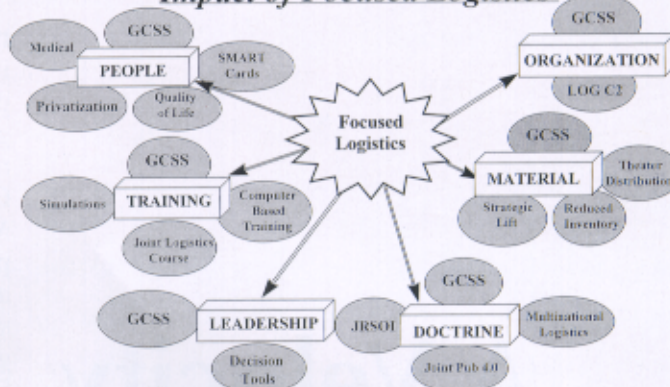
as well as a state of mind, that we must perpetuate throughout the joint logistics community. Focused Logistics is a dynamic plan of action for combat support to the warfighter.

ALOG

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Lieutenant Colonel Donald C. Pipp, USAF, is the Focused Logistics Project Officer in the Readiness and Requirements Division of the Logistics Directorate (J4), the Joint Staff. He previously served as Chief of Wartime Policy and Supply Readiness on the Air Staff. He is a graduate of the Industrial College of the Armed Forces.

Impact of Focused Logistics



A Velocity Management Update

by Major General Robert K. Guest, Thomas J. Edwards,
and Chief Warrant Officer (W-4) Ramon Navarro

Amid the competing initiatives underway throughout the Army to manage resources better, one is emerging as the best way to improve our logistics processes. Velocity Management is the Army's logistics answer to the Department of Defense (DOD) reengineering projects under Vice President Al Gore's Reinventing Government initiatives. Velocity Management, or VM, is the Army's initiative to improve the speed and accuracy with which material and information flow through the system. Our sister services call the idea by other names (Precision Logistics in the Marine Corps, Lean Logistics in the Air Force). Wherever you are, the intent is the same: to enhance and streamline logistics operations by eliminating those non-value added tasks so common in our logistics processes.

Over 2 years ago, a cell of key logistics planners in the Office of the Deputy Chief of Staff for Logistics (ODCSLOG), Department of the Army, asked the RAND Arroyo Center in Santa Monica, California, to distill its work on logistics process improvement into a single thrust that the Army could promote as a new paradigm. Their efforts resulted in a RAND publication, *Velocity Management, An Approach for Improving the Responsiveness and Efficiency of Army Logistics Processes*, by John Dumond, Rick Eden, and John Folkeson. This publication became the guide for the ODCSLOG effort.

Then-Lieutenant General Johnnie E. Wilson, at that time the Army DCSLOG, heard the first Velocity Management briefing in late June 1994. [General Wilson is now the commander of the Army Materiel Command.] The VM message in that briefing proposed discarding the "we've always done it this way" maxim and dared the Army to stop doing logistics processes that either add no value or actually add delays and increase costs.

On 20 January 1995, General Wilson convened the first session of the Velocity Group (VG), a board of senior Army logisticians dedicated to implementing the Army VM program. Armed with the RAND study, the VG launched this cultural shift in the Army's logistics processes and committed the Army to its success. The group's initial guidance was to focus VM on reducing class IX (repair parts) order and ship time and repair process time. The VG committed itself to extend VM quickly throughout the Army.

Major General Thomas W. Robison, then commander of the Army Combined Arms Support Command (CASCOM) at Fort Lee, Virginia, provided an introduction to Army Velocity Management in the May-June 1995 issue of *Army Logistician*. Since then, VM has experienced growth and change. Here

is a short review of VM, an update to General Robison's introduction, and a report on the progress of the program.

General Ronald H. Griffith, the Vice Chief of Staff of the Army, hailed VM and added his challenge in his 22 March 1996 message on implementing the program. In that message, he set an order and ship time goal for the field Army of 2 days to enter requisitions into the national system and 2 days from the arrival of parts on post to customer receipt of those parts. He also set the Army's repair cycle time goal at reducing the current time by 50 percent where possible and then by 50 percent everywhere by the end of fiscal year 1997.

How VM Is Organized Today

In the last 2 years, the VM organization has matured. The VG is directly supported by four process improvement teams (PIT's), which rely in large part on their designated VM representatives, commonly referred to as change agents; by Army technical staffs; and by the VM site improvement teams that have been established throughout the Army.

The VG embraces a wide representation of the DOD logistics and financial management communities. Today, the group provides guidance and leadership to the many teams and sites throughout the Army who are eagerly implementing VM. Quarterly VG meetings are key Army events. These meetings are designed to bring the logistics community to a reengineering forum. Lieutenant General John G. Coburn, the current Army DCSLOG, has said that VM meetings are the most important Army logistics venues he attends.

At CASCOM, the program management staff has grown to a team of seven with contract support provided by RAND and Military Professional Resources, Inc. (MPRI). This staff coordinates all VM assistance visits, supports VG and PIT meetings, manages the VM Site on the CASCOM Homepage on the World Wide Web, conducts special seminars, and publishes VM literature.

VM PIT's Today

The VM PIT's, which focus on order and ship, repair, stockage, and financial management processes, find and explore targets of opportunity for logistics improvement. They have been at work finding those targets of opportunity by conducting logistics system process analyses and resolving policy and legal issues standing in the way of improvement. Through a busy travel schedule, they also have been inspiring the implementation of VM initiatives across the force.

Each VM PIT is headed by a Senior Executive Service civilian.

The Order and Ship Time PIT (OSTPIT) focuses on the six segments of the supply process. Each segment has a responsible agent in DOD, and those agents are constantly looking internally at their processes.

By defining the segments of the repair cycle and quantifying them, the Repair Cycle Time PIT (RCTPIT) is revealing many opportunities to improve repair processes.

The Army is changing the way units compute stockage levels. The Stockage Determination PIT (SDPIT) is leading the effort to redefine those stockage policies and set a transition plan for the Army to use to shift from austere peacetime stockage to deployment stockage.

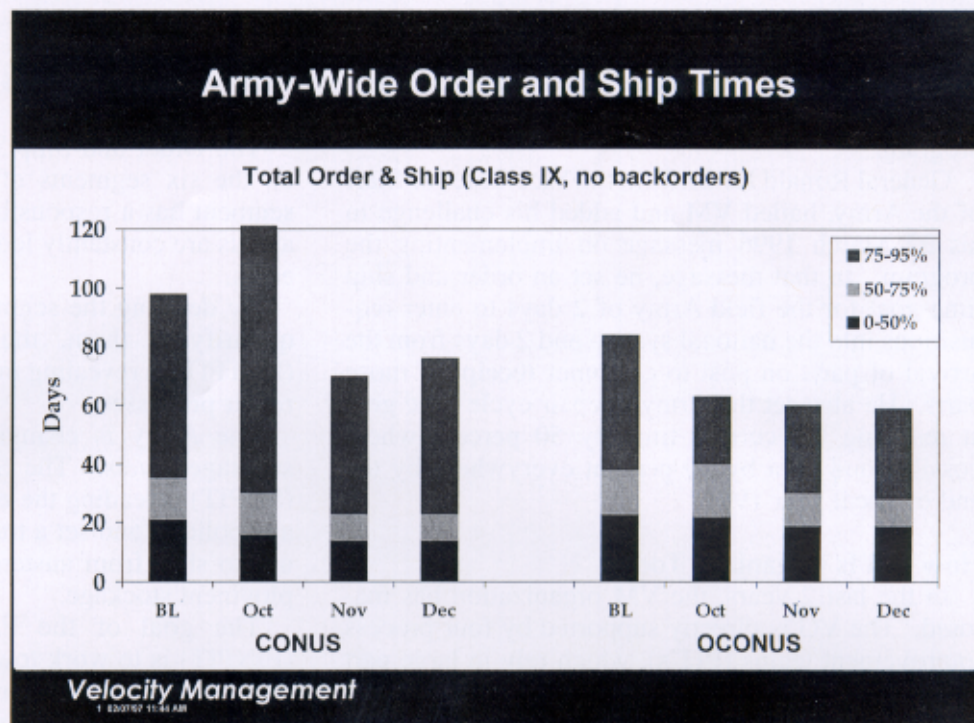
The goal of the Financial Management PIT (FINPIT) is to work toward a seamless logistics and financial management process. When we achieve this goal, we will be able to provide real-time unit budget status and rapid and accurate financial information to enhance decisionmaking and encourage pricing and credit business rules that produce desired outcomes.

VM Site Improvement Teams

Site improvement teams (SIT's) continue to be established throughout the active component of the Army. The Army National Guard (ARNG) reports an aggressive plan for establishing a "train the trainer" concept as they continue to export the VM methodology throughout the 50 states and the U.S. territories. The U.S. Army Reserve (USAR) continues to establish SIT's at the regional support command/installation level as part of VM's "walking the process." VM is going to have a lasting impact on the way the Army does its logistics business, and it will be accomplished at each installation and in every unit of the force. Under the leadership and guidance of the major Army commands (MACOM's), G4's, and division support command (DISCOM) commanders, SIT's are the local VM agents to ensure things get fixed and stay fixed. SIT's are at work today at over 20 continental United States (CONUS) installations and in both Europe and Korea.

The VM Team at Fort Lee has prepared a user's guide explaining how SIT's can improve the order and ship processes. This user's guide is available now at the VM Site on the CASCOM Homepage (accessed at <http://www.cascom.mil/vm>). Each PIT also is developing templates that will go into greater detail on those processes so that users will have a clear guide on implementing initiatives at their posts.

□ LOGSA data are converted to charts such as this one, which shows recent Army-wide order and ship time (OST) performance for class IX (repair parts) in days. It shows total OST for the last 3 months of 1996 stratified into management group percentiles, compared to the baseline (BL) period (30 June 1994 to 1 July 1995).



VM Achievements

The OSTPIT, under the leadership of the Deputy to the CASCOM Commander, has made significant reductions in the order and ship time for the Army. In the short time that this PIT has been working, the many simple, low or no cost corrections implemented at Army installations and in the Defense Logistics Agency (DLA) have reduced the average Army OST by over 8 days. At an investment cost of up to \$6.2 million per day, this represents a significant one-time reduction in pipeline value. The PIT goal is to bring all CONUS Army installations to an OST of 7 days for issue priority group (IPG) I and 10 days for IPG II and III. For outside CONUS (OCONUS), the goals are 15 days for IPG I and 20 days for IPG II and III.

Meeting these goals will reduce stock levels throughout the Army, as OST is one component of the requisitioning objective for supply support activities. Installation OST reports, available via file transfer protocol (ftp) from the Army Materiel Command's Logistics Support Activity (LOGSA) at Redstone Arsenal, Alabama, help installation commanders and logisticians see how the wholesale system is supporting them; they also provide a way for commanders and logisticians to track their performance in their pipeline segments. You can reach the LOGSA ftp site today at <ftp://ftp158.2.2.3> for monthly reports and <ftp://ftp158.2.2.7> for weekly reports. The user name is "guest," and the password is "guest1." Depending on your computer system ftp access protocol

(ftp icon, TELNET, America Online, Netscape, etc.), you may need to consult your directorate of information management (DOIM) for help in configuring your computer to reach this site.

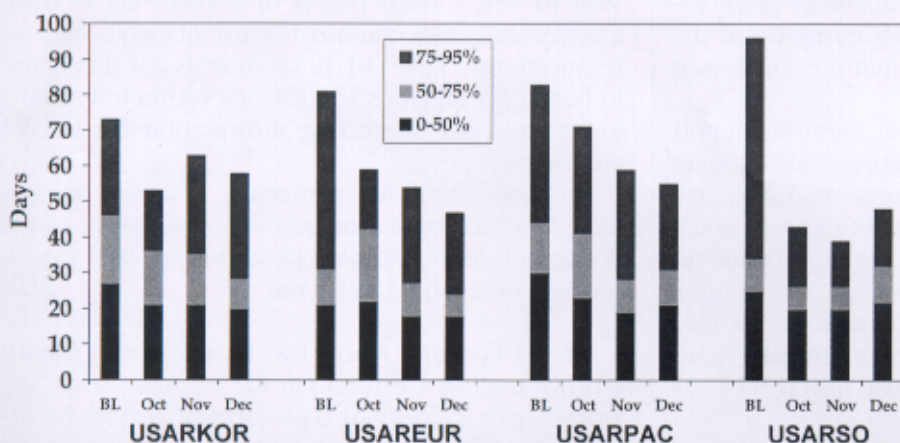
The RCTPIT, headed by the Deputy for Maintenance Policy in DA ODCSLOG, continues to work toward the established goal of reducing the repair cycle time by 50 percent on selected components this year. The RCTPIT has developed a set of repair cycle performance metrics using the Work Order Logistics File (WOLF) data base. However, WOLF depends on timely, quality unit input, so units are asked to concentrate on providing the best input possible. The PIT will continue to assist MACOM's in their efforts to obtain a more accurate picture of their repair performance. The RCT performance reports are currently available from RAND at its ftp site, <ftp://ftp.rand.org/pub/girardin/outgoing>.

The SDPIT, led by the Deputy for Supply Policy in DA ODCSLOG, is focusing on key issues relating to stockage policy, positioning, availability and deployment. This PIT has been waging a behind-the-scenes campaign to improve the Army's stockage determination process by increasing data accuracy, enhancing requirements computations, refining stockage levels, and developing customer-oriented metrics.

An Army-level Essentiality Codes Process Action Team has investigated the mysterious world of essentiality coding. Their review revealed many flaws

OCONUS By Major Commands

Total Order & Ship (Class IX, no backorders)



Velocity Management

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Overseas major Army command data also are available from LOGSA. The improvement in performance of OST is readily apparent.

and inconsistencies in the method of coding parts for essentiality. The resulting new policy will appear in AR 700-18, Provisioning of U.S. Army Equipment, effective 1 January 1997. The policy change, announced on 19 December 1996, will standardize the logic used by the Army Materiel Command for assigning and reviewing essentiality codes and should greatly increase the number of parts considered essential, thereby increasing consideration for stockage.

The SDPIT also has been interested in DLA's stock positioning policy and operations. DLA now is redistributing stocks to its two major regional distribution depot complexes, at New Cumberland, Pennsylvania, and San Joaquin, California. The SDPIT is assessing the impact of that policy on the large portion of the Army that is located in the center of the country.

The FINPIT, led by the Deputy to the Assistant Secretary of the Army for Financial Management and Comptroller for Financial Operations, has set its focus on developing and delivering a logistics-finance interface, including systems changes and a robust training program. Today, the field Army spends a great deal of energy on balancing its logistics books. The supply system handles its requirements, and the financial system accounts for the funds, but they hardly ever do so at the same rate of speed or in coordination. The result is an awkward manual reconciliation process that is not efficient. The PIT is working toward an automated solution that will blend

logistics and financial management transactions.

The VM program recently hosted a conference of over 60 Army logistics warrant officers and senior noncommissioned officers at Fort Lee. They were charged with reviewing the current thrusts of VM and providing advice on its future. The results of this "reality check" will be on the agenda of a future VG session. (See related article on page 11.)

VM in Future Logistics Automation

AMC is upgrading the current Logistics Intelligence File (LIF) with a modern (LIF-MOD) automated system that will replace the current archaic one. In the near future, LIF-MOD will replace the current ftp with a system upgrade that will permit greater access to its data warehouse and services. The system upgrade will provide Army users at all levels with a state-of-the-art, graphical user interface (GUI) and point-and-click capability for obtaining performance data. This system will become an integral part of VM reporting capabilities. LOGSA reports that this system will be in place by July.

Automated tools added to the standard Army retail supply system (SARSS) as enablers (material release order control system [MROCS], objective supply capability [OSC], automated manifest system [AMS], and integrated logistics analysis program [ILAP] 4.1) continue to be enhanced and retrofitted to units throughout the Army. These tools provide speed and accuracy to logistics and financial transaction proc-

essing while reducing errors. ILAP 4.1 will bring visibility to the financial management process and eliminate most of the manual edits required today.

The Army Quartermaster School at Fort Lee is planning to add several new modules to its Mobile Training Team (MTT) Program. The modules to be added are needed to leverage the capability of the logistics automation enablers that are currently in the hands of our soldiers in the field but are underused for lack of training.

The objective Integrated Combat Service Support System (ICS3) eventually will replace all existing combat service support (CSS) automated systems. The conversion to a common operating system and a single software baseline will lead to significant reductions in software maintenance costs. By using a single system to support all CSS functions, we also should be able to reduce training requirements. Ultimately, VM metrics will be imbedded into ICS3 as its performance measurement tools.

We Are Just Getting Started

In 1997, the VM program will employ a concentrated focus approach to implementing VM at Army installations. By focusing for 6 months on a major CONUS post, the program will concentrate its efforts using all of the VM resources. The goals will be to reduce OST to 7 days for IPG I and 10 days for IPG II; determine the best method for selecting components for local repair; determine the optimum stockage for prescribed load lists (PLL's) and authorized stockage lists (ASL's); and produce tailorable PLL's and ASL's. Fort Campbell, Kentucky, and the 101st Airborne Division (Air Assault) has agreed to be the first 1997 focus installation. Teams have already begun to implement this next phase of VM there. At the conclusion of this concentrated effort, the VM team will move on to other posts.

You Can Be on the VM Team, Too

Regardless of participation in the focused VM implementation, VM teams operating from Fort Lee are eager to include all Army units and installations in the program. The Fort Lee VM Team will include you in a courtesy visit to present the VM story and walk through the logistics processes with your SIT. Contact Chief Warrant Officer (W-4) Ramon Navarro at the CASCOM VM Team to arrange for a courtesy visit (navarorr@lee-dns1.army.mil).

VM Web Page Information

VM has its own site on the CASCOM Homepage. The VM Site is a functional information center for all VM documents, minutes, PIT reports, situation reports, briefings, and points of contact lists. You can

download all documents from drop-down menus and view them in Microsoft Word and PowerPoint.

Also accessible on the CASCOM Homepage is a bulletin board entitled "Web Board." This bulletin board is monitored by the VM Team, which is available for discussion and comments on anything relevant to VM. Each points of contact list is linked electronically to a mailbox for instantaneous response to questions. The VM Team intends for this feature to become a logistics and finance forum to exchange ideas and post interesting information for the VM community.

To view the VM Homepage, use this address: <http://www.cascom.army.mil/vm>. Requests to post documents to the Homepage can be sent by e-mail to: johnsohl@lee-dns1.army.mil.

ALOG

Major General Robert K. Guest is the Deputy Commanding General for Combined Arms Support, Army Training and Doctrine Command, and Commanding General of the Army Combined Arms Support Command and Fort Lee, Fort Lee, Virginia. He served previously as Commander, Division Support Command, 101st Airborne Division (Air Assault), Fort Campbell, Kentucky; Commander, 3d Corps Support Command, Wiesbaden, Germany; Deputy Chief of Staff for Logistics, U.S. Army, Europe, and Seventh Army; and Commander, Army Quartermaster Center and School, Fort Lee, Virginia. He is a graduate of North Georgia College and has a master's degree in business administration from the University of Georgia.

Thomas J. Edwards is the Deputy to the Commanding General of the Army Combined Arms Support Command, where he is responsible for doctrine, training, leader development, organization, and materiel for Army logistics. He is the Velocity Management Order and Ship Time Process Improvement Team Leader. He holds a bachelor's degree in political science from Ohio State University and an M.S. degree from the University of California.

Chief Warrant Officer (W-4) Ramon Navarro is the Velocity Management Change Agent at the Army Combined Arms Support Command. He previously served as Chief of the Logistics Automation Mobile Training Team, Army Quartermaster Center and School, and deployed to Operations Desert Shield and Desert Storm with the Logistics Automation Assistance Team, 22d Support Command. He is a graduate of Cameron University in Lawton, Oklahoma, and is a recipient of the Order of Saint Michaels for excellence in aviation logistics support.

Velocity Management Workshop: A Reality Check

More than 60 warrant officers and senior noncommissioned officers convened at Fort Lee from 5 to 7 February to study current and proposed velocity management (VM) initiatives and the structures that support them. The Army Combined Arms Support Command (CASCOM) hosted the workshop which was held at the Army Logistics Management College. In December 1996, Lieutenant General John G. Coburn, Army Deputy Chief of Staff for Logistics, suggested that the users in the field be brought together to assess the progress made in implementing velocity management and recommend ways to improve and speed the implementation process. (For more information on VM, see page 6.)

CASCOM Commander Major General Robert K. Guest, in his opening remarks, emphasized that staff and budget reductions in both active and reserve components make it essential to find ways to reduce Army expenses while improving support to the troops. He reminded the workshop attendees that the Army is the smallest it has been since World War II. At the same time, deployments are up by 300 percent. To support supply and maintenance activities, the Army must provide effective logistics support as quickly as possible. "We logisticians have a responsibility to make this [velocity management] happen," General Guest said. "In this workshop, you have the opportunity to influence the future of the Army's logistics processes."

The attendees were divided into four work groups to analyze and discuss process improvement initiatives in order and ship time, repair cycle time, stockage determination, and financial management. General Guest challenged the groups to evaluate all facets of the combat service support system and recommend actions to ensure that all logistics support systems support one another. On the third day of the workshop, the groups came back together to present their reports.

The order and ship time work group stated that although there are problems that need to be addressed

in this area, the Army should move forward on all initiatives. The team recommended several actions, including—

- Institutionalize VM as soon as possible. Provide all activities with flow charts and instructions on what it is, how it works, and how to use it.
- Simplify the retrograde of hazardous materials. Units should be able to move them directly from the user to the hazardous materials waste facility.
- Provide more information systems training to more people. Consider offering the training in other languages so that all users will be trained at all sites.
- Eliminate cultural biases and regulations that interfere with the VM process. Too many "umpires" are slowing down the supply process.
- Provide resources so that supply support activities can deliver parts to units.

The repair cycle time team recommended deleting two issues and adding the following issues—

- Provide units with state-of-the-art diagnostic equipment. They need it to be compact and portable, but tough and durable.
- Standardize and guarantee turn-in credits to give units more incentive to turn in unneeded stocks.
- Improve packaging of parts and equipment to provide more protection during retrograde.
- Allow more up-front time for diagnostics in the maintenance units so that the right part can be ordered. This will save time in the long run.
- Army leaders must provide the time and resources for mechanics to do the job right or lower the standards. Using VM techniques increases maintenance man-hours by emphasizing and requiring accurate diagnostics and ordering the correct repair parts the first time. More effective maintenance can be done if sufficient manpower and the right diagnostic equipment are available.

The stockage determination work team also determined that although there are problems that need to be addressed in this area, the Army should move forward on all initiatives. The team recommended several actions, including—

- Continue to focus on determining deployment stocks for the transition from peacetime to wartime. The field needs a good set of procedures to simplify this transition.
- Continue to focus on the implementation of stockage determination metrics. It was agreed that the cornerstone of the entire VM stockage determination effort is based on the feedback from these metrics weighing investment versus performance.
- Reevaluate current and proposed retail stockage policies. As the order and ship time for class IX items continues to decline, the depth of stockage for the authorized stockage list and the prescribed load



□ Workshop participants discuss the Army's progress in implementing velocity management.

list should decrease, also. Although the depth of high-dollar items will decrease, there is potential to increase the breadth of stockage to include many low-dollar items. In this scenario, it is possible to increase customer support at a decreased cost.

- Reevaluate the Army's current stockage performance standards. The work group felt the standards were inadequate. Improved order and ship time creates routine deliveries. Focusing on zero balances is not a true measurement of the logistics system.

The financial management team stated that the supply request process is still cumbersome, but is improving. They also said—

- The number-one issue is price and credit policy stabilization. If item prices and turn-in credits are not firm, budgets and financial management become irrelevant to commanders and soldiers.

- Logistics and financial management business rules and processes are not synchronized among activities, such as from post to post and between major commands. One set of instructions should be used by all soldiers and civilians.

- Units need continuous financial management training, not just when a new system is installed. Periodic sustainment training is needed, and institutional and schoolhouse training should be TRADOC-mandated. Logisticians should teach resource management and finance personnel, and resource managers and finance personnel should teach logisticians.

- Financial management business rules should be "forgiving." Units should not be penalized for ordering a wrong item. Credit rules should promote a desired behavior, such as allowing more than a 10-

percent credit. Units need incentives to turn in excess items.

- To produce accurate financial management and budget reports, take steps to integrate the database Commitment Accounting System (dCAS), Unit Level Logistics System (ULLS), Standard Army Maintenance System (SAMS), and Standard Property Book System-Redesign (SPBS-R) as a quick fix.

- Provide better Defense Reutilization and Marketing Office (DRMO) business rules. Eliminate the need to get equipment up to 10/20 standards when it eventually will be sold to the public. Consider Army-wide redistribution. An item should not be shown as excess at DRMO if any Army unit is short that item.

After the teams presented their summary reports, Mr. Tom Edwards, Deputy to the Commander, CAS-COM, stated, "I am encouraged by the eagerness and enthusiasm I heard among the work groups.

"The main thing I heard from all four teams is that generally, VM is a success, but we need to establish some rules and then give you the resources to make it happen. On the other hand, what we need from you is for you to keep informing everyone about what VM is and what it does. Also, if there is a better way to do something, or new tools or equipment you think might work well for us, we need to know about it. That is why we brought you here. General Guest needed an overall assessment of how the hands-on people see velocity management and to be certain it is something we want to continue to devote time to."

Mr. Edwards told the participants that the team recommendations and assessments would be sent to General Coburn for his review. "But your work isn't over yet. We need you to keep feeding the system, keep fixing the templates, and keep bringing in your ideas. . . . You need to keep thinking about how repair operations will change when the supply and maintenance units know that the right parts will be delivered quickly.

"VM seemed to work in Bosnia. In the past, the first thing supply support activities did after deployment was order everything they could think of, just in case they needed it later. It made all the difference in what they ordered, though, once they found out they got everything they asked for in a short amount of time. The volume of orders went down and the requests became more conservative. They no longer felt the need to stockpile. They began to trust the system. Eventually, this is what we expect to happen Army-wide."

Although workshop participants reported some problems with implementing VM, they were enthusiastic about the potential benefits. To put it in the words of Mr. Edwards, "Faster is better—period!"

—Story by Janice W. Heretick

QWG LOG: Allied for Logistics

by Bernard P. LeVan

Coalition operations
are becoming a fact
of life for the Army.
To ensure that we can work
with our British, Canadian,
and Australian allies,
the Quadripartite
Working Group for Logistics
(QWG LOG)
is developing standardized
logistics procedures.

“War without allies is bad enough; with allies, it is hell.” This wry comment on the difficulties inherent in forming a coordinated military force from the armies of different nations, made by Sir John Slessor in *Strategy for the West* in 1954, serves as a reminder of the challenges facing the American, British, Canadian, and Australian (ABCA) coalition. Turning the coalition’s potential hell of a problem into a heavenly bed of roses is the job of the ABCA Standardization Program, which has the goal of ensuring “that [ABCA] Armies achieve agreed levels of standardization necessary for two or more ABCA Armies to operate effectively together within a coalition . . .” One of the most important bodies working toward this goal under the ABCA program is the Quadripartite Working Group for Logistics (QWG [pronounced “quig”] LOG). In today’s Army, where multinational operations are becoming more common and all soldiers must be able to work closely with allies, logisticians should be familiar with the important work QWG LOG is doing.

TEAL, WSO, and QWG?

QWG LOG is one of a number of bodies that together make the ABCA Standardization Program

work. The program is headed by the vice chiefs of staff of the four member armies. Collectively, they are known as the TEAL, and they provide direction and guidance to the program on behalf of their parent armies. The TEAL meets annually. (The name “TEAL” is derived from the original organization, Tripartite Equipment and Logistics.)

Beneath the TEAL in the ABCA program’s organizational structure are the Washington Standardization Officers (WSO’s). They also are four in number: the senior officers at the British, Canadian, and Australian embassies in Washington and the Deputy Under Secretary of the Army for International Affairs at the Pentagon. The WSO’s meet each month.

The Primary Standardization Office (PSO) provides staff support to the TEAL and the WSO’s. The PSO has a multinational staff of eight people who conduct day-to-day management and act as the program’s office of record. They also maintain close liaison with other standardization programs, especially the ABCA Air Force and Navy programs.

The job of working out standardization agreements, as directed by the TEAL and the WSO’s, is the responsibility of the QWG’s, of which there are 16. Each QWG is composed of a standing chairman and a national point of contact (NPOC) from each member army. QWG’s usually meet every 18 months. Most QWG work is done between meetings.

QWG LOG

QWG LOG was established by the ABCA Standardization Program in 1973. The Office of the Deputy Chief of Staff for Logistics (ODCSLOG) originally was designated as the U.S. Army’s NPOC. However, in 1976 ODCSLOG transferred that responsibility to the Logistics Evaluation Agency (now the Logistics Integration Agency [LIA]) in New Cumberland, Pennsylvania, where it has remained.

The other QWG LOG NPOC’s are the Directorate for Land Warfare at Headquarters Doctrine and Training in Upavon, England; the Directorate Army Training at Kingston, Ontario, Canada; and the Logistics Policy Branch at Army Headquarters in Canberra, Australia. The standing chairman of QWG

LOG is the Sustainment Chief, Canadian Directorate for Army Doctrine, in Kingston.

QWG LOG Supports the Army's Direction

QWG LOG's mission is to focus on all combat service support matters, except medical, that affect coalition operations. This coalition mission is becoming increasingly important to the U.S. Army because the Force XXI Army often will fight as part of an alliance or coalition. Doctrinal publications such as FM 100-5 and Army Training and Doctrine Command Pamphlets 525-5 and 525-200-6 now stress that in the future logistics will be more of a collective enterprise and less of a strictly national responsibility. QWG LOG is one of the organizations leading the way toward this logistics future.

QWG LOG receives its direction for standardization work from the ABCA TEAL through the WSO's. The WSO's approve QWG LOG's "top 10" list of standardization issues to pursue on behalf of the member armies.

The most recent QWG LOG agreement signed by the ABCA Armies concerned handling of deceased personnel in an area of operations. This agreement was initially drafted in conjunction with LIA, the Army Mortuary Affairs Center at Fort Lee, Virginia, and the Marine Corps Combat Development Command at Quantico, Virginia. It then was used by the Army, as the joint proponent, to develop portions of Joint Chiefs of Staff Publication 4-06, Joint Tactics,

Techniques, and Procedures for Mortuary Affairs in Joint Operations. This example demonstrates how QWG LOG's work on ABCA agreements becomes incorporated into U.S. doctrine.

In addition, Joint Staff guidance is reinforcing the importance of coalition standardization work to U.S. forces. Recent Chairman of the Joint Chiefs of Staff Instructions 2700.01 and 3120.07 directed the commanders in chief (CINC's) of the unified commands to "maximize joint and logistic cooperation in pursuit of interoperability in procedures, logistic command and control, and common support equipment." CINC's also "are encouraged to participate in the international military RSI [rationalization, standardization, and interoperability] process by making recommendations to the lead service on RSI developments and CINC priorities and participating in the evaluation process where appropriate." To ensure that the U.S. support forces made available to the unified commands are capable of operating with ABCA forces, LIA, as the Army NPOC for QWG LOG, is soliciting standardization issues from each unified command. From this solicitation, LIA will incorporate CINC standardization requirements into the QWG LOG program of action.

QWG LOG's Top 10 Tasks

QWG LOG has developed over 40 logistics-related agreements so far. In addition, QWG LOG has a backlog of standardization issues that will be elevated to the top 10 list as soon as current top 10 tasks are completed. Some examples of these backlogged standardization issues are interoperability of logistics automatic data processing systems, common procedures for selected law enforcement activities, and interchangeability of fuel.

The number one priority on QWG LOG's current top 10 list (see chart at left) is to develop and finalize the Coalition Logistics Planning Guide (CLPG). As its title indicates, this publication provides standard guidance and logistics checklists that can be used as a generic planning guide for any coalition operation. One checklist is a matrix that matches the logistics functions needed to support a coalition operation plan (OPLAN) against the different means of performing those functions (for example, through collective responsibility, execution by one nation, contracting, or host nation support).

A second checklist provides planners some basic questions to ask in developing an OPLAN for a coalition force. The coalition planner's goal should be twofold: determine collective materiel requirements; then identify the most efficient and effective coalition logistics force structure that will sustain the OPLAN while minimizing duplication of individual national

- 1. Coalition Logistics Planning Guide.**
- 2. Supply, munitions, equipment, and personnel loading in air and ground transport.**
- 3. Intratheater movement.**
- 4. Force reception.**
- 5. Finance and contracting.**
- 6. Supply, demand, issue, and control.**
- 7. Host nation support.**
- 8. Sustainment planning factors.**
- 9. Personnel tracking and tracing.**
- 10. Handling and moving of stocks, stores, and equipment.**

□ QWG LOG top 10 list of standardization tasks.

logistics efforts.

QWG LOG envisions that the CLPG, after its formal acceptance as an agreement by the ABCA program, will be available to assist the logistics planners of all four armies in executing future coalition operations.

The second priority on the top 10 list concerns loading. Military operations can quickly become inefficient when multiple modes of transportation are used to distribute materiel, equipment, and personnel. This inefficiency is compounded when loading involves more than one nation and loading operations are not standardized. To avoid loading pitfalls in coalition operations, QWG LOG is developing agreements on bulk cargo movement systems and requirements for loading materiel and equipment for intratheater onward movement.

Loading has a relationship with the next two tasks on the top 10 list: coordination of intratheater administrative movement and force reception. Task three requires QWG LOG to agree on compatible procedures, organization, authority, and responsibility for coordinating intratheater administrative movement—in other words, a coalition movement control center.

Task four requires QWG LOG to examine the establishment of a combined-joint reception center for coalition forces coming into a theater. This is not an easy task, because theater reception involves not only armies from different nations but also other armed services.

Task five involves standardizing procedures for financial accounting and reimbursement of participating nations for coalition use of logistics sustainment resources and services. It also calls for setting up contracting services on a collective, as opposed to a national, basis; this will ensure that coalition members do not compete against themselves for the same scarce resources.

Task six—supply, demand, issue, and control—is composed of many parts. So far, QWG LOG has agreed to use U.S. national stock numbers as the basis for developing a common critical priority system for demand, salvage, disposal, and packaging procedures. Some new areas for QWG LOG scrutiny include storage procedures, handling of hazardous and dangerous goods, management of reusable containers, cargo marking for transport, and interoperability requirements for asset tracking and visibility.

Task seven covers host nation support (HNS). Work continues on defining the organization, roles, and responsibilities for coordinating HNS within a coalition environment. Another ABCA QWG is developing an agreement on the procedures to be used for coordination among the coalition's governmental and nongovernmental agencies and a host nation.

Task eight calls for agreement on sustainment planning factors. At the most recent QWG LOG meeting, the British, Canadian, and Australian Armies agreed to evaluate the U.S. Army Combined Arms Support Command's operational logistics planner as a common tool for calculating sustainment planning for coalition operations.

The ninth task requires QWG LOG to investigate tracking and tracing of personnel. Although this is not strictly a G4 logistics task, it is an important responsibility for any coalition commander. As a consequence, QWG LOG has been asked to look at the G1 personnel area and contribute recommendations.

The last task on the top 10 list is developing procedures for handling and moving stocks, stores, and equipment. Some agreements already exist in this area, such as those on materials-handling equipment and material-handling aids. The United Kingdom is investigating new issues in this area for QWG LOG.

As more U.S. personnel become involved in multinational operations, more opportunities exist for greater standardization. If any soldier has witnessed a logistics problem while serving in a multinational force with British, Canadian, or Australian (including New Zealand) forces and thinks standardization would help, he should contact LIA with the problem and any solutions he believes would help. The address is: Director, Logistics Integration Agency, ATTN: LOIA-OE (ABCA QWG LOG NPOC), 54 M Avenue, Suite 4, New Cumberland, Pennsylvania 17070-5007; or you may call (717) 770-7449; or send e-mail to—blevan@lia-pa-smtpgw.army.mil.

Winston Churchill was quoted as saying, "There is only one worse thing than fighting with allies—and that is fighting without them." QWG LOG is paving the way so the Army's road to fighting with allies is smooth, and not filled with potholes. **ALOG**

Bernard P. LeVan is the U.S. national point of contact for the ABCA Quadripartite Working Group for Logistics. He is a senior logistics management specialist in the Operations and Evaluation Division, Logistics Integration Agency, New Cumberland, Pennsylvania. He is a graduate of the University of Alabama in Tuscaloosa and holds a master's degree from American Technological University in Killeen, Texas. He is also a graduate of the Army Logistics Management College's Logistics Executive Development Course and Program in Executive Logistics Development and an honors graduate of the Army Command and General Staff College. He is an Army Reserve lieutenant colonel.

Retrograding Ammo in Ke

Imagine living and working in a country where "...the majority of the people live in concrete block huts on dirt floors..." and the "...street and traffic lights don't work because they don't have any bulbs." Five Army civilians temporarily lived and worked in such a place, and upon their return they all said they would go again—any time, any place—to "...get things done that need to be done."

The five people who endured the somewhat austere conditions described above were members of a Mobile Ammunition Renovation, Inspection, and Demilitarization (MARID) team from McAlester Army Ammunition Plant, Oklahoma. The team was sent to Kenya in east Africa to inspect, pack, and prepare weapons and ammunition for shipment to Europe. MARID is a program established in 1994 by the Industrial Operations Command, Rock Island, Illinois, to provide specialists on short notice to handle unique missions involving inspection and handling of ammunition and associated materiel. Dennis Ridpath, an ammunition specialist at McAlester, has been the coordinator of the program since its inception. De-

pending on the nature of each mission, the MARID coordinator chooses qualified personnel to assist him.

The MARID team members who traveled to Kenya were selected for their demonstrated willingness to work hard and their skills in inspecting, packing, palletizing, and loading weapons and ammunition. The mission involved packing 2.5 million rounds of small arms ammunition and 11,000 pistols and rifles for shipment to countries in Europe. The ammunition and weapons originally were provided to the United Nations peacekeeping forces in Somalia, which is on the northeast border of Kenya. As the political situation in Somalia deteriorated, the ammunition and weapons were flown out of Mogadishu in Russian aircraft to an island naval base off the coast of Kenya to keep them out of the hands of the fractious Somali warlords. The weapons and ammunition had been stored at the Kenyan naval base for approximately 2 years when the State Department decided to ship the serviceable supplies to peacekeeping forces in Lithuania, Latvia, Estonia, and the Baltic Battalion in Bosnia. The Industrial Operations Command gave the



□ A quality assurance specialist in ammunition surveillance from McAlester Army Ammunition Plant helps two Kenyan sailors stack boxes of small arms ammunition to prepare them for inspection.



□ An industrial equipment mechanic from McAlester positions boxes of repackaged small arms ammunition before loading them in metal shipping containers.

job to the MARID team after the U.S. State Department asked the command to assist the Army's Security Assistance Command in inspecting and packing the weapons and ammunition for shipment to the four European countries.

The five-member team stayed in a hotel on Africa's mainland in Mombasa, a port city on Kenya's border with Tanzania. Each day, the team took a ferry to the island naval base where the weapons and ammunition were stored. The team found most of the weapons and ammunition in good condition in an air-conditioned bunker. Additional items found in scattered boxes, crates, and footlockers were in varying degrees of deterioration.

When team members looked for forklifts to move the items out of the bunker, they discovered that every forklift on the naval base had something wrong with it, such as flat tires, dead batteries, or inoperable parts. The MARID team decided to repair them because that was cheaper than renting new forklifts. Before they began moving the ammunition, they built a wooden ramp for the forklifts to move up and down the step into the bunker.

For 16 continuous days, the team worked 12 hours a day with few breaks to inspect, repackage, and move the materiel into 15 large, metal shipping containers similar to MILVAN's. The materiel was blocked and braced inside the containers, and the containers were prepared for shipment to Europe.

The MARID team completed the job several days ahead of schedule with the help of Kenyan naval personnel assigned to the base. The MARID coordinator, Dennis Ridpath, said, "That's what MARID is in business to do—go in and get the job done as quickly and as cheaply as possible. It was hard work, but I would do it again."

ALOG

Army Logistician wishes to thank Clare Thomas, Public Affairs Officer for the McAlester Army Ammunition Plant, McAlester, Oklahoma, who submitted the information and photographs used in developing this article.

The MARID coordinator can be reached by calling the McAlester Army Ammunition Plant at (918) 421-2099 or DSN 956-6099 or by contacting the Industrial Operations Command.

Force Provider Deploys t

by Lieutenant Colonel Tim Lindsay, James J. McLaughlin, and Norm Bruneau

In a December 1995 *Newsweek* article, Colonel David Hackworth called Bosnia-Herzegovina "Hell in a Cold Place." He described it, accurately, as a cold, wet, muddy, mine-infested land almost entirely devoid of the infrastructure needed to support the soldiers of Task Force (TF) Eagle during their peacekeeping mission. But the same conditions that made supporting Operation Joint Endeavor a challenge also presented a perfect opportunity for testing the Army's new Force Provider system.

Between 8 November 1995 and 23 February 1996, an eight-person team coordinated the deployment of Force Provider to Bosnia. We were members of that team, deploying with the system and spending about 60 days in theater. At the height of the operation, Force Provider provided high-quality bare-base support to over 5,000 soldiers of TF Eagle in the vicinity of Tuzla, Bosnia. We believe that the system has made a marked difference in the quality of life of those soldiers and that its deployment represents a historically significant advance in the Army's approach to field services and base camp support.

Force Provider is a complete, containerized, highly deployable bare-base system that is engineered to provide climate-controlled billeting, dining, shower, latrine, laundry, and morale, welfare and recreation (MWR) facilities in battalion-sized modules designed for 550 soldiers each. It is packaged with utility systems, including water storage and distribution (80,000 gallons), fuel storage and distribution (40,000 gallons), wastewater storage, and power generation and distribution (1.1 megawatts continuous) capabilities. Force Provider's basic building block is the tent, extendable, modular, personnel (TEMPER), which comes with external forced-air heating and cooling similar to the systems in the average home.

Force Provider missions include providing rest and refit for combat-weary soldiers, supporting theater reception, and acting as an intermediate staging base (ISB) or as a base or redeployment camp for humanitarian, disaster relief, and peacekeeping operations.

An Interim Response

The Army plans to acquire 36 Force Provider modules through fiscal year 2002; the first two were delivered in December 1996. However, well before those first modules were delivered, the Army's lead-

ers recognized the need for an interim Force Provider-type capability to support contingency missions. So Headquarters, Department of the Army (HQDA), directed that twelve 550-soldier interim support package (ISP) modules be assembled from the Army inventory. The ISP modules (6 in ISP 1 and 6 in ISP 2, with each ISP capable of supporting a brigade-sized force of 3,300 soldiers) were assembled and packaged at Sierra Army Depot, California, between March 1994 and May 1995. ISP 1 has been deployed to Army War Reserve-3 on the pre-positioning ship *Gopher State* since the summer of 1994, while ISP 2 was deployed to Tuzla for Operation Joint Endeavor.

The Army also plans to create six Force Provider companies (two active and four reserve component). However, as of August 1995, only one of those companies had been activated, and it was deployed to Guantanamo Bay, Cuba. So the Army decided to use contractors to operate Force Provider camps in Bosnia. Fortunately, a logistics civil augmentation program (LOGCAP) support plan for Force Provider had been developed. This plan was designed to ensure that civilian contractors would be available when needed, either to augment the Force Provider companies or to operate Force Provider camps when an Army unit was not available.

For Operation Joint Endeavor, two modules of ISP 2 were deployed at each of three base camps in Bosnia's Tuzla Valley: Comanche Base (Tuzla West), with a population of 1,700 soldiers; Steel Castle Base (Tuzla East), also 1,700 soldiers; and Lukavac Base (also known as Gotham City), with 1,500 soldiers. The ISP modules provided 3,300 billeting spaces in TEMPER tents; approximately 2,000 billets were provided in general purpose (GP) medium tents (hardbacks) shipped in the Force Provider containers. Additional GP medium tents were constructed at each camp to provide administrative space. The resulting 5,270 billeting spaces provided by Force Provider represented 54 percent of all TF Eagle billeting in the Tuzla Valley and 25 percent of all space required for U.S. forces in Bosnia.

Predeployment Planning

Predeployment planning began in earnest in August 1995. The Force Provider Product Manager's

o Bosnia



Office (PMO) provided detailed planning information on the capabilities, characteristics, and composition of the ISP 2 package to the U.S. Army, Europe (USAREUR), staff. USAREUR subsequently requested 12 ISP modules, of which 6 (those in ISP 2) were approved for release by HQDA on 6 November.

In October, the PMO selected volunteers for the Force Provider deployment support team and began the long process of preparation for overseas movement. Our eight-person team coordinated and managed the deployment, receipt, assembly, inventory, and handoff of the six ISP modules. We provided technical, doctrinal, engineering, and logistics assistance to the various organizations and activities responsible for selecting and preparing the sites in Bosnia and constructing, operating, maintaining, and managing the camps. Our team finally departed for Bosnia on 17 December.

During October, detailed deployment schedules and timelines were developed, the Military Traffic Management Command (MTMC) identified seaports of embarkation and debarkation, and modes of transportation and cost estimates were established. Detailed discussions also began with the LOGCAP planning cell at the contractor, Brown and Root, Inc.

Because of the long lead time (estimated at 35 days) for shipping Force Provider equipment from Sierra Army Depot to Europe, the Army decided in November to move the six modules out of Sierra and pre-position them in Europe for call forward to Bosnia. The assets were to be stored at the Combat Equipment Group-Europe site in Zuttendaal, Belgium. This decision saved 26 days and avoided the costs of expedited delivery of those assets. (As it turned out, the modules never went to Zuttendaal; they were called forward directly from the port of debarkation at Rotterdam, the Netherlands.)

Deployment and Shipping

The first shipment of ISP 2 left Sierra Army Depot for Beaumont, Texas, on 8 November. The depot programmed and tagged all 355 individual pieces of cargo with radio frequency (RF) tags for improved intransit visibility. In all, Sierra successfully shipped 248 20-foot ISO containers, ninety 100-kilowatt (kW) generator sets, twelve M85 laundries, and five latrine servicing trucks—collectively weighing over 2,500

tons. Sierra personnel also assisted in coordinating the upload of the *American Condor* by the 1314th Medium Port Command in Beaumont.

The ship sailed from Beaumont on 18 November and made port in Rotterdam on 3 December—26 days after the first shipment out of Sierra. Daily situation reports were initiated on 6 November and provided to interested parties throughout the operation. After this initial push, additional equipment (15 containers of cold-weather kit components and 12 new deployable field latrines) was procured, packaged, and shipped into the theater. The ISP modules were moved by all modes of transport: railroad, truck, air, and sealift.

Theater Receipt and Intratheater Transportation

Our team coordinated the offload operation in Rotterdam, which was completed on 5 December by the 1819th Medium Port Command of MTMC Europe. Because signing of the Dayton peace accords was imminent and shipment of the ISP modules to Bosnia would follow immediately, HQ USAREUR decided to leave the modules at Rotterdam for call forward rather than move them to Belgium.

Having members of the Force Provider team on the ground to coordinate movements from Kaposvar, Hungary, site of the ISB, to the base camps in the Tuzla Valley was instrumental to the success of this phase. The modules were shipped from the ISB to Tuzla by the main supply route, which ran from Kaposvar through Staging Area Harmon, across the Sava River Bridge, and down route Arizona. Our team split up after training at Hohenfels, Germany. Four members arrived at Kaposvar on 28 December to coordinate movements and escort the convoys to Tuzla; the other four arrived at Tuzla Main Airfield on 29 December, along with the Air Force's 823d Red Horse Squadron, to coordinate for the shipment, receipt, staging, site selection, design, assembly and handoff of the modules.

The first module was loaded and shipped from the ISB on 2 January 1996. It remained at Staging Area Harmon until 4 January because of a landslide on route Arizona and finally arrived at Comanche Base later that day. The remaining 5 modules were shipped from the ISB to the three camp sites over the following 25 days, with the last module arriving at Steel Castle Base on 30 January.

During this same period, fifteen 20-foot ISO containers of cold-weather kit components were airlifted into the Tuzla Airfield by C-141 and C-17 aircraft. However, lack of adequate materials-handling equipment (MHE) at the airhead and at each camp site frustrated the efficient receipt and movement of this cargo. Nevertheless, the containers were received and moved to the various sites in time to meet construction schedules. Finally, the 12 field-deployable latrine systems to support all three camps were airlifted to the theater between 26 January and 23 February. These water-flush latrines provided the final pieces of a high-quality troop support system at each camp.

At no time were the construction schedules of the three base camps delayed by the arrival of this equipment. However, all parties had to be flexible in executing the mission under very demanding and sometimes chaotic circumstances, particularly in the early stages of the deployment. Inadequate local communications and lack of MHE and transportation increased the difficulties. Use of onsite, dedicated support from our team at the ISB and Tuzla to coordinate and direct all aspects of the movement, as well as support from USAREUR headquarters, were vital to successfully completing the mission.

Long-distance communications via DSN, mobile subscriber equipment, and satellite communications were available to coordinate daily movements and report status. Intransit visibility was provided by the eyes, ears, and hands of team members. Although all cargo was RF-tagged, a system of tag interrogators and communications and information architecture was not in place during these early stages of the deployment to take full advantage of RF technology.

Building the Camps

The speed of the deployment and the "friction and fog of war" required close, continuous coordination of materiel movements with 1st Armored Division command and staff elements and numerous other Implementation Force activities in the Tuzla area. Onsite direction of vehicle offload operations and coordination with construction teams were essential to the efficient construction and handoff of the modules.

Upon arriving in Tuzla on 29 December 1995, our team immediately coordinated with the Red Horse Squadron and Brown and Root on selecting the sites and preparing and constructing the camps. The focal point for all camp construction was the TF Eagle Base Camp Coordinating Agency, and we attended daily planning and status meetings with them.

The master schedule for building the camps in the Tuzla Valley called for the Red Horse Squadron to

construct two tent cities (with GP medium tents) on Tuzla Main Airfield, which was TF Eagle headquarters. Initial entry elements of the "Horse" were already at work constructing 1,200 billeting spaces when we arrived with their number two advanced team. They would begin building Comanche Base within a week after starting the two Tuzla Main Airfield camps.

Comanche Base. Camp design of Comanche Base (Tuzla West) began on 31 December with a site survey by the Red Horse Squadron, our team, and the TF Eagle Base Camp Coordinating Agency. Security for the site had not yet been ensured, and Bosnian Government soldiers still occupied old Soviet MIG aircraft hangers in the immediate vicinity of the camp. Security and safety continued to be concerns during construction because of the presence of Bosnian children, adults, soldiers, and even livestock in and around the site.

Bad weather in mid- to late December restricted air traffic into Tuzla and caused the Sava River to flood (delaying opening of the main supply route), which contributed to delays in receiving needed lumber and plywood. Nevertheless, the flow of Force Provider modules began on 31 December. The modules arrived at Tuzla West (Comanche Base) on 4 January 1996, and construction began in earnest.

The site initially chosen for Comanche Base—an open field adjacent to the airstrip—had poor soil conditions that would have required about 60 days of site preparation before camp construction could begin. That forced a compromise in camp location and design: the majority of the camp was erected on about 2,500 feet of airstrip, and the dining, laundry, and administrative facilities were set up in a smaller section of the original site. While the layout certainly was not ideal, it did demonstrate the flexibility of the Force Provider system.

Billeting spaces for 1,700 soldiers, showers, field-expedient latrines, and MWR facilities, including chaplain, medical, and sports and recreation facilities and a movie theater, were occupied by 25 January by the 4th Aviation Brigade and the 18th Military Police Brigade (-). The remainder of the camp, dining facilities, laundry, and administrative facilities were not completed until 5 February. The tactical field exchange opened on 9 February, and water-flush latrines were installed shortly thereafter.

Comanche Base represents the full capabilities of a Force Provider camp, including power by organic 100kW generators and camp exterior lighting. Operation and maintenance is the job of Brown and Root; however, soldiers operate the dining facilities (with Brown and Root-contracted local nationals per-

forming kitchen patrol functions).

On 9 February, General John Shalikashvili, Chairman of the Joint Chiefs of Staff, toured Comanche Base with Major General William L. Nash, the commander of TF Eagle, and the commander of the 4th Aviation Brigade. The Chairman, aware of similar Air Force bare-base systems, was impressed with the Army's commitment to providing high-quality life support for our soldiers.

Lukavac Base. Construction of Lukavac Base waited while the TF Eagle contracting office negotiated a lease for its site. Camp construction began with the arrival of the first Force Provider module at Lukavac on 5 January 1996.

The Lukavac site, while very confined, did provide some fixed facilities to support a variety of administrative and troop support functions, including dining; as a result, not all of the module's equipment was needed. The Force Provider facilities were built on the surface of a coal bin at the Lukavac coke plant. The water system was plumbed into the existing water supply, and Force Provider 100kW generators were used to power the camp. Because the generators were close to the tents and created unacceptable noise, we developed plans to shift to commercial power. Commercial cranes were required to support the offloading and re-siting of containers.

The soldiers of the Division Support Command (DISCOM), Division-Rear, and other units moved into their new quarters on 17 January. These quarters included heated shower facilities for both men and women. The MWR facilities were sufficiently completed so that a live feed of the Armed Forces Network (AFN) signal could be provided in time for the Super Bowl.

[Lukavac Base closed in August 1996. The two Force Provider modules there have been retrograded through the Logistics Support Activity in Hungary to Miesau Army Depot, Germany, where they are being processed for retrograde to the United States. They will be refurbished and resupplied at Defense Distribution Depot Albany, Georgia, and placed back into the Army's operational project stocks.]

Steel Castle Base. This base, which was the home of the 1st Armored Division Engineer and Division Artillery, was built on a grass airstrip by the Red Horse Squadron. Construction began on 14 January 1996.

Unlike the other camps, it was decided that Steel Castle would be powered by the 249th Engineer Battalion (Prime Power). Close coordination with the prime power team ensured that their four 750kW generators were included in the camp design. Innovative procedures for laying power cable for this

1,700-soldier camp were developed to work around the Bosnia curse of mud and muck.

As with the other camps, the Force Provider 20-foot ISO containers were used to supplement the camp's force protection measures. Being within a few kilometers of the Zone of Separation between Bosnia's warring parties underscored the importance of force protection. Containers also were sited for use as storage and administrative space. As in the case of the other two camps, space was provided for MWR, chaplain, medical aid station, and exchange functions. Steel Castle Base was completed by the Red Horse Squadron on 16 February and was ready for initial occupancy on 19 February.

Key Players

The ranking colonel was the commander of each camp. He in turn appointed one of his officers (in each case a major) as camp mayor. This structure served exceptionally well in achieving the desired level of customer interface and command and control during all phases of camp design, assembly, and handoff. The TF Eagle leadership took a very active and personal interest in all steps of the process.

Our team held coordination meetings that included representatives from Brown and Root (usually the camp manager), the division property book officer, the LOGCAP accountable officer, the Red Horse Squadron, the prime power team (when needed), and, of course, the camp military leaders. The agenda of these meetings included camp construction status and schedule; roles, responsibilities, and relationships of all the players; capabilities and characteristics of the Force Provider system; and the camp commander's comments and issues. We also conducted a final walkthrough at handoff to ensure that each camp was built to the satisfaction of the leaders.

As the individual responsible for the Force Provider modules, the TF Eagle property book officer played a pivotal role in the inventory and handoff of equipment, establishment of supply and maintenance policy, and control of inventory throughout the sustainment phase of the operation. He directed appropriate levels of sub-hand receipts, coordinated further cross-leveling of equipment as directed by higher headquarters, and assisted Brown and Root in establishing a Department of Defense (DOD) activity address code and supply support activity for class IX repair parts for Force Provider equipment.

Coordination also was needed with other agencies, including the Army and Air Force Exchange Service for establishment of tactical field exchanges (there was one in each camp); AFN for installation of satellite dishes or antennas for television and radio

service; and the MWR specialist assigned to each camp for operation of the MWR sets. We also teamed up early with the Center for Army Lessons Learned to document the performance of the Force Provider system, from deployment and assembly through handoff and sustainment to retrograde.

Lessons Learned

Through our experiences in Operation Joint Endeavor, we have learned a great deal about how to deploy and use Force Provider in a theater. Many of these lessons have been incorporated in the new Force Provider Field Manual 42-424 and the new statement of work for the follow-on LOGCAP contract. Here is some advice for those who will support deployment of Force Provider in the future.

Intratheater transportation and intransit visibility. The use of commercial trucking for the intratheater movement from Rotterdam to Tuzla was effective. However, delays generated extra costs and made coordination difficult. Downloading of cargo at the ISB in Hungary added to coordination problems, particularly in managing transportation paperwork. A Force Provider deployment like ours must assess movement and convoy requirements and restrictions before deployment and must ensure that needed transportation assets and personnel are included on the team.

TRICON containers with weight limits of less than 10,000 pounds should be included in the Force Provider production package to ensure the transportability and deployability of the system. There must be timely and adequate transportation and MHE support at the ISB and receiving site to meet the demands imposed by the camp location and the quantity of modules being deployed.

Fully integrated intransit visibility technology should be planned into the Force Provider production system. Until a complete intransit visibility tracking, reporting, and retrieval infrastructure is available, deployment planning must include close coordination with all parties. RF tags should be robust, inexpensive, and physically compatible with containers to prevent their loss or damage. Ancillary equipment, such as handheld interrogators, must be capable of operating in cold weather and must be compatible with cold-weather clothing and equipment.

Site preparation and construction. Do not underestimate site preparation requirements in time, dollars, and materiel. Advanced site surveys and reconnaissance by engineers and logisticians is vital in areas, like Bosnia, that offer challenging terrain and climate. We strongly recommend the continued use of the Air Force's Red Horse squadrons or similar Army capabilities for base camp planning, site sur-

vey, and design and construction in future Force Provider missions. The number of Red Horse squadrons in the active force has been reduced from six to two. Further reductions in the capabilities provided by these squadrons are undesirable. The Army also should study joint use of Red Horse Squadron assets for all future deployments of Force Provider.

Adequate MHE, tools, transportation, and equipment must be made available to prepare the site and receive, unpack, and assemble the Force Provider camp. When LOGCAP contractors are used, they must be given sufficient time after contract award to plan, organize, and equip. It is unreasonable to expect LOGCAP to be effective as an expeditionary logistics or engineering capability if contractors do not have adequate planning time.

Active and/or reserve forces should be used to respond early in the deployment. Units like the Red Horse Squadrons have proven their worth many times over because they can arrive ready to immediately construct assigned base camps. Force Provider has demonstrated the merits of having all the equipment for a camp ready for immediate deployment.

Inventory management. Include an accountable officer representative for operational project stocks on the deployment support team and actively involve him in the predeployment, deployment, and retrograde phases of the operation. Involve the using unit accountable officer early in predeployment planning to ensure that there is adequate inventory and handoff support at the receiving site.

During production assembly, all Force Provider equipment should be marked with unique markings. All serial numbers should be captured during receipt of equipment at the depot and included in the Force Provider management information system data base and on Force Provider packing lists. If the LOGCAP contractor will be operating and maintaining this equipment, make sure that he is bound contractually to accept direct responsibility for all items through standard hand-receipting procedures.

Supply and maintenance. To ensure that equipment can be started and checked out, prepackage battery acid with the Force Provider system support package (SSP) and include sufficient packaged petroleum, oils, and lubricants (POL) products. Make certain that unit operators and maintainers have planned for sustainment support of these items. Bulk POL requirements will continue to be identified to the logistics planner in the predeployment phase; follow through with the deploying unit (the DISCOM or class III officer) or the LOGCAP contractor so that an adequate supply plan is established. Ensure that everyone understands and plans for the POL storage

and distribution capabilities included in the Force Provider package.

LOGCAP contracts must address the specific requirements for system receipt, assembly, startup, and operation and maintenance. Use the Force Provider LOGCAP support plan as a guide when developing the LOGCAP contract. Contract compliance should be conscientiously enforced and monitored.

Adequate planning and execution of repair and spare parts provisioning, receipt, and packaging is vital. Fully coordinate supply support requirements with the receiving unit and the LOGCAP contractor as required to ensure that the system is fully supported by the supply system. Ensure that the user of the Force Provider system has a maintenance plan and can execute it at handoff.

Force Provider ISP equipment. All MWR equipment should meet desired performance characteristics and quality standards. The current 12-head field shower works well and should be part of the production package. Shave stands are a must, and changing benches and clothes hooks should be considered as additions to the production package.

A complete maintenance technical library should be developed and packaged with the prescribed load list and authorized stockage list provided in the SSP of the production configuration. Electronic copies of manuals and supply bulletins should be included to allow for a complete maintenance operation. The Army should consider creating a supply and maintenance service submodule that could deploy with the advanced deployment team; the submodule would include all equipment, supplies, and tentage, plus support capabilities, needed to support the team during its initial coordination of Force Provider deployment, receipt, assembly, and checkout.

Plan and use Force Provider shipping containers for force protection and administrative space without causing damage to the containers. This practice will furnish an immediate capability for performing these functions and will ensure the containers stay with the system until repack and retrograde.

(ISP equipment shortcomings identified during this deployment and documented in our lessons learned have resulted in improvements that are being applied to the production configuration modules.)

In Operation Joint Endeavor, we should have insisted on including Force Provider expertise on the site selection team. That might have averted some of our early problems with site preparation and camp layout. As a result of our Bosnia experience, the Army's Force Provider units have been redesigned so they are capable of operating a minimum of six Force Provider camps without contractor support. To better

prepare ourselves for future operations, we need to ensure that all Force Provider units are trained and can be deployed readily to operate or supervise contractor operation of Force Provider.

In Operation Joint Endeavor, the Army successfully deployed a superior bare-base system providing warm, sanitary, healthful living facilities and recreational outlets for over 5,000 of America's best sons and daughters performing a very difficult and lengthy mission. The Army leadership's vision of improved quality of life for our soldiers is manifested on the ground in Tuzla in an effective Force Provider system. While it may be unusual for a PM to "deploy" his system, this was a unique instance in which the expertise within the PMO and supporting Army Materiel Command activities was needed to perform the mission. It presented an excellent opportunity, in the system's first major deployment, for the PM to assess its operational effectiveness and suitability and to obtain direct, immediate feedback from customers on the system's strengths and shortcomings.

In the future, however, we must take advantage of the Army force structure designed, activated, and trained for this mission. The many lessons learned during this mission will continue to influence the design, development, production, and integrated logistics support of a more responsive and ready Force Provider in the future.

ALOG

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Norm Bruneau is the combat developer for Force Provider. He is assigned to the Army Combined Arms Support Command, Fort Lee, Virginia. He also is the combat developer for airdrop and slingload equipment. He is a retired soldier with over 30 years of experience in logistics, special operations, and airborne matters.

Bridge o

Once known as the 'bridge of death,' the Brcko Bridge has been rebuilt and renamed. Whether the new name is prop



□ The 502d Engineer Company assault float bridge spanning the Sava River at Zupanja, Croatia (above), was used to deploy the NATO Implementation Force into the American sector of Bosnia in December 1995 and January 1996. The motors of the boats alongside the bridge in the current. At right, an M1070 and M1000 heavy equipment transporter system crosses the reconstructed Brcko bridge. After the permanent bridge at Brcko was built, the temporary float bridge was disassembled. At far right, soldiers of the 502d Engineer Company, in conjunction with the 8th MCT and local labor, load float bridge sections and boats onto railcars for return to Germany.



f Fortune

by David Kashimba

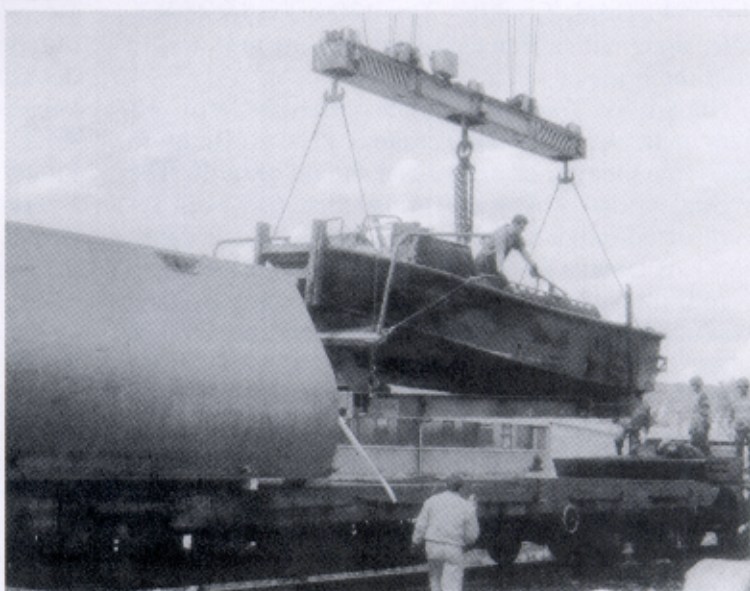
idge between Croatia and Bosnia
phetic or not remains to be seen.



Four years after the Brcko Bridge over the Sava River was blown up by Serbians, personnel of the 1302d Major Port Command, Military Traffic Management Command Western Area, Oakland, California, were among the first to cross the reconstructed link between Gunja, Croatia, and Brcko, Bosnia. The bridge had become known as the "bridge of death" because, at the time of its bombing, it was occupied by two buses carrying over 80 Croatian and Muslim refugees trying to escape Bosnia. The new Brcko Bridge was subsequently renamed "Most Fortuna," which means "bridge of fortune." Whether that name is truly prophetic or not remains to be seen.

In December 1995, after the Brcko Bridge was destroyed, the 502d Engineer Company, an element of the 130th Engineer Brigade in Hanau, Germany, built an assault float bridge spanning the Sava River at Zupanja, Croatia. This bridge was used to deploy the North Atlantic Treaty Organization (NATO) Implementation Force into the American sector in December 1995 and January 1996. It was reported to be the longest American assault float bridge ever constructed.

During a 6-month deployment to Croatia and Bosnia, Major Dale Caroe, 1302d Major Port Command's operations officer, was asked to design a transportation network that would include a new bridge across the Sava River at Brcko. The bridge was part of the main supply route for supplies and equipment coming out of Hungary and other areas across the Sava River to U.S. forces in Bosnia. The design strength of the existing float bridge was inadequate for the heavy vehicles. While deployed, Caroe was commander of the 8th Movement Control





□ A soldier guards the Brcko end of the reconstructed bridge that once again connects Gunja, Croatia, with Brcko, Bosnia (above left). While in Croatia, soldiers of the 8th MCT contacted their families, church groups, schools, and other stateside organizations to send clothes, toys, and other useful items. In the photo at right, Major Dale Caroe (left), with a chaplain's assistant and a local translator, hands out gifts to Bosnian refugee children.

Team (MCT), an element of the 27th Transportation Battalion, which resided north of the Sava River in Slavonski Brod, Croatia. The 130th Engineer Brigade, along with a Hungarian engineering unit, would build the bridge.

The 8th MCT and other Transportation Corps soldiers made several reconnaissance visits to Brcko to determine the type of bridge that should be built. The original bridge was a rail bridge that had been reconstructed into a highway bridge in 1984. Because the roads leading to the existing float bridge were so narrow, the 8th MCT and the 130th Engineer Brigade concluded that a new bridge with a one-way traffic pattern would be the best and most expeditious choice.

When the bridge was finished, an MCT member was stationed on it 24 hours a day to help the military police direct traffic. The MCT developed staging areas nearby for the supply trucks that had to cross the bridge. There the drivers parked and waited for their turn to cross the bridge.

According to Major Caroe, the presence of U.S. troops had a calming effect in the war-torn areas of Bosnia and Croatia. "I believe this is why we routed our main supply routes through some of the more devastated and volatile areas like Gunja and Brcko, because everywhere we went we did act as a calming force. Whether it will stay that way or not I don't know," he said. "But by the end of my deployment, I was encouraged to see people rebuilding homes on both sides of the river." Hopefully, the bridge of fortune also will be a bridge to peace. **ALOG**

David Kashimba is the editor of the Military Traffic Management Command Western Area's newspaper, Western Arrow. He is a graduate of San Francisco State University and teaches English literature and writing at one of Chapman University's extensions in San Francisco, California.

The author thanks Major Dale Caroe and Captain David Fruedenburg for the photos that accompany this article.

'Let's Go to the PX!'

by Major Richard D. Colley and Major Earnest L. Evans

Although the Army and Air Force Exchange Service (AAFES) has always considered support of contingency operations a priority, it usually has been the last 'player' to be included in operational deployment planning.

The post exchange and its various facilities are at the center of off-duty activities wherever soldiers are stationed around the world. Whether it is the main store, shoppette, theater, military clothing sales store, barber or beauty shop, or just a vending machine in the barracks, the Army and Air Force Exchange Service (AAFES) is always there for soldiers and their families. But what about soldiers who are deployed on extended training exercises or peace-keeping missions in remote areas of the world? Is AAFES there for them too? You bet!

AAFES has always considered support of contingency operations a priority. However, AAFES usually has been the last "player" to be included in operational deployment planning. This means that, when the call finally comes to move out, contingency planners at AAFES headquarters often have to scramble for information and timelines in order to establish exchange support on the ground. Because of the importance of AAFES facilities to soldier morale and the volume of merchandise that must be moved by military transport, it is imperative that AAFES be included in the initial planning process. Planning is one of several critical issues addressed in the Army Combined Arms Support Command's (CASCOM's) Tactical Field Exchange Operational Concept, currently being staffed, and Joint Publication 1, Joint Warfare.

Recently, the Strategic Planning and Communications Directorate at AAFES headquarters in Dallas, Texas, took the proverbial bull by the horns and initiated planning coordination with major military commands throughout the Army and Air Force to enhance the readiness of AAFES to support contingency operations. It is hoped that this action will result in AAFES routinely getting in on the ground floor of the planning process for major deployments.

Most military contingency plans call for units to

deploy with 60 days' worth of class VI supplies that are prepackaged in health and comfort packs. (Class VI supplies are personal items that normally would be available through the exchange system.) This means that, in many cases, AAFES is not considered in air or sea flow planning earlier than D+60. However, soldiers have come to expect much more than the items provided in the health and comfort packs. For that reason, commanders have requested AAFES support much sooner than planned during recent deployments for military operations other than war. For example, the first field exchange was opened on D+7 for personnel in Hungary for Operation Joint Endeavor. AAFES will provide ground exchange support as early as the commander wants it. However, AAFES depends on the theater or major command commander for transportation, facilities, and, sometimes, personnel to operate the field exchanges.

Levels of Support

AAFES can provide three levels of field exchange support. The support provided depends on the level of hostilities in the area of operations and the level of support desired by the commander. First, the commander can ask for an imprest fund activity. This type of support allows the commander to establish an account with a parent exchange and draw up to 10 thousand dollars' worth of resale merchandise. The activity can be resupplied as often as desired, but its inventory must not exceed the total authorized stockage level. The commander appoints an imprest fund activity manager who is trained by AAFES in accountability and retail sales procedures. The imprest fund is best suited for small unit operations in remote areas.

If the commander will be operating in a hostile or potentially hostile environment, he may choose the second kind of support—a tactical field exchange

(TFE). A TFE is staffed by military personnel who are trained in retail operations by AAFES. A TFE officer is appointed to supervise the operation and account for the exchange funds and inventory. The TFE officer also must attend AAFES training.

There is no limit to the size of the inventory authorized for a TFE. However, it should include only health, hygiene, and welfare items. Televisions, compact disk players, and jewelry are beyond the intended scope of a TFE.

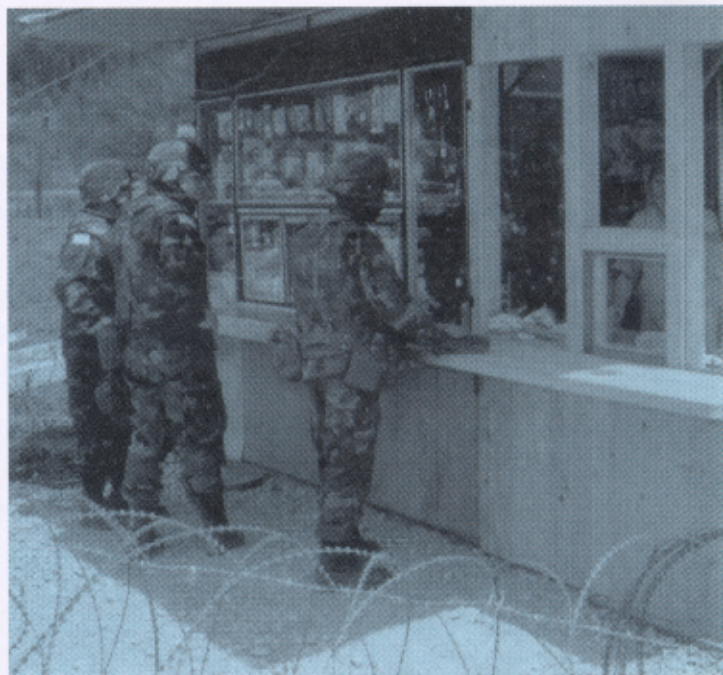
Finally, in nonhostile environments, AAFES can employ civilians to provide a direct operations exchange-tactical (DOX-T). The size of the DOX-T is limited only by the size of the physical facility provided by the military commander and the availability of military transportation to support it.

Concurrent Operations

In a large area of operations, it is not uncommon for more than one type of AAFES field exchange support to be provided simultaneously. Current operations in Bosnia require a mix of DOX-T's and imprest fund activities to support the troops adequately. The



□ Military personnel depart a tactical field exchange in Bosnia carrying snacks, sodas, and other items. The bullet holes in the walls of the AAFES facility are a grim monument to earlier violence in the area.



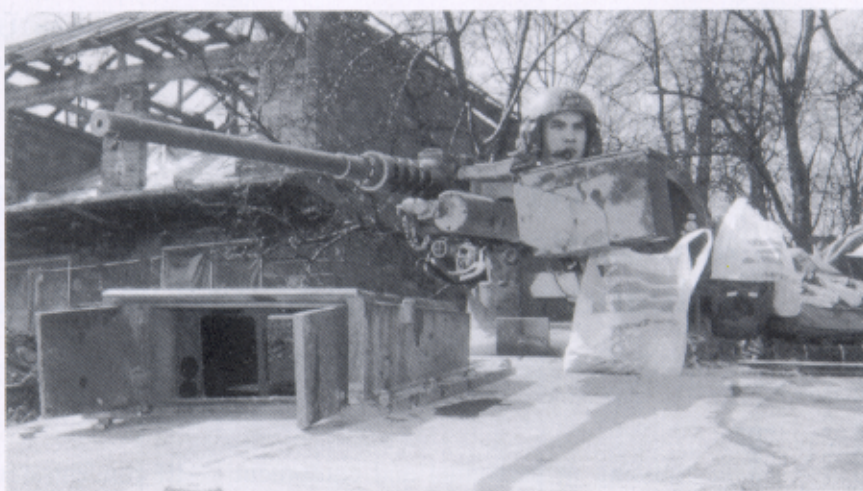
number and geographic dispersion of base camps in Bosnia, coupled with force protection considerations and travel restrictions, make DOX-T support throughout the theater difficult. By the end of May 1996, nearly 20,000 U.S. troops were deployed south of the Sava River in Bosnia. To support them, AAFES operated 12 DOX-T's staffed with AAFES employee volunteers and 20 imprest fund activities managed by unit personnel.

All North Atlantic Treaty Organization coalition forces and Department of Defense civilians deployed in support of Operation Joint Endeavor are authorized to shop at AAFES facilities. For the first time, this authorization also extends to Russian, Polish, and Czech soldiers. AAFES also operates DOX-T's in Hungary and Croatia. U.S. forces in Sarajevo, which is situated in the French-controlled sector of Bosnia, are supported by an imprest fund activity that draws from the DOX-T at Zagreb, Croatia.

AAFES also provides other services that enhance the quality of life for soldiers deployed to Hungary, Croatia, and Bosnia. AAFES opened its first food court in Hungary in April 1996. Initially, the food court included Anthony's Pizza, Burger King, and Baskin-Robbins Ice Cream. The operation has expanded and now provides mobile food service to remote locations throughout Bosnia. As the situation stabilized, services such as barber shops and clothing alteration services were added at many DOX-T facilities. Most of the troops deployed to Bosnia have access to AT&T phone service for morale-boosting calls home. This same phone service is also available in Hungary and Croatia.



□ Barbed wire notwithstanding, this exchange is located in a 'nonhostile' area in Bosnia and is staffed by AAFES civilians (left). Well supplied with snacks purchased at a nearby AAFES site, a soldier resumes his duties atop an M1 tank in Bosnia (below).



Staffing Restraints

Before October 1995, the Army relied on Air Force personnel to operate TFE's. However, the Air Force no longer has the capability to provide this support to the Army. This means that the Army must find a way to staff TFE's with soldiers when the exchange is located forward of the corps boundary or in a hostile environment. (As noncombatants, AAFES civilians usually are not authorized to be in these areas.) However, operational units are not staffed to perform this mission. Therefore, CASCOM, in conjunction with AAFES; the Office of the Deputy Chief of Staff for Personnel, Department of the Army; and several other Army agencies, is studying this situation to develop a doctrinal solution for staffing TFE's with reserve component personnel.

The number of personnel required to operate a field exchange varies from 4 to 20, depending on the size of the facility and the number of soldiers supported. To ensure that field commanders have trained and qualified military personnel, AAFES has developed a 1-week training package that can be accomplished with a mobile training team from AAFES. The training covers the various retail tasks a soldier must perform, such as receiving and accounting for merchandise; rotating stock; managing the inventory, sales, and cash funds; reordering; and completing daily paperwork and reports. Soldiers of the 240th Quartermaster Battalion, Fort Lee, Virginia, were the first personnel to receive this training during Operation Roving Sands '95, held in Texas and New Mexico. AAFES will continue to refine the training package and use it as a starting point for developing a

formal Army and Air Force course.

AAFES employees are proud of their mission to support soldiers, airmen, and their families. In a recent call for volunteers to staff DOX-T's, over 100 AAFES employees worldwide signed up to go wherever the need arises. AAFES will continue to search for ways to improve service to the soldiers and families in garrison. But AAFES also is committed to providing high quality goods and services at a moment's notice anywhere in the world for our deployed soldiers and airmen.

ALOG

Major Richard S. Colley is assigned to the Military Clothing and Accessories Strategic Business Group at Headquarters, Army and Air Force Exchange Service (AAFES), in Dallas, Texas, as the Army Business Program Manager following a year as aide-de-camp to the commander. He is a graduate of Eastern Kentucky University, the Infantry Officer Basic Course, Quartermaster Officer Advanced Course, and the Combined Arms and Services Staff School.

Major Earnest L. Evans is currently a student at the Air Command and Staff College, Maxwell Air Force Base, Alabama. He served previously as contingency plans and operations officer at Headquarters, AAFES, and deployed to Bosnia with the AAFES advance team in January 1996. He has a bachelor's degree from Middle Tennessee State University and a master's degree from Troy State University in Alabama. Major Evans is a graduate of the Air Defense Artillery Officer Basic Course and the Quartermaster Officer Advanced Course.

Drawing Down Sea Signal

by Lieutenant Colonel Dorothy T. Johnson, USA, Captain Ronald W. Krueger, USAF,
and First Lieutenant Jennifer M. Shields, USA

When the mission of caring for migrants ended at Guantanamo, a U.S. Atlantic Command joint activity cleaned up the base and retrograded the equipment.

The massing of personnel and equipment from the different armed services for a joint operation is not unusual during times of armed conflict. However, in January 1996 a joint logistics element was established, not for battle, but to conclude the final phase of a humanitarian mission that had involved U.S. Forces for nearly 2 years.

That humanitarian mission was Operation Sea Signal. It began at Naval Base Guantanamo Bay in Cuba in May 1994, when Joint Task Force (JTF) 160 assumed responsibility for feeding, housing, clothing, and caring for more than 50,000 Haitian and Cuban migrants seeking asylum in the United States. When the last migrants departed from the base in late January 1996, the Joint Logistics Support Group Guantanamo (JLSG GTMO) stood up to undertake a threefold mission: retrograde all remaining Sea Signal equipment and materiel to the United States; restore the facilities and grounds of the base to pre-Sea Signal conditions; and redeploy JLSG personnel.

The JLSG consisted of 320 soldiers, sailors, airmen, and marines under the command of an Army Transportation Corps lieutenant colonel. All of the group's personnel worked tirelessly to clear out and clean up the impact of Sea Signal on the naval base.

JLSG first conducted a thorough mission analysis to determine the amount of time that would be needed to execute separately each of the mission's common tasks: retrograde, restoration, and redeployment of troops. JLSG then synchronized those requirements to produce a four-phase, event-driven plan that directed simultaneous restoration and retrograde missions while continuing the drawdown of U.S. personnel. The first phase focused on the migrant camps, and the second on the U.S. Forces base camps. Phase

III concentrated on consolidating assets and support facilities, while phase IV was the redeployment of troops. Phase I began on 2 February, and phase IV finished on 11 April—a week ahead of schedule.

Retrograde

The retrograde of assets from Operation Sea Signal began before the standup of JLSG GTMO. It was a systematic, ongoing process that increased in tempo as units no longer needed equipment for operational taskings. The final retrograde was more challenging because moving the large amount of materiel and equipment had to be synchronized carefully with the performance of remaining missions at Guantanamo.

The most critical retrograde task was accounting for all assets. The property book office spent countless hours conducting research, tracking paperwork, and locating items—a massive effort that restored accountability for nearly \$452,000 of installation property. The accountability process had another plus: JLSG gained visibility of all equipment and materiel for retrograde.

Based on an analysis of mission requirements to determine when equipment was no longer needed, JLSG constructed a flexible retrograde plan. The data for all items requiring transportation were loaded into the Joint Operational Planning and Execution System (JOPES), which provided planners with the information they needed to define lift requirements. The majority of assets were returned to the continental United States (CONUS) by sealift. Over 182,000 square feet of cargo were carried on board seven vessels, including the commercially contracted barge *Thunder and Lightning*, the Military Sealift Command ship *American Condor*, and watercraft from the

Army's 7th Transportation Group at Fort Eustis, Virginia.

The remaining excess materiel was screened for controlled items and then either turned over to the base's Defense Reutilization and Marketing Office (DRMO) or the Retrograde and Excess Disposition Team (RAEDT). DRMO disposed of unusable property and ensured that serviceable property was made available for reutilization. RAEDT assigned disposition instructions for materiel purchased by the commander in chief of the U.S. Atlantic Fleet (CINCLANTFLT) and saw that it was provided to other crisis areas as needed.

Restoration

The other main task confronting JLSG was restoration of the facilities and grounds of the naval base in the wake of Operation Sea Signal. During the early stages of the operation, base facilities were used to temporarily house migrants and provide office and operating space for U.S. Forces support functions. Eventually, four camps were established, two for migrant housing and two for U.S. Forces base camps. As the populations in the camps decreased, so did the need for support facilities.

Facilities and grounds used throughout the 2 years of Operation Sea Signal required substantial restoration before they could be returned to the custody of the naval base. A memorandum of understanding between the base and JTF 160, signed in September 1995, and a subsequent meeting between representatives of the base, U.S. Atlantic Command (USACOM), and CINCLANTFLT produced a list of all facilities impacted by the operation and clarified the procedures for returning them to base control.

Where possible, responsibility for restoring each facility was assigned to its occupants. In those cases where restoration was beyond the capabilities of the occupants, Seabees from Naval Mobile Construction Battalion 7 or the base public works department completed the work. Migrant villages were restored to a condition of "readiness" so their facilities could be reactivated for future migrant contingencies with a minimum of engineering effort and reconstruction.

In an attempt to leave the base in a better condition than existed before Sea Signal, JLSG troops completed several "value-added" restoration projects not previously identified, such as collecting over 1 mile of concertina wire found throughout the base and transferring it to DRMO. They also participated in the base's weekly police call.

Redeployment

In order to maintain the correct mix of personnel needed to complete the mission, the redeployment of troops had to be carefully managed. The key to success was developing a plan that synchronized redeployments with the retrograde and restoration missions. A personnel assets inventory conducted when JLSG stood up established a firm personnel roster by service and specialty. That ensured that the right people were present and available as the operation wound down.

Achieving Success

The final drawdown of Operation Sea Signal required careful calculation and balance among the missions of retrograding equipment and materiel, restoring grounds and facilities used throughout the operation, regaining accountability and visibility over



	PHASE I Migrant Camp (2 Feb–22 Feb)	PHASE II U. S. Base Camp (25 Feb–18 Mar)	PHASE III Consolidation of Assets and Support Facilities (19 Mar–1 Apr)	PHASE IV Redeployment (2 Apr–18 Apr)
Restoration	38% (13%)	54% (38%)	75% (87%)	100% (100%)
Retrograde	47% (56%)	86% (77%)	96% (98%)	100% (100%)
Redeployment	25% (25%)	41% (38%)	61% (57%)	100% (100%)
Overall Mission	43%	70%	86%	100%

□ The drawdown of Operation Sea Signal was conducted in four phases, with the missions of restoration, retrograde, and redeployment pursued during each phase. JLSG set goals for accomplishing a certain percentage of each mission during each phase. This chart shows the percentage of each mission actually performed during each phase, with the goal shown in parentheses.

operational assets, and redeploying troops. JLSG's success was due to several factors.

Mission analysis. JLSG's first step was the analysis of the mission. This analysis determined what the mission entailed and how much time was needed to execute each aspect of the mission independently. The three tasks of retrograde, restoration, and redeployment, which were referred to as the "common threads" throughout each phase of the operation, were surveyed for their mission requirements.

Warehouses, grounds, and facilities were inspected for equipment and materiel requiring retrograde. Retrograde items were defined as those items that required disposition to CONUS via sealift (airlift was not required), to organizations at the base (such as DRMO), or to the RAEDT (which was operating as a representative of CINCLANTFLT).

The first restoration step was identifying work that still had to be performed on grounds and facilities under a memorandum of understanding executed between JTF 160 and the base and verified at a December 1995 meeting hosted by the USACOM J4. Once identified, each individual tasking was analyzed to determine the time, equipment, and materials needed to do the job and the availability of the required equipment and materials.

Requirements for troops and specialized personnel (such as electricians and drivers) were identified in terms of who was needed to execute the retrograde and restoration missions separately. This permitted development of a redeployment plan that would support the ongoing retrograde and restoration missions.

Synchronizing tasks. Once the work requirements were determined, the common threads—retrograde, restoration, and redeployment—were synchronized using a timeline methodology. This synchronization over time produced a clearer picture of how much time was needed to accomplish the mission with available resources. Synchronization created a balance among the common threads that allowed the overall mission to succeed. For example, large numbers of troops could not redeploy until the most labor-intensive missions were completed, and key equipment was scheduled for retrograde only when specific mission requirements were completed.

Operation order. The operation order was developed, staffed, coordinated, and published before the mission began. All key staff personnel and commanders were thoroughly familiar with what had to be done and had verified that all requirements were "doable" before the order was published. Organizing the mission into four phases provided order and focus, as well as end-of-phase goals that could be used to quantify success. The operation order facilitated understanding and eased mission execution; troops at

all levels could understand the order's intent.

Phase analysis. At the completion of each phase, an analysis was conducted to identify shortfalls, discover how well goals were being attained, and determine what corrective actions were needed. Each primary staff officer and commander was required to write a synopsis of what was accomplished in the phase, including an analysis linking phase accomplishments to the planning factors in the operation order. This process forced key personnel and the JLSG commander to think seriously about the means they used to perform the mission.

Property accountability. Property accountability was emphasized at all levels of the command and was addressed daily as a command issue. A disciplined property accountability system was set up as soon as the JLSG was established, and it was routinely reinforced. As a result, visibility and accountability were regained over both installation and organizational property. All reports of survey were resolved before JLSG stood down.

Flexible execution. While JLSG personnel pursued the goals for each phase, they also took advantage of opportunities to complete tasks scheduled for subsequent phases. For example, 38 percent of the total restoration mission was completed during phase I, exceeding the goal of 13 percent planned for that phase. However, due to additional engineering requirements, 75 percent of the restoration mission had been accomplished by the end of phase III, compared to the planning goal of 87 percent. The bottom line was that moving ahead and not being confined by a planning factor allowed the mission to remain on track.

Joint teamwork. A superbly matched joint team was deployed to Guantanamo Bay in JLSG. Most troops volunteered to work on the mission; some already had frequent involvement with Operation Sea Signal. However, the real strength of JLSG was a sincere desire to accomplish the mission as a team. There were no unfriendly service rivalries; the services helped each other and complemented each others' capabilities in achieving success.

Troop support. Troops who believe they are well informed and well cared for tend to take personal ownership of their mission and much greater pride in what they are doing. With this in mind, the JLSG leadership emphasized team building through communication, group social activities, and improvements in living conditions.

The main body of JLSG personnel initially was housed in block and wood structures at the U.S. Forces base camp; those quarters featured port-o-lets and cold-water gang showers. Since restoring the base camp was one of JLSG's missions, the group



□ These "before and after" aerial views show the change in the migrant villages and base camps produced by the restoration efforts of the Joint Logistics Support Group Guantanamo



leadership coordinated with the naval base to move troops into empty base housing units so that restoration of the base camp could be completed far ahead of schedule; the move had the important additional benefit of improving troop morale tremendously.

The JLSG commander kept the troops informed of mission status through end-of-phase mission briefings. These briefings, which featured the same charts used to brief general officers, explained progress toward the mission's end state and identified the specific tasks that had to be completed before redeployment. By the end of phase I, all troops knew the phase during which they could expect to return home.

Picnics and end-of-phase social activities were held on a regular basis so the troops could meet outside of work. Group physical training also was emphasized for all services. The JLSG conducted weekly formation runs to build team spirit and ensure that the troops would be physically fit when they returned to their home units.

"Host nation" support. One of the most important factors contributing to success was the relationship JLSG established with the residents and leaders of the

naval base. The base accommodated troops at the base mess hall and housing area and scheduled sports and other morale, welfare, and recreation activities around the JLSG's redeployment plan so JLSG personnel could participate. The early restoration of the U.S. Forces base camps was possible only because of the friendly relations and sincere cooperation that existed between the JLSG and its host.

Communicating with higher headquarters. To avert potential misunderstandings, JLSG maintained frequent, thorough communications with its higher headquarters at USACOM, the naval base, and its customers. Daily situation reports sent by the secure electronic messaging system kept USACOM aware of changing mission requirements; detailed weekly messages reporting mission status contributed to more accurate higher level decisionmaking. A sincere effort by the JLSG staff to telephone and get to know their counterparts at USACOM and the naval base kept all players focused on completing the mission. The result was a true team effort.

What were the JLSG's accomplishments? Nearly \$21 million worth of equipment and materiel—232,000 line items, or 947,000 square feet—were retrograded from Cuba. Twenty-four facilities and grounds were restored, at a minimum, to their condition before the operation, and operational facilities were placed in a state of readiness for the future. The group maintained accountability over a \$15.5 million property book and regained visibility and accountability over nearly \$452,000 worth of installation property.

The mission was accomplished safely, customers were satisfied, and the troops felt that they had done something good for their country. The joint environment presents challenges one does not find in the service environment, but the experience of working successfully as a joint team is extremely rewarding.

ALOG

Lieutenant Colonel Dorothy T. Johnson was commander of the Joint Logistics Support Group Guantanamo from 20 January to 11 April 1996. She is a Transportation Corps officer and currently is assigned to the U.S. Atlantic Command Directorate for Logistics (J4).

Captain Ronald W. Krueger, U.S. Air Force, served in the Joint Logistics Support Group Guantanamo J3. He is currently assigned to the 34th Bomb Squadron at Mountain Home Air Force Base, Idaho.

First Lieutenant Jennifer M. Shields was commander of the 62d Quartermaster Detachment at Guantanamo Bay. She currently serves as the supply and services officer, 553d Corps Support Battalion, Fort Hood, Texas.

Intermediate Staging Base O

Although the size of U.S. Armed Forces has diminished significantly during the 90's, many American commitments and interests continue overseas. Because of this, greater emphasis has been placed on the ability of the U.S. military to project power beyond the continental United States.

A key factor in the power projection equation is the intermediate staging base (ISB). [Draft Field Manual 100-17-3, Reception, Staging, Onward Movement, and Integration, now being staffed by the Army Training and Doctrine Command, defines ISB as "intheater staging base."] Multifunctional logisticians must be able to plan and execute ISB operations successfully to enable U.S. forces to deploy quickly and efficiently. And, because of potential distances to deployment sites, the ISB often is located outside U.S. national boundaries in a friendly host nation (HN).

Simply put, an ISB is a staging and support area where personnel and vehicles gather before moving to an exercise or operations area. An ISB arranges food, fuel, billeting, and other life-support services for transient soldiers. It also oversees the coordinated movement of vehicles, equipment, and supplies to support the operation at hand.

Logisticians from the 22d Area Support Group (ASG), based at Vicenza, Italy, operated an ISB in support of Exercise Peaceful Eagle '96 (PE '96) last summer. The 22d ASG was assisted by the 14th Transportation Battalion and the 1321st Medium Port Command. PE, first held in 1995, is a combined peacekeeping exercise involving U.S., Italian, and Albanian soldiers. The 22d ASG habitually supports deployment of a joint task force (JTF) built largely from personnel of the Southern European Task Force (SETAF), also based at Vicenza.

The ISB executed three phases of support of PE '96. Phases I and II deployed forces to the exercise area port of entry at Durres, Albania. Phase III included the redeployment of all U.S. and Italian forces exiting Albania by sea as well as a significant number of troops traveling by air.

The ISB was not a single, continuous entity. In-

stead, it encompassed five separate installations. The ISB's center was at the Italian port of Ancona on the Adriatic Sea. The ferry-loading areas for troops and equipment bound for Durres were located at the commercial port of Ancona. The ISB command and control cell was located in a building approximately 4 kilometers from the port entrance. The Italian naval detachment in Ancona provided the command and control cell with billeting, office facilities, food service support, and storage areas.

Italian Air Force facilities were located 10 kilometers north of the port at the Falconara airport. These facilities served as marshaling areas for vehicle convoys, bus staging areas, and emergency overflow troop accommodations. Caserma Sarcini, home of the Italian Army's 84th Infantry Battalion at Falconara, was the primary life support point for soldiers passing through the ISB. This facility provided food service, billeting, and showers for the troops. The



❑ Ships compete for the limited space in the Port of Ancona, Italy, the center of the intermediate staging base for Exercise Peaceful Eagle '96.

operations in Italy

by Major Scott T. Glass

caserma, which sat almost immediately adjacent to the Italian Air Force facility, was also a vehicle refueling site.

Caserma Alto Del Monto in Pesaro, about 60 kilometers north of Ancona and also on the Adriatic coast, supported soldiers who could not be accommodated at Caserma Sarcini. The installation also maintained a large area that was used for vehicle staging when necessary.

During PE '96, the Ancona ISB handled over 1,000 soldiers, 450 pieces of rolling stock, and 30 pieces of miscellaneous cargo during deployment and redeployment operations. ISB personnel used eight ferries, four trains, six convoy serials, and six CH-47 Chinook helicopter missions to transport personnel and equipment to Albania.

ISB operations for PE '96 were successful by every definition. However, success was possible only with a great deal of support from and coordination

with Italy, the host nation. This cooperative effort produced a number of lessons learned that would be useful to any unit planning to execute ISB operations with the assistance of a host nation.

Interpreters. It is likely that, when operating an ISB with HN assistance, ISB leaders will encounter at least one language in addition to English. Ancona ISB planners recognized early on that a high level of language proficiency is necessary to carry on sensitive coordinations. Although soldiers making up the ISB teams lived and worked in Italy, few could speak Italian very well. The 22d ASG S3 section deployed a local national employee whose primary function was to serve as an interpreter. In addition, the Italian liaison staff at SETAF provided an Italian Army lieutenant colonel to assist the ISB. Although the ISB would have benefited from one or two more interpreters, this arrangement was satisfactory.

Elements from the 7th Corps Support Group based in Germany participated in PE '96. During the redeployment, a significant amount of oversized equipment had to be moved back to Germany by commercial truck. The truck operators spoke German exclusively, slowing coordination during loading operations. The ISB had not anticipated the need for proficiency in German. In the future, if the possibility exists that an ISB may serve multinational forces, ISB planners should seek to recruit an interpreter or liaison officer from each country to be available to the ISB command and control element throughout the operation.

ISB personnel recognition. The HN military personnel must be able to recognize ISB personnel readily. This issue was solved easily by making small, laminated badges showing the equivalent HN rank and insignia for all ISB team members. The badges were worn clipped on the battledress uniform chest pocket flap. Since recognition is a two-way street, ISB personnel also should carry pocket cards or sheets with HN ranks and insignia. Materials for this purpose may be available at a supporting training and audiovisual support center.

Leader reconnaissance and site-coordination visits. When planning an ISB with host nation involvement, plan to do reconnaissance and site visits early in the planning process and, when possible, more than once. Ancona ISB planners received authorization to visit the ISB area of operations and coordinate with



Italian military authorities only 2 weeks before operations began. Although this short lead-time might be adequate in a no-notice deployment, it adversely affected the ISB staff's ability to plan some areas effectively.

Interpreters and HN liaison officers are absolutely vital to a meaningful HN ISB reconnaissance. The HN officers facilitated entry into limited access areas and arranged meetings with Italian commanders, which helped make the best use of the time spent on ISB site-coordination visits.

Subsistence. One of the goals of the ISB should be to feed deploying soldiers hot, high-quality, nutritious meals as often as possible. In most cases, the meals consumed in the ISB are the last hot meals deploying soldiers have before entering the area of operations. The ISB in Italy contracted for meal service by Italian military dining facilities. Reviewing the menus to be sure they were compatible with American diets became one of the reconnaissance objectives. For example, Italians place much less emphasis on the breakfast meal than Americans do. Therefore, planners negotiated additional breakfast menu items during the site-coordination visits. Also, the Italian dining facilities regularly serve small amounts of table wine with meals. Coordination during the planning stages deleted the wine from the meals served to American soldiers.

Italian Navy dining facilities operate on a monthly budget and needed their final monthly payments before the exercise ended. The 22d ASG civilian liaison worked closely with the dining facility managers to ensure reimbursement to accommodate their operating schedules.

Italian military services prepare meals for exact headcounts, often with ingredients purchased on the day of preparation. Meals are served at precise times. If U.S. soldiers could not be at the dining facilities when the meals were served, the ISB provided the soldiers with meals, ready to eat (MRE's), and bottled water. Each site, with the exception of the port, maintained a supply of both.

Caserma Sarcini is an Italian training base. Italian soldiers training there are issued a mess kit remarkably similar to the one familiar to U.S. soldiers. During the ISB reconnaissance, leaders discovered that there were no mess kits available for temporary issue to transient U.S. soldiers. The ISB solved this potential problem by bringing paper plates and plastic flatware from Vicenza.

ISB planners should determine if multifaith meals are needed to support troops from different countries transiting the ISB. Whenever Italian Army units moved through Ancona, the ISB was responsible for

feeding the Italian troops while they were loading ferries in the port area. The meals furnished to both U.S. and Italian soldiers at dockside were MRE's. Fortunately, feeding Italian soldiers MRE's posed no problem, but host nations with diverse religious views might have required a significant number of multifaith MRE's.

Fuel. Another primary goal of the ISB should be to enable forces to deploy with maximum amounts of fuel, both in vehicle fuel tanks and in direct support refuel vehicles and trailers. U.S. forces used JP-8 fuel in PE '96. However, the Italian military does not use JP-8. To refuel vehicles driven from Vicenza, the ISB transported bulk fuel from Vicenza in HEMTT (heavy, expanded mobility, tactical truck) tankers.

Both the Italian military and U.S. Army used diesel and "mogas" (motor gasoline) during the exercise. Caserma Sarcini provided diesel fuel and mogas support for both. However, the Italian military used considerably more mogas than the U.S. Army. Although the Italian military's higher fuel consumption rate did not cause a problem at Ancona, ISB planners should consider bulk fuel requirements of each country's deploying forces whenever executing an HN ISB.

Billeting. Each ISB should have the capability to house transient soldiers in safe, secure, weatherproof quarters. This allows soldiers to rest before moving to the area of operations.

A serious billeting problem occurred because the Italian Army has no female soldiers. Italian military authorities were extremely sensitive to the presence of female soldiers, especially female officers, and limited the areas where females could stay. If the HN military differs from the U.S. military in this respect, ISB planners need to coordinate additional accommodations for female U.S. soldiers. For instance, female showers did not exist on the Italian casermas, and a schedule for using the existing showers by male and female soldiers had to be worked out.

The ISB leaders committed themselves to leaving the Italian quarters in excellent condition. The ISB deployment plan included a provision that all facilities and equipment would be cleaned before departure. Site officers in charge conducted a walk-through of the empty quarters with Italian military representatives to ensure that the facilities met cleanliness standards for return to the HN.

Convoy escorts. Under status of forces agreements already in place, Italian police (carabinieri) must escort convoys of more than four vehicles, oversized vehicles, any vehicle carrying hazardous materials, or troops whose movement is accompanied by other than individual weapons. In addition, convoys

moving at certain times during the weekend require special permission, coordination, and escort. ISB leaders must coordinate traffic movements with the HN. It is also important to allow flexibility in convoy departure times and plan for escorts accordingly. In addition, ISB planners must know HN military traffic rules and regulations.

Security. Force protection is always a planner's concern, but it is even more critical during HN ISB operations. Each Italian military installation offered the advantages of walled compounds topped by razor wire. Double-gated access points with armed Italian guards further enhanced the ISB's security posture. This level of security may not be provided at other HN facilities, so ISB planners must determine the level of threat and, if required, ask HN authorities to upgrade security precautions.

Operations security (OPSEC). Even though the HN likely will be supportive of the mission objectives, OPSEC still must be observed. At the ISB at Ancona, Italian security arrangements restricted contact between deploying forces and the local population. In addition, soldiers moving through the ISB were not allowed to leave Italian military facilities unless specifically required to do so by their military duties.

Communications. Because of frequent changes in troop flow, ferry docking times, and aircraft flights, an ISB's communications system determines if it lives or dies. ISB planners should ascertain the communications support available on an early reconnaissance visit to the HN. The ISB at Ancona could not arrange an interface between the Italian military telephone network and the Defense switched network (DSN). Consequently, the primary ISB communications mode was cellular phones. Although convenient and flexible, cellular phones can be exorbitantly expensive to use, and most cannot operate in a secure mode. Except by cellular telephone, the ISB command and control cell had no telephone link with local Italian military commanders. This was a significant deficiency. Planners should address this for all future HN ISB's.

Customs documentation. PE '96 involved customs coordination with Italy, Germany, and Albania. During redeployment, operational necessity dictated that, instead of being returned to Germany, some equipment had to be sent to a fourth country. The importance of thorough customs documentation must be emphasized throughout the planning process. Poorly prepared customs paperwork will bring ISB operations to an immediate, grinding halt.

Public affairs office and local news media. U.S. public affairs elements were present during parts of

all three operational phases. However, the ISB leaders did not develop a specific plan or procedure for dealing with the local Italian news media other than referring them to the public affairs personnel. Although Italian news sources did not request credentials from the ISB (perhaps an indication of the success of the ISB's physical security and OPSEC plan), a strategy for dealing with them should have been in place.

Unit ministry team. The ISB should plan for religious services. However, if the HN government recognizes a particular religious faith over all others, the HN might object to U.S. multifith services. If possible, the ISB reconnaissance team should get approval from the HN to conduct multifith services, and a suitable site should be coordinated.

HN cultural differences. In coordination with the G5 (civil affairs) element, ISB leaders should prepare a briefing that addresses cultural differences and practices that could cause friction for soldiers deploying through the ISB. Although the majority of soldiers coming through the 22d ASG's ISB had home stations in Italy, a significant number had never served in Italy. A briefing on cultural differences would have benefited soldiers who had no previous exposure to Italian customs and lifestyle.

Maintaining a strong bond with the HN makes the ISB's job much easier. Although there is no set method for forging this bond, any successful plan surely would include treating HN personnel and facilities as you would expect your own soldiers and facilities to be treated, keeping lines of communication open, and respecting and observing HN rules and regulations.

Hopefully, these lessons learned during PE '96 will be helpful to any unit whose mission requires planning and executing an ISB operation outside its usual country of operations. They will be incorporated into the 22d ASG's deployment standing operating procedures to provide even better support to future SETAF deployments and contingencies. Future missions will give the 22d ASG additional opportunities to prove that it lives by its motto—"Support to Win."

ALOG

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Deploying for Joint Ende

When the word came to deploy Army forces into Bosnia,

Two months before the signing of the Dayton peace accords ended the fighting in the former Yugoslavia, the 21st Theater Army Area Command (TAACOM) was already hard at work planning the 1st Armored Division's deployment into Bosnia. The planning effort began in early October 1995, after the TAACOM's commanding general—and the senior logistician in U.S. Army, Europe (USAREUR)—Major General James M. Wright, was given the charter to deploy the force by the commander in chief of USAREUR (CINCUSAREUR), General William W. Crouch. We were part of the effort led by General Wright to plan for the deployment. Our planning was done on short notice while all of us kept an eye on developments in the peace negotiations that ultimately would determine if and when we would deploy.

After receiving the charter, General Wright immediately assembled his commanders and staff at the Grafenwoehr Training Area in Germany to develop the logistics support concept and plan for deploying and sustaining a Bosnia operation. For the next 43 days, we dissected every aspect of the logistics concept and plan for clarity, simplicity, and executability. It was during this period that General Wright and his subordinates created the deployment and support concept that would ensure mission accomplishment despite the extremely short timelines under which we had to work.

Developing a Concept

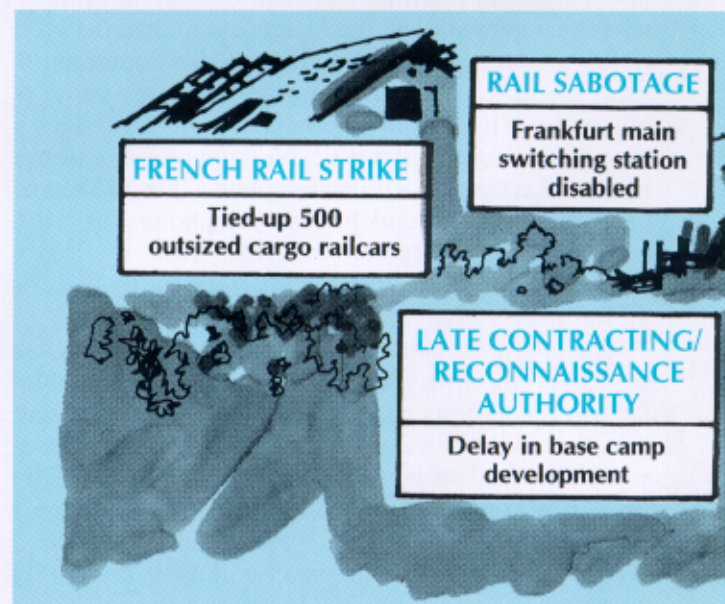
Using logistics doctrine as a point of departure, we sought to "break paradigms." Chapter 12 of FM 100-5, *Operations*, provided the basis for a deployment and logistics support strategy that envisioned the use of an intermediate staging base (ISB) for split-based operations. Competition for infrastructure from other nations contributing to the peace Implementation Force led to the selection of Hungary, rather than Serbia or Croatia, as the ideal ISB location. Hungary also had the advantage of being outside the borders of the former Yugoslavia, which would reduce force protection requirements.

Breaking logistics paradigms would not be easy. Our logistics concept envisioned supporting the deploying force by using new velocity management concepts for materiel distribution; leveraging estab-

lished logistics infrastructure in NATO's Central Region (Germany) to provide split-based operations and capabilities; and reducing the U.S. footprint in the former Yugoslavia to cut down on troop exposure in a hostile environment. General Wright presented this concept to the CINCUSAREUR in mid-November, and, after some refinements, it was given a "go."

Deployment execution needed to be practiced, so we conducted two short-notice deployment exercises (DEPLOYEX's). These exercises ensured that we were trained and certified in deployment procedures and that all personnel involved in the deployment process were aware of their interrelated functions.

In addition to conducting the DEPLOYEX's, three main challenges remained: resourcing the operation, making a reconnaissance of the Hungarian infrastructure, and building floating bridges across the Sava River to establish a ground line of communication (LOC) into Bosnia. (The Sava River separates Bosnia from Croatia.) After detailed analysis and refinement of the plans, we updated the CINCUSAREUR. The resource implications, changing locations in Hungary, and risk analyses of the deployment timelines were the major issues discussed at this session.



□ Nothing was easy when the Army deployed to Bosnia.

planning for the operation already was underway.

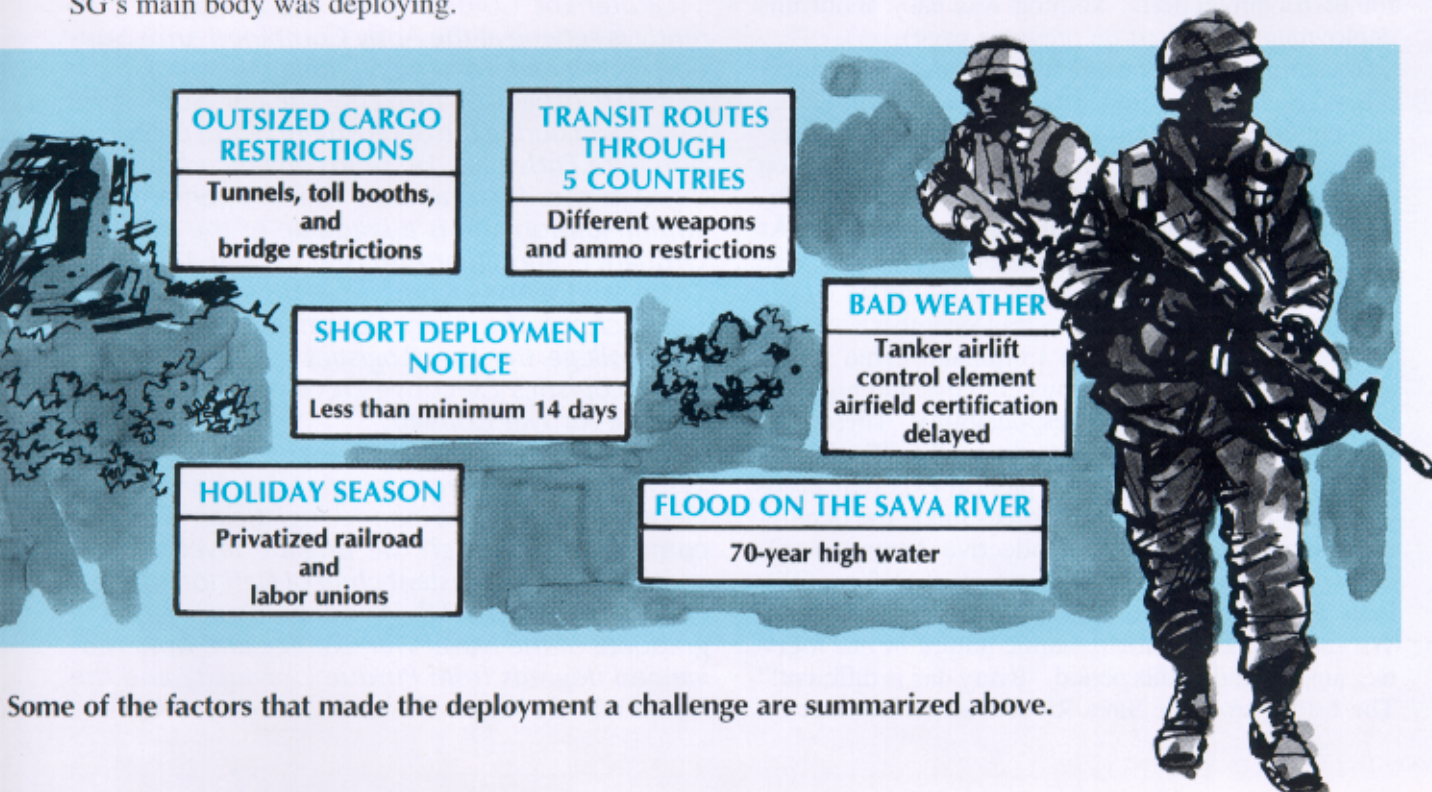
Deploying on Short Notice

By the end of November, the stage was set for the deployment of U.S. troops from NATO's Central Region into Bosnia. Our planning and detailed calculations showed that a minimum of 14 days was needed to get the ISB up and running in Hungary. The clock was already ticking, but the magic date to have the ISB operational was not moving back! We needed to get into Hungary and establish the ISB to ensure an orderly and safe deployment of the force, which was already in motion. But the diplomatic process that eventually produced the peace accords in Dayton forced the military leadership to "hold" the move, and at times it appeared that the whole mission would be scrubbed.

Finally, on 8 December, NATO enabling forces were allowed to go into Bosnia and Croatia. These initial forces included command and control, signal, military intelligence, and special operations forces. However, the main logistics force for setting up the ISB, the 29th Support Group (SG) from Kaiserslautern, Germany, could not move until the peace agreement was signed. The peace agreement finally was signed on 14 December, and 2 days later the 29th SG's main body was deploying.

This delay between moving the NATO enabling forces and the 29th SG's main body forced the group to compress its 14-day timeline for setting up an ISB into only 9 days! This was a monumental task, to say the very least. In essence, the 29th SG was required to deploy and establish billeting, dining, and intermediate support activities for 20,000 U.S. troops cramming into Bosnia, while simultaneously receiving, staging, moving onward, and integrating those deploying forces.

We received support from all of our sister services, including air transport and base support from the Air Force, construction support from the Navy and Marine Corps, and even staff support from one officer of the Coast Guard. The 3d Corps Support Command accompanied the 29th SG and became known as the 21st TAACOM Forward. The 21st TAACOM Forward was first located at Taszar and then later Kaposvar, Hungary, providing needed logistics staff support and serving as the national support element. ("National support element" is a multinational term that is used to identify a specific country's support command.) These logisticians made this complicated and almost impossible deployment happen.



Some of the factors that made the deployment a challenge are summarized above.

Transportation Management

The 1st Transportation Movement Control Agency (TMCA), headquartered in Kaiserslautern, had the prodigious task of moving and controlling the movements of all forces to be deployed in support of Operation Joint Endeavor. Because planning of the operation took place in a very short time with little prior notice, a detailed time-phased force deployment list (TPFDL) was not available for 1st TMCA's use. However, they did have a movement plan based on unit requests for transportation. Starting on 8 December with the movement of the NATO enabling forces, this plan quickly became the basis for controlling movements and monitoring execution of the deployment.

Subsequent unit movements were adjusted in coordination with commanders on the ground and with operational requirements that arose as METT-T (mission, enemy, troops, terrain, and time available) factors were revised. This proved to be a difficult process because railroads were the primary mode of transportation and the railroad companies needed a minimum notice of 5-7 days to accommodate any changes.

The 1st TMCA attempted to lock in units 7 days before their scheduled departure dates. However, circumstances sometimes forced leaders to make last-minute changes. One example was getting the floating bridge units into Croatia. These units had to erect their floating bridges over the Sava River in order to establish the LOC and create a conduit for moving U.S. forces into Bosnia. They also required combat forces for protection. Nothing was easy about this deployment (see chart on previous page).

In addition to these challenges, we dealt with many others, including a French rail strike (which tied up 500 outsized-cargo railcars), rail sabotage, transit restrictions in five different countries, restrictions on outsized cargo, flooding of the Sava River, late delegation of contracting authority, and bad weather. As a result of all these factors, numerous changes were made to the movement schedule, often on an hourly basis, during the period 11 to 29 December.

The 37th Transportation Command came to the rescue by providing numerous convoys and highway transport into the areas of responsibility. These convoy routes later became known as the "Eagle Express." Although this was a painful experience, logisticians and the supported forces made the deployment successful using our collective American soldier spirit. In the words of Secretary of Defense William Perry, this was "true grit!" Or as General Wright summed up the dynamic nature of our logistics support during this period, "Every day is different!" The bridge over the Sava River was put in place on

the morning of 31 December. By the end of the day, over 180 vehicles were in Bosnia. The commander of USAREUR Forward, Lieutenant General John N. Abrams, made sure that this crossing and subsequent movements into Bosnia were conducted with sufficient force protection to preclude any hostile incidents with rogue-type elements. General Abrams' selection of a force mix was heavy on armor and clearly met the demands of the situation. The force was led by the 1st Armored Division's commander, Major General William L. Nash, with his 1st Brigade in the lead.

In early January 1996, General Nash and his commanders moved into their positions and made minor force adjustments based on the evolving situation (using METT-T). Their mission was to get between the warring factions in Bosnia by taking up emplacements in what is known as the zone of separation. Their force deployments were normalized by mid-January. The 1st Brigade also served as a covering force for the 2d Brigade as it deployed. By 15 February, all major combat forces were in place along the zone of separation as called for in the peace accords.

Over 25,000 soldiers and Department of the Army civilians were deployed, along with all of their equipment. The soldier spirit of the leaders and forces involved made this one of the most successful missions in USAREUR's long and illustrious history. These soldiers and civilians did a magnificent job in sustaining Operation Joint Endeavor, but that's another story . . .

ALOG

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Colonel J. Stephen Koons is chief of staff of the 21st Theater Army Area Command, Kaiserslautern, Germany. He is a seasoned logistician who has commanded through the brigade level and recently served as assistant chief of staff for logistics at Headquarters, U.S. Army, Europe. He is a graduate of the Naval War College and holds advanced degrees from Purdue University and the Naval War College.

Shelf-Life Management

by Kenneth W. Pillar

Proper management
of shelf-life items
helps ensure readiness,
saves money,
and protects the health
of Army personnel.

It's a typical day in the life of a supply systems analyst at the Army Materiel Command's Logistics Support Activity (LOGSA) Packaging, Storage, and Containerization Center (PSCC) in Tobyhanna, Pennsylvania. A military customer calls from halfway around the world in Kuwait: Are his batteries still good? Are his tires okay to use, or should he dispose of them before they cause a fatal accident? Another customer, an Army sergeant, calls from Fargo, North Dakota: His unit is being disbanded and he can't order new supplies, but he has some brake fluid he'd like to use up. Is the fluid a shelf-life item? Should he dispose of it?

Shelf-life management of items of supply is something that has been around ever since there have been shelves; it certainly is not unique to the military. In the civilian world, almost every consumer has experienced problems with products that were too old. For example, a consumer may check three or four packs of batteries before selecting one to buy in order to ensure that he gets the newest items.

Within the military, because of shrinking budgets, resource shortfalls, and greater environmental concern, shelf-life item management has become increasingly important for reducing inventory levels, disposal costs, and hazardous wastes. In the Army alone, the current dollar value of the inventory of shelf-life items is over \$2 billion.

A concerted effort from logistics personnel can result in a comprehensive and effective shelf-life management program. In our business of providing logistics support for national defense, shelf-life management plays an important role. According to Kris Keydel of Headquarters, Department of the Army (DA), "The shelf-life management program not only influences the readiness of equipment, but it also af-

fects the health, safety, and well-being of our human resources. It should be considered one of the most important and consequential concerns of all logisticians." And as Mike Pipan, Director of the Department of Defense (DOD) Shelf-Life Program, recently observed, "The DOD shelf-life program impacts the entire logistics life cycle from weapons system development to the shop floor. Accordingly, all DOD personnel need to be aware that their concern for shelf-life can improve readiness, save DOD and taxpayer dollars, and preserve our environment."

What Is a Shelf-Life Item?

A shelf-life item is defined as an item of supply that will deteriorate or become unstable over time; it therefore must be assigned a maximum storage period to ensure that it will perform satisfactorily when used. Shelf-life items include standard and hazardous items, both consumable and nonconsumable.

The first step in shelf-life item management is determining the shelf-life period. This period begins with the date of an item's manufacture, cure, assembly, or pack (for subsistence only) and ends in one of two ways. For type I shelf-life items, the ending date is the date by which the item must be used. This date is called the expiration date, and it cannot be extended except in limited cases. For type II shelf-life items, the ending date is the date by which the item must be tested or inspected according to established criteria. This date is called the inspect/test date. Based on the results of the test or inspection and restorative action, the inspect/test date—and thus use of the item—may be extended beyond the original date to a new inspect/test date.

Shelf-life periods for both type I and II items are expressed through assigned shelf-life codes (see chart on next page). Type I codes are alpha characters and represent times ranging from 1 to 240 months. Type II codes are numeric characters and represent times ranging from 3 to 60 months. A code of zero is assigned to non-shelf-life items.

Obtaining Shelf-Life Information

Shelf-life codes are assigned to national stock numbered items and are contained in Army and DOD item management data bases. This information can be accessed through remote terminal inquiry to the data bases or by reading the compact disk products

Shelf-life Period (months)

Shelf-life
Code
Type I

Non-extendable

1	2	3	4	5	6	9	12	15	18	21	24	27	30	36	48	60	72	84	96	108	120	144	240
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	Y	Z	

Type II
Extendable

		1			2	3	4		5		6			7	8	9								
--	--	---	--	--	---	---	---	--	---	--	---	--	--	---	---	---	--	--	--	--	--	--	--	--

□ Shelf-life codes express the shelf-life periods for type I (non-extendable) and type II (extendable) items with letters and numbers, respectively.

ARMYLOG or FEDLOG.

Another system, designed by the Defense Logistics Agency (DLA) and maintained on the mainframe computer at Defense Megacenters Columbus, Ohio, contains more detailed information on type II shelf-life items. This system, called the M-204 Program, consists of the materiel quality control storage standards (MQCSS) and the quality status list (QSL) data bases. The M-204 was created to provide an online, real-time source of the information contained in the publication Materiel Quality Control Storage Standards (DLA Regulation 4155.37/Army Regulation 702-18/Navy Supply Instruction 4410.56/Air Force Joint Manual 23-223/Marine Corps Order 4450.13), as well as QSL data.

The MQCSS contains appendices for each inventory control point (ICP) that are used in performing storage surveillance and receipt inspection and developing test criteria. The QSL contains the results of tests conducted by various DOD-approved laboratories on samples of type II extendable materiel. ICP's, which are responsible for updating and maintaining the data, have access to all M-204 system capabilities, including adding, deleting, and updating data, while storage activities can view the data they need to accomplish their surveillance duties.

Shelf-life management information allows a user to determine an item's serviceability by assessing the degree of degradation it may have experienced. Another way of putting this is that the user can better determine if shelf-life items have retained their original characteristics to a degree that warrants extending their shelf-life periods. Shelf-life information also prescribes maintenance for both the item and its packaging so that restoration can be accomplished.

An important point to remember is that shelf-life periods are assigned to materiel based on prescribed storage environments; storing materiel in environments other than those prescribed may significantly

lessen the shelf-life period and therefore require more frequent tests and inspections.

The Players in Shelf-Life Management

The Under Secretary of Defense for Acquisition and Technology has delegated authority for the shelf-life management program in DOD to the Director of DLA. DLA directs the shelf-life management program in accordance with the responsibilities assigned to it in DOD Directive 5105.22, Defense Logistics Agency. Policy and procedures for the program are contained in DOD 4140.27-M, Shelf-Life Management Manual. In addition to DLA and the armed services, the General Services Administration, the Federal Aviation Administration, the Defense Special Weapons Agency (formerly the Defense Nuclear Agency), and the United States Coast Guard also participate in the DOD shelf-life management program in a spirit of partnering to achieve common management goals and objectives.

This is where LOGSA PSCC fits into the picture. As the Army Materiel Command's (AMC's) executive agent, with authority delegated from Headquarters, DA, PSCC provides the Army member of the DOD Shelf-Life Committee, Susan Joy, who serves as the Army shelf-life administrator. PSCC's responsibilities include—

- Analyzing trends in the assignment of shelf-life codes to new items of supply.
- Reviewing disposal rates of shelf-life items.
- Performing surveillance visits to activities with high disposal rates of shelf-life items.
- Recommending policy changes to enhance management of the shelf-life program.
- Providing statistics on Army shelf-life items to DOD and Army item managers.

One recent PSCC accomplishment was the Army's advocacy of a test program to provide materiel with longer remaining shelf-life to foreign military sales

(FMS) customers. While the test ultimately was not required, the multiservice and multi-agency debate led to a consensus that FMS customers' needs were not being met by current policy and an agreement on a new policy for both FMS and other customers outside the continental United States. That new policy now requires direct vendor delivery to overseas customers, when feasible, so that materiel moves from manufacturers to customers as quickly as possible. Additionally, items with shelf-life periods of 2 years or more now must have at least 1 year, instead of 6 months, of remaining shelf-life upon issue from the wholesale supply system.

Determining shelf-life periods in the Army is the responsibility of the various commodity-based item management activities, usually the national inventory control points (NICP's). Each of the other services and DLA also have given shelf-life management responsibilities to their wholesale ICP's.

The Army NICP's, which report to the commanding general of AMC, are the Tank-automotive and Armaments Command, located in Warren, Michigan (this command includes the Armament and Chemical Acquisition and Logistics Activity at Rock Island Arsenal, Illinois); the Missile Command at Redstone Arsenal, Alabama; the Communications-Electronics Command at Fort Monmouth, New Jersey (this command includes the Communication Security Logistics Activity at Fort Huachuca, Arizona, and the Intelligence Materiel Management Center at Warrenton, Virginia); and the Aviation and Troop Command at St. Louis, Missouri. Along with these commands, the Army Petroleum Center at New Cumberland, Pennsylvania; the Army Medical Materiel Agency at Fort Detrick, Maryland; and the Army Support Activity at Philadelphia, Pennsylvania, also have item management responsibilities for specific items.

LOGSA PSCC staffs all changes in shelf-life policy with these front-line Army managers and chairs an annual Army shelf-life summit meeting to promote discussion and resolution of common shelf-life problems and issues. All Army item managers, plus any Army activity with a significant interest in or problem with shelf-life management, are welcome to attend. Historically, the chair and members of the DOD Shelf-Life Committee also have attended the Army meetings.

Shelf-Life Management and the Logistician

Proper shelf-life management requires efforts that go beyond those needed for non-shelf-life items. These demands can strain limited logistics resources that also are being used for specialized management of other categories of inventory, including critical, sensitive, and other hazardous items. But the lack of

effective shelf-life management procedures can result in added costs for stock replenishment and unnecessary and costly disposal of unserviceable materiel.

To avoid these costs, shelf-life management practices should include surveying stock for approaching inspect/test dates of type II materiel and taking required restorative measures; issuing the oldest stocks of both type I and type II materiel first (the first-in, first-out principle), except for FMS customers, who are always issued the newest stocks (last-in, first-out); and stowing materiel in prescribed storage environments when possible.

In addition, all logistics managers need to do their parts. Provisioning personnel must substitute non-shelf-life or longer shelf-life items whenever possible. Packaging improvements can prolong or eliminate the shelf-life of items. Requisitioning personnel can minimize stockage of shelf-life items at higher levels by avoiding excessive order quantities and accurately forecasting demands. Acquisition personnel can use direct vendor delivery to obtain the newest materiel possible and reduce warehouse inventory costs. Storage activities can evaluate the effectiveness of their shelf-life programs by using the management control evaluation checklist developed by the Army, which can be found in Appendix C of AR 740-1, Storage and Supply Activity Operations.

Also, with increasing emphasis on the Army's War Reserve (AWR) Program, Bradford Foley, LOGSA PSCC Chair of the AWR3 and TM 38-450 Committees that have responsibility for developing AWR site caretaker policies and procedures for equipment and supplies, summarized the benefits of the shelf-life management program in the following way: "The shelf-life management program implemented by the AMC Industrial Operations Command has made maintenance cycles more efficient and has given the war fighter a better feeling about the equipment in the field."

The incentives of cost reduction and human health and safety in managing an effective shelf-life program are clear. The Army's leader in the DOD program, LOGSA PSCC, will continue to improve the program and ensure that the soldier in the field has shelf-life materiel, like tires, batteries, and brake fluid, that is ready for use when needed! **ALOG**

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The information presented in Army Logistician's ALOG Systems is compiled, coordinated, and produced by the Army Combined Arms Support Command (CASCAM) Information Systems Directorate (ISD). Readers may direct questions, comments, or information requests to Lieutenant Colonel Thet-Shay Nyunt by e-mail at nyuntt@lee-dns1.army.mil or phone (804) 734-1207 or DSN 687-1207.

-Editor

The "information battle" for maintenance at the organizational level is fought by understanding the critical input and output of the unit level logistics system (ULLS). To help the field manage and lead organizational maintenance better, Colonel Mitchell Stevenson provided *ALOG Systems* with "Twelve Dirty Questions" that leaders should ask their motor pool officer. Below is an abridged version. Each question is followed by a "primer" on the answers that motor pool officers should provide.

Question 1. How often should you run a prescribed load list/document control register (PLL/DCR) reconciliation? How are discrepancies corrected? Why is this process important?

Recommend this process be run monthly or weekly to ensure that all dues-in to the PLL have matching open DCR entries. For any mismatches it finds, the process corrects the ULLS PLL file to reflect the correct due-in quantity and, if required, generates PLL replenishment.

Question 2. How often should your supply support activity (SSA) provide a reconciliation listing? How do you use the listing? How long do you keep the listings on file?

Most SSA's provide it every 2 weeks. The first thing you should do with the reconciliation listing is check it against each organizational repair parts requisition listed on the reverse of your DA Form 2406, Materiel Condition Status Report (ULLS-G "not-mission-capable" report), for validity. Gross disconnects found between dues-in expected and those

indicated on the SSA's reconciliation listing should be investigated in a face-to-face session with your direct support unit. Keep reconciliation listings for at least 1 quarter; even 1 year is not unreasonable.

Question 3. Has the unit commander signed your PLL listing? Is there anything in your PLL that is not demand supported? When did you last inventory your PLL? Who checks it?

The PLL listing can be printed in the motor pool as often as needed. Recommend it be printed whenever it changes or quarterly, whichever comes sooner. Regulation requires that the PLL be reviewed no less than quarterly and that the unit commander sign it. Parts that are not demand supported must be justified individually to the first general officer in your chain of command. PLL's should be inventoried at least quarterly. It may be wise to inventory active PLL's monthly. The commanding officer or battalion executive officer should periodically spot-check the accuracy of the inventory and the location of parts.

Question 4. Who signs the Commander's Exception Report? How often is this report generated? How long should it be kept on file?

Use of priority designators 02 and 05 (high priority) and high-dollar requests require the unit commander's authentication. With ULLS, there is no document register to sign anymore. Instead, ULLS creates a Commander's Exception Report each day that lists high-priority requisitions. It also lists requisitions that exceed \$500. Copies of the Commander's Exception Report should be kept on file for 2 years.

Question 5. Does your SSA provide supply status to you each day?

This is probably the most critical element of ULLS to understand. Whenever you take a class IX (repair parts and components) transaction disk to your SSA (which should be at least once daily), the standard Army retail supply system (SARSS) operator should read the transactions and provide a status report that same day.

Question 6. When did you last run a catalog load? Why is this important?

This process is extremely important and should be run monthly. It is created on tape or on disk by your supporting materiel management center. It is de-

signed to run on your ULLS computer. Your ULLS-tailored Army master data file (AMDF), if current, contains AMDF data on all national stock numbers that have had activity in the past 12 months.

Question 7. How often do you use your parts received/not installed report?

You should ask to see this report whenever you visit the motor pool. It is not unreasonable to expect the motor pool sergeant to run a new report daily. It lists all parts received (posted as "RC" on the DCR) that do not have application recorded on the automated DA Form 5988-E. (See more on the DA Form 5988-E below.) Spot-check the parts bin (where your PLL clerk keeps parts received but not yet installed on vehicles) against this report.

Question 8. How often do you send Army materiel status system (AMSS) transactions to the battalion? How often should AMSS transactions be sent to the standard Army maintenance system (SAMS)? Why is this process so important?

AMSS transactions should be sent to the battalion as often as required by the battalion standing operating procedure (SOP). This process is critical for two reasons. First, we will stop submitting manually prepared DA Forms 2406 soon and use the AMSS process to broadcast readiness data throughout the Army. Failure to send AMSS transactions to higher headquarters in a timely manner will result in a distorted view of your unit's readiness at higher headquarters (all the way to the Chief of Staff). Second, usage reporting is done now in conjunction with AMSS reporting. Failure to send AMSS transactions to higher headquarters also means that you are not reporting usage data. Your usage data is used to compute your budget; underreport, and you will be underbudgeted.

Question 9. Do you have the current version of the maintenance master data file (MMDF)?

The MMDF must be the same at all units subordinate to the materiel management center SAMS-2. If you have an outdated MMDF, you may not be sending all required data to your higher headquarters. Your combat service support automation management office should know the "as of" date on the current MMDF.

Question 10. What is a DA Form 5988-E, and why is it important?

This form is the automated (ULLS-G) version of a

more familiar form, DA Form 2404, Equipment Inspection and Maintenance Worksheet. Its title reflects its use and importance. It can be printed on demand and even mass-printed for all equipment during an alert.

Question 11. What is a Scheduled Services Report? How do you ensure that services are performed on time? Do operators and crews participate in services?

This is another report that is printed on demand in the motor pool. The battalion S3/unit training non-commissioned officer needs a copy of this report at least once a month, so he can make sure that scheduled services are posted to the battalion training schedule. Once on the training schedule, services can be monitored easier, and they are more likely to be completed on time. Operators, crews, and leaders need to be present during services.

Question 12. Is your reference library current?

It is not current unless it contains the most recent ULLS End User's Manual, Supply Update, Maintenance Update, AMDF/ARMYLOG (maybe even FEDLOG), AMDF Code Reference Guide, Commanders' Guide to ULLS and the AOAP [Army Oil Analysis Program], unit maintenance SOP, SSA external SOP, and the supporting direct support maintenance unit SOP. Without these basic references, ULLS may seem mysterious. However, with the correct reference publications, ULLS is really pretty simple and can be learned easily on the job. The ULLS End User's Manual is now imbedded in the ULLS program and can be printed from there. Online help keys make finding the reference easy.

About 'Twelve Dirty Questions'

"Twelve Dirty Questions" has been published for a number of years under several different titles. Colonel Stevenson, the author, is the Executive Officer in the Office of the Deputy Chief of Staff for Logistics, Department of the Army. He is a graduate of the Infantry Officer Basic Course and the Ordnance Officer Advanced Course. He attended the Army Command and General Staff College and the Army War College and has a master's degree in logistics management from the Florida Institute of Technology.

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