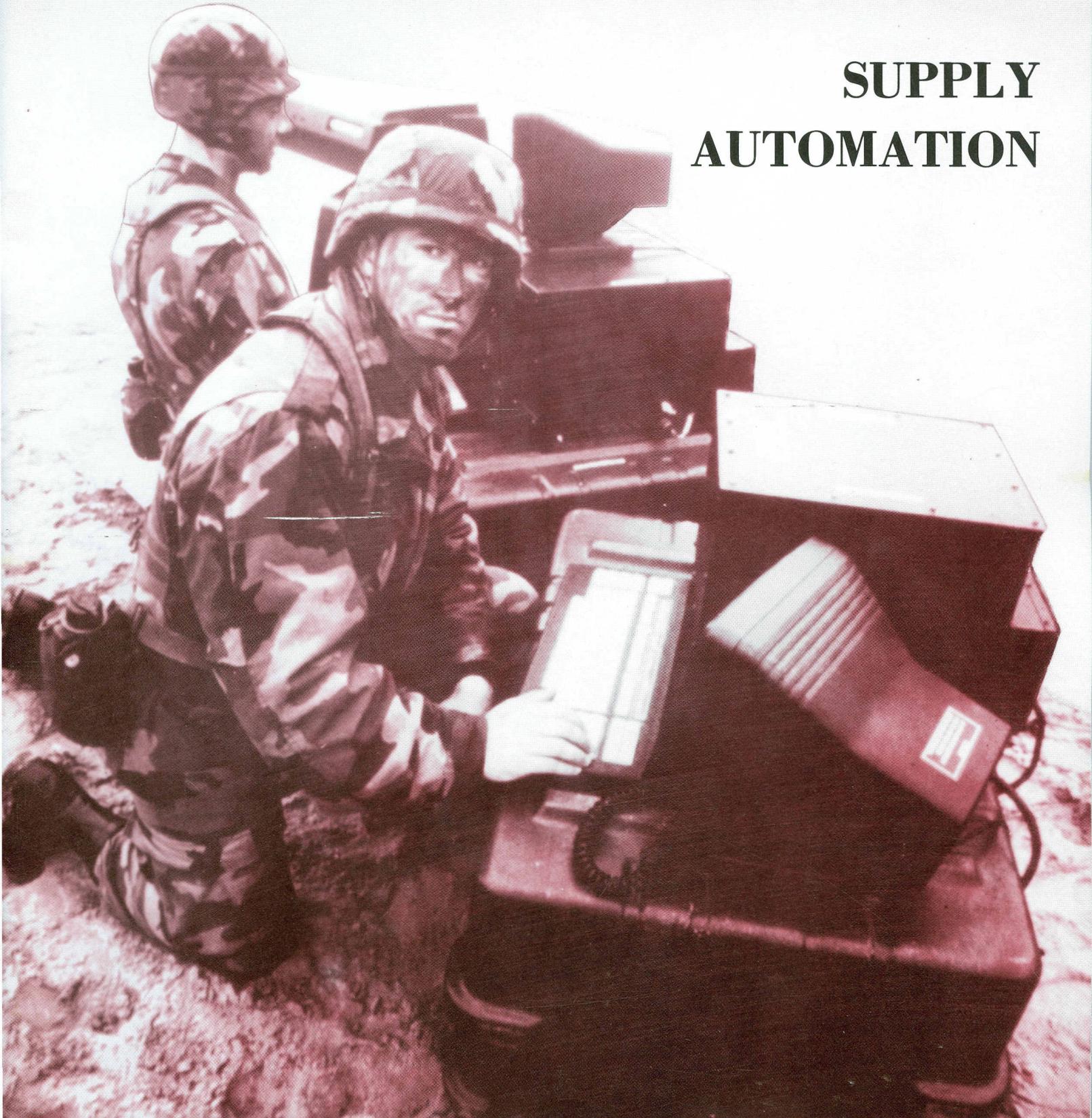


Quartermaster

PROFESSIONAL BULLETIN

AUTUMN 1989 PB 10-7-89

SUPPLY AUTOMATION





U.S. ARMY QUARTERMASTER CORPS



Key To Logistics

THE QUARTERMASTER GENERAL

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SUSTAINMENT IMPERATIVES

Brigadier General Paul J. Vanderploog

Sustaining the force is one of an army's greatest challenges. The challenge is especially great for the U.S. Army with forces spread all over the world and prepared to react to a variety of contingencies. Army forces must meet worldwide strategic challenges against the full range of threats from terrorism through conventional warfare and nuclear operations. Quartermasters understand that logistics considerations will affect the design and conduct of battles and campaigns.

Much has recently been written about the ability of support units to provide the necessary sustainment capability on future battlefields. The Quartermaster focus is on warfighting and sustaining the combat soldiers and their weapons systems. Quartermaster commanders and leaders must know and understand AirLand Battle doctrine at the tactical and operational levels. The link between AirLand Battle tenets of initiative, agility, depth, and synchronization and the ability to sustain our Army are critical imperatives. These imperatives of Anticipation, Integration, Continuity, Responsiveness, and Improvisation are in our operations and combat service support manuals but are rarely put to practical application. This article will hopefully highlight the critical importance of these imperatives and make them more understandable by describing them in "field soldier" language.

Anticipation. Quartermaster commanders and staffs must anticipate future events and requirements. This means we must continue to support the current operation and plan for future operations knowing that unexpected changes will occur in the course of battle. Logisticians cannot fall into the trap of inflexibility. During battle, maneuver commanders will not be concerned with how pre-battle logistics plans were designed to support "different battlefield scenarios." We must plan for logistics support with given information and resources, but we must anticipate all probable scenarios -- including the worst case. The following points will assist your ability to anticipate:

- Know the commander's intent. Logisticians must know what the

commander is doing and why. The changing faces of the battlefield may not allow the logistician to be personally familiar with the maneuver commander; however, the logistician can better anticipate the commander's intent by being technically and tactically proficient. We must know what is meant by a deliberate attack and what support requirements are necessary. At the tactical level, this may mean adjustment of basic loads, prescribed loads, and expenditure rates to ensure adequate food, fuel, ammunition, and repair parts. At the operational level, anticipation requires the Quartermaster to visualize the entire course of a major operation while planning specifically for the phase underway.

- Go among them. The best way to understand the commander's intent is spend time with him and his staff. Continual dialogue with the maneuver element will ensure the understanding of tactics. Additionally, it will assist in conveying the basics of support to our tactical peers and superiors. Half the battle is won if the combat commander understands the support resources and capabilities -- basically, what you can do for him. Get out of your logistics circles and mingle among our combat arms cohorts. Everybody benefits.

Integration. Integration of sustainment operations with the operations of the maneuver forces is critical. Support forces must be organized to give the commander the greatest possible freedom of action. Without arguing the advantages and disadvantages of either point, unit support or area support should be utilized depending upon what is best for the customer. Task organize to meet the maneuver element's needs, and when the situation changes, consider reorganizing the support to match the situation.

- Multifunctional logistics. The logistical units supporting our combat brigades and divisions are multifunctional. We need to think multifunctional. Very few Quartermaster officers single track into specialties such as fuel or subsistence. The majority will be assigned to units with multiple logistics missions. That means our officer and senior noncommissioned officers need to not only be technically proficient in supply and services but also in

maintenance, transportation, and medical services.

- Joint logistics. The primary Quartermaster missions are essential to the support of joint and combined operations just as they are to U.S. Army unilateral operations. The U.S. Army Quartermaster already has significant multiservice supply responsibilities for water and petroleum. Supporting other land-based services in areas such as food service, resupply, laundry and bath, and graves registration are logical extensions of current U.S. Army missions. As we enter the 1990s, highly integrated joint operations will be common, with our soldiers providing support throughout the military services.

Continuity. Sustainment cannot be interrupted for long without directly diminishing the combat power of a force. Pauses for rebuilding impede momentum and rob the commander of the initiative. Simply stated: we must be at the right place with the right materiel, at the right time -- all the time. While operations and sustainment both vary in intensity, operations may enter inactive periods. Sustainment does not. There is no "time-out" for the Quartermaster soldier -- food must always be prepared, spare parts replaced, and vehicles fueled. The key to maintaining a unit that can ensure continuity of operations is discipline, and the key to discipline is standards.

- Standards. Sergeant Major of the Army Julius W. Gates summed it up best during a discussion on safety. The points outlined here provide a template that is applicable to what we do on the battlefield:

"There are four major reasons for human error. They are command failure, training failure, leader failure, and individual failure. When standards are not clear, not practical, or do not exist and a soldier makes an error, that error is the result of command failure -- failure to establish standards. If standards exist and the soldier has an accident because he does not know the standards or does not know how to achieve them, we have a training

failure. Where standards exist and are known but leaders fail to enforce them, soldier error is the result of leader failure. And finally, when standards are known but are not followed -- when the soldier fails to perform to established and enforced performance standards -- then we have individual standards."

- Disciplined units. In disciplined units there are clear, practical, enforced standards. These units are filled with soldiers who have the stamina, initiative, and knowledge to ensure continuity on the battlefield.

Responsiveness. AirLand Battle doctrine relies on the ability of the combat force to seize fleeting opportunities. Sustainment elements of the command must be as opportunistic as the maneuver elements. Major General John Herr, Cavalry Chief who opposed the development of the tank in 1938 said: "We must not be misled to our own detriment to assume that the untried machine can displace the proved and tried horse." This inflexible way of thinking still exists, to some degree, in the U.S. Army today. Remember, battlefield requirements determine logistics requirements. The logistician does not determine how the maneuver commander will fight the battle. The sustainment system must react and be flexible to the commander's battlefield intent.

Improvisation. Quartermaster soldiers must seek new, innovative solutions to problems. The routine and the traditional must be discarded if they will not solve a problem. Extraordinary methods may be necessary to get things done. FM 100-10 (Combat Service Support) states this in a very simple, understandable manner.

The force that has been built is a quality force, but it is also a constrained force. Congressionally mandated officer cuts and strength reductions have affected our ability to sustain. In the coming years, doing more with less will become a way of life in the U.S. Army. Leaders at all levels must look at everything in a "value-added" context -- what will be the added value for the expenditure of any resource. 

BG Paul J. Vanderploog is the U.S. Army Quartermaster General.

SUPPLY AUTOMATION OVERVIEW

The U.S. Army is becoming more and more automated in its never-ending pursuit of excellence. This issue of the *Quartermaster Professional Bulletin* is dedicated to identifying and describing some of the supply automation systems that are currently being used and others that will be used shortly. These systems are designed to ensure that the soldier on the front lines receives the best possible support.

The Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) is an example of a system which is modernizing supply accountability. The article "LOGMARS" by Nicholas L. Flaim shows how the Army is moving into the twenty-first century by using bar code readers similar to the ones in many retail stores. The article tells how LOGMARS saves time and increases inventory accuracy and how the system's applications are only limited by the imagination of the user.

The next automation system in this issue is the Tactical Army Combat Service Support Computer System (TACCS). This microcomputer is the workhorse of tactical supply automation. The article "TACCS" explains the durability and versatility of this microcomputer. Virtually all of the automated supply systems discussed in this issue run on TACCS. In addition to these systems, numerous other Army systems operate on TACCS. TACCS represents the first computer system that is deployable throughout the battlefield. This system brings automation to wherever it's needed.

The next article is about a software system being designed to offer some relief to the often over-tasked battalion supply officer and the unit supply sergeants. In Unit Level Logistics System - S4 Module, the logistician discovers a supply management software package that promises to make life easier for the battalion supply shop and the company supply room. This system offers automation to an area that currently has no standard Armywide automation system. Standard required reporting and subhand receipting are only two areas that this new program will assist.

In a time of dwindling resources, the Army is placing a greater emphasis on property accountability. The article "Lost and Found: The Standard Property Book System - Redesign" by SFC Willard C. Sabourin presents an overview of an automated property accountability system. This system replaces the centralized Standard Property Book System (SPBS) and automates several additional functions that were previously performed manually. Since the software operates on the TACCS, it

is extremely mobile and versatile. The Standard Property Book System - Redesigned (SPBS - R) has two basic applications: property accountability and asset visibility.

The ammunition community will be pleased to hear of "The SAAS Family." This article describes the Standard Army Ammunition System (SAAS) which is designed to automate the munition management at the storage, intermediate, and issue levels.

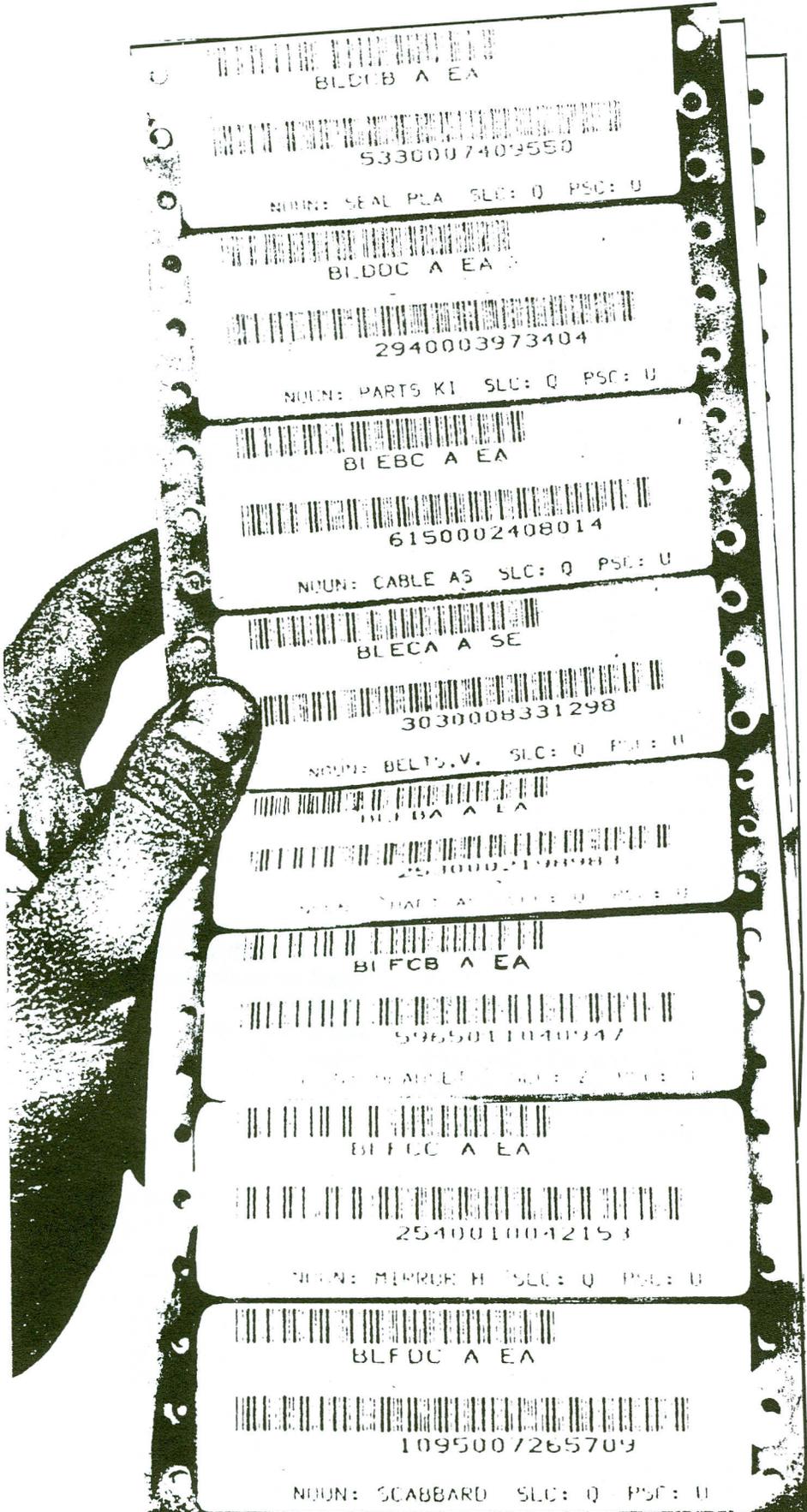
The article "SARSS" by Richard Weinz takes a look at the Standard Army Retail Supply System (SARSS) which is the Army's effort to have a worldwide supply automation software system. The system is designed to operate at every level of the the supply system, from the direct support unit (DSU) through the theater Army materiel management center (TAMMC). In time of war this system will permit the soldier in combat to bypass a disabled level of support to receive the needed item.

In "Automation Supply Training," the U.S. Army Quartermaster Center and School (PROV) tells how it is preparing the soldiers of today and tomorrow to operate the supply automation systems the Army is fielding. The author, Gary Liptrap, welcomes responses on how well the school trains soldiers to operate the supply automation systems in the field.

The article "Artificial Intelligence in Logistics -- The Future is Now" takes a close look at how logisticians might benefit from the use of artificial intelligence, which is the capacity of a computer to perform operations similar to learning and decision-making in humans. The author, CPT Ira S. Naiditch, spent the last year studying artificial intelligence as he trained with industry at Proctor & Gamble Company.

The final article in the highlight section of the Quartermaster Professional Bulletin is a historical study of how the Army got started in the area of automation. The author Dr. J. Britt McCarley tells us how steam and electricity really laid the foundation for where we are today. The article "Steam and Electricity: the Origins of Supply Automation in America" takes us back to a time when TACCS was the money paid the government at the end of each year and SAILS were used to catch wind.

The world of supply automation is an ever-changing world, with systems constantly coming and going. The innovative systems of today will be the dinosaurs of tomorrow. Sitting still and accepting the old way as the best way is to ensure being swept downstream in the fast-moving river of supply automation. 



LOGMARS

Nicholas L. Flaim

Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) is fast becoming a familiar system to more and more logisticians. This bar coding and scanning system may be the greatest innovation ever implemented into the Army supply system. Its value in such a wide range of applications has quickly led to its use in many areas of Army inventory. It has been tested and applied to just about everything from petroleum to small arms issue.

LOGMARS-T (tactical) is the bar coding and scanning system similar to the one in every major commissary today. The Army has adopted a bar code 3 of 9 or Code 39 as its standard. Code 39, a self-checking code, includes a full range of letters and numbers. For a complete look at the precise standards of Code 39, such as contrast and spacing, see Military Standard 1189. Initial tests found only one error in 3,379,458 characters. The LOGMARS-T system was fielded in September 1987.

The Army first used bar code technology in the Pentagon library, which circulates 11,000 to 13,000 books and magazines monthly to more than 12,000 users, and tremendously improved efficiency. In September 1981, the Department of Defense published its first report on LOGMARS that recommended use in every area tested. According to tests at the Warner Robins Air Logistics Center, the LOGMARS system tested never reached its capacity during the test. With further testing and use of LOGMARS, the Army's plan for 1986 called for implementing bar coding in every system where it



**The future of this
bar coding and
scanning system
is limited
only by the
imaginations of
logisticians.**

had been proven cost effective or increased the unit's readiness.

Today more than 5,000 bar code readers have been fielded. The U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA, has added classroom hours to supply courses on the operation of LOGMARS equipment. LOGMARS is used today in many areas such as Self Service Supply Center (SSSC), bulk petroleum management, automation of cargo documentation, ammunition, and tool control.

The LOGMARS-T system consists of five principal components: the bar code reader, laser scanner, contact wand, bar code printer, and modem. The bar code reader is battery powered. Nickel cadmium batteries and chargers are also available.

LOGMARS-T has met or exceeded the standards set by its first test report in the field. For example, using LOGMARS-T during bin inventories at the direct support unit (DSU) can produce a 66 percent time savings. Throughout the Army, LOGMARS-T users are reporting tremendous savings in time, decreases in personnel required for inventories, and the ability to continue operating during inventories.

LOGMARS-T also greatly reduces excess and non-recorded property. It helps reduce the number of human errors. It reduces misidentification of National Stock Number items and also reduces paperwork.

Those who have used LOGMARS-T and continue to use it today tell of its power to increase

accuracy while decreasing time spent on routine supply functions. LOGMARS-T is currently being fielded throughout today's supply system. Where LOGMARS-T will be applied in the future is limited only by the imaginations of logisticians.

For more information on LOGMARS-T, the Program Manager, Tactical Management Information Systems (PM TACMIS), publishes a bimonthly fact sheet called "The Scanner" as well as the "LOGMARS Army Master Plan." Write to PM TACMIS, ATTN: ASPES-TPC, Fort Belvoir, VA 22060-5456 or phone AUTOVON 345-2235. 

Nicholas L. Flaim is a Senior Logistics Management Specialist, Systems Support Division, U.S. Army Logistics Center, Fort Lee, Virginia.

TACCS



SFC Willard C. Sabourin

It's the final day of a long field exercise as a company of soldiers gathers up gear to return to garrison. Along with their standard equipment, the men and women are breaking down one extra item: a fully portable microcomputer system known as TACCS (Tactical Army Combat Service Support Computer System).

Since the beginning of the exercise, the TACCS -- staffed by one or two operators -- has been working as hard as the soldiers, storing and retrieving vital combat service support data and communicating with other TACCS in the field or in offices in the rear. Driven by standard 110- or 220-volt generators, the same power used by other Army field equipment, the TACCS has functioned as a mobile office just as it would in garrison. And now, in only minutes, it's being packed into four lightweight, rugged cases and loaded on the back of a truck. When filled, each case weighs less than 135 pounds and can easily be transported by two soldiers.

The driver eases the truck up toward the crest of a hill when a wheel suddenly hits a hidden pothole, jarring the tailgate open and spilling the cargo of TACCS equipment. Accidents are bound to happen with equipment in the field. Such incidents are rare but when they do occur equipment must be properly protected. The soldiers quickly recover the equipment and wonder whether it will work at their next location. When the soldiers arrive at their designated site, they

quickly set up the TACCS and discover that the solid green cases really work, for the TACCS functions perfectly. TACCS can operate under extremes of heat, cold, dust, and impact. The Army put TACCS through extensive testing before giving approval for full-scale production. For the first time, the Army has a computer system that can go anywhere.

Since the fielding of TACCS began in May 1985, more than 8,600 TACCS have been fielded

workstation logic module, creates a V-2 configuration. A second operator works at the remote workstation that can be located up to 410 feet away from the master workstation (connected by cable).

Although the V-2 is the configuration most commonly found throughout the Army, TACCS may be fielded with up to four remote workstations, and all workstations may be operated simultaneously. While a printer is normally found at only the master workstation, a printer may also be installed at a remote workstation when equipped with an optional power supply.

TACCS can communicate with other TACCS in a variety of ways. With its built-in modem, it can pass data over

commercial telephone lines (U.S. and foreign). It can also communicate through either two-wire or four-wire direct hookup (normal field telecommunications wire) and can transmit and receive over FM radio.

TACCS is currently the workhorse of tactical automation. All software systems that operate on TACCS are designed to be user-friendly and are operated not by specially trained computer operators but by the same soldiers who were doing the job using the older, manual methods. TACCS simply provides the soldier with a quicker and more efficient tool to do the job.

Some of the benefits TACCS provides over manual systems are that it greatly reduces the time needed to perform a task by reducing or eliminating manual

RUGGED AND READY GO ANYWHERE COMPUTER

worldwide. By the end of FY 92, that number will grow to over 15,000. Inside the rugged, protective outer shell, TACCS is actually an off-the-shelf Unisys (formerly Burroughs) model B-26 computer system. With a commercially available computer, the Army kept costs down by not designing a new computer system from scratch.

TACCS comes in four modular subsystems, each with its own transit case. The first subsystem includes a visual display monitor and detachable keyboard. The second is a master workstation logic module, and the third is a printer. The TACCS with these three subsystems is commonly known as a V-1 configuration and is used by one operator. Adding the fourth subsystem, consisting of a second monitor and keyboard and a remote

TACCS – Current workhorse of tactical automation

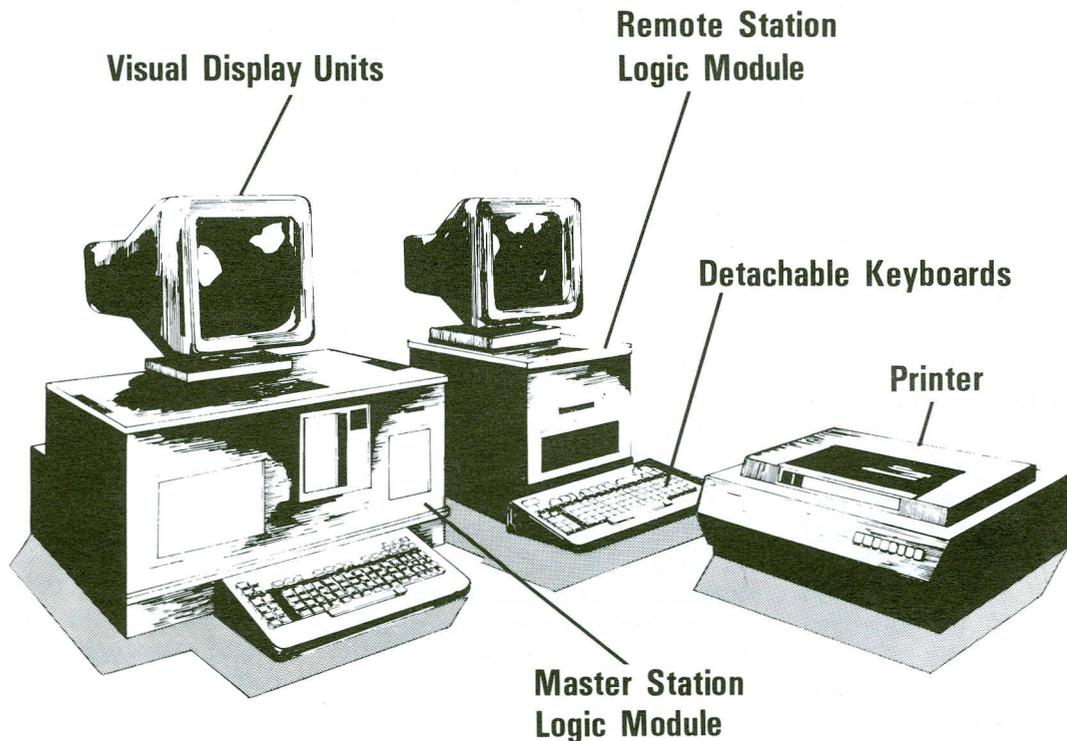
records and processes, reduces or eliminates errors, automatically creates reports that used to be prepared by hand, and also does many other things "behind the screens" that the operator used to have to do manually. TACCS also allows the soldier to do the job in the field the same way it is done in garrison.

TACCS has moved into nearly every area of combat service support. The following are the software systems currently operating on TACCS --

- Supply - Standard Army Retail Supply System (SARSS)
- Property Accountability Standard Property Book System - Redesign (SPBS-R)
- Ammunition - Standard Army Ammunition System-Level 4 (SAAS-4)
- Maintenance - Standard Army Maintenance System (SAMS-1, SAMS-2)
- Transportation - Department of the Army Movements Management System-Redesign (DAMMS-R)
- Personnel - Standard Installation/Division Personnel System (SIDPERS)
- Finance - Finance Battlefield System (FBS)
- Communications Security (COMSEC) - Army COMSEC Commodity Logistics and Information Management System-Level 4 (ACCLAIMS-IV)
- Calibration - Calibration Management Information System (CALMIS)

So, the next time one of these "green boxes" appears in the battalion Personnel and Administration Center or the direct support unit, soldiers will probably know a little more about what it is. Chances are, that box already contains information about the soldiers or some of their equipment. 

SFC Willard C. Sabourin is a Logistics Systems Noncommissioned Officer, Logistics Automation Directorate, U.S. Army Logistics Center, Fort Lee, Virginia.



The V-2 configuration of TACCS

ULLS—S4

Unit Level Logistics System—S4 Module

SFC Edward B. Scott

The U.S. Army Logistics Center at Fort Lee, VA, is currently designing an automated system for the S4 (Supply Officer) and unit supply sergeants: the Unit Level Logistics System-S4 Module (ULLS-S4). ULLS-S4 will reduce the time required for unit-level logistics. It will also improve the performance and efficiency of S4 and company supply tasks.

ULLS-S4 will operate on a standard, commercial, off-the-shelf microsoft disk operating system (MS/DOS) microcomputer located at the battalion S4 and shared by the company supply personnel. The S4 will be the ULLS-S4 administrator responsible for controlling access to the system by assigning individual passwords and for assisting the unit supply sergeants. Other ULLS-S4 locations include separate companies/troops/batteries or those geographically dispersed, and the S4 at brigade level, group level, and special troop level.

ULLS-S4 will be operated by the currently assigned functional personnel in garrison and in the field. It will replace the current systems unique to individual commands and automate the manual procedures for the Active Army, Army Reserves, and the National Guard, and for the table of distribution and allowances (TDA) and installation activities.

The ULLS-S4 data base will feed command control information into the objective Combat Service Support Control System (CSSCS). ULLS-S4 will interface with other combat service support (CSS) automated systems such as the Standard Property Book System -

Redesign (SPBS-R) and the Standard Army Retail Supply System Level 1 (SARSS-1).

S4 FUNCTIONS

Currently, the S4 requires logistical management data that must be extracted by hand from several different CSS automated systems or originated by hand. Human error in transcribing, transmitting, and collating causes numerous inaccuracies. This means the S4 cannot provide accurate logistical information in a timely manner.

ULLS-S4 will improve supply

"... will improve supply management with the capability for an automated forecast, requisition, and distribution of supplies."

management with the capability for an automated forecast, requisition, and distribution of supplies. This will include the management of commodity-specific planning and resupplying data for expendable and consumable items, pre/postmobilization stocks, contingency stocks, and management of food service and dining facility operations.

The management of transportation assets and requirements will be enhanced by automated deployment planning, load planning, convoy and movement planning, and movement reporting. ULLS-S4 will also provide the capability for automating maintenance management and readiness reporting requirements; the management of logistics such as

S4 status reports, service support annexes, and suspense tracking; and fiscal management such as stock fund reports, budget forecasting, and budget execution.

COMPANY SUPPLY FUNCTIONS

ULLS-S4 will automate the more time-consuming processes. This will reduce time required for supply actions and increase the unit supply sergeant's productivity. ULLS-S4 will greatly improve property accountability by automating the functions of preparing and maintaining subhand receipts, component hand receipts, and shortage annexes.

Currently, at the company supply level, manual preparation and maintenance of the required records (such as subhand receipts, component hand receipts, and shortage annexes) places an enormous administrative burden on the company supply sergeant. This burden results in a backlog of work in the supply room; and, in some units, additional non-supply personnel must assist the supply sergeant to get everything done. This administrative burden also affects the company commander, who consequently has less time for leading, training, caring, and maintaining.

ULLS-S4 will also automate the preparation and tracking of logistical reports such as barracks utilization, budget allocation and tracking, daily petroleum, oils, and lubricants (POL) issues, and monthly POL summary reports. Also, the documentation for

requisition, receipt, storage, issue, and turn-in of supplies and equipment will be automated to include preparing and maintaining document registers and due-in suspense files.

PROTOTYPE SOFTWARE

The U.S. Army Logistics Center at Fort Lee, VA, is currently developing a prototype software for property accountability, the first function to be automated. This property accountability function will be threefold: automating the preparation and maintenance of subhand receipts, component hand receipts, and shortage annexes. This automation replaces the manually prepared DA Form 2062 (Hand Receipt/Annex Number) and will improve the accuracy and timeliness of property accountability.

SUBHAND RECEIPTS

The first task developed was for subhand receipts. This task automates the capability to prepare and maintain subhand receipts between the commander and the subhand receipt holders. The unit must create the hand receipt and serial number data files. These files contain all required data for all of the property book items that the commander is responsible for. These files are created either by a floppy diskette download from the Standard Property Book System - Redesign (SPBS-R) or Standard Property Book System - Redesign - Installation/Table of Distribution and Allowances (SPBS-R-I/TDA) or entered into ULLS-S4 by computer keyboard.

The unit then creates a subhand receipt holder data file, containing administrative data such as name,

section, and phone number for each subhand receipt holder. With these files completed, the unit assigns all of the property to the respective subhand receipt holders, creating the subhand receipts. Also, sub-subhand receipts are available for issuing property from the subhand receipt holder to the user. The sub-subhand receipt is identical the subhand receipt, except that the heading and on-hand quantities are blank. Sub-subhand receipts and subhand receipts may be printed as often as required.

SUMMARY REPORTS

There are two summary reports available for the commander that provide "at a glance" status on property accountability. The summary-complete report shows the total quantity of each item that the commander is responsible for and also the quantity issued to each subhand receipt holder. The summary-imbalance report shows any imbalances between what the commander is responsible for and what is issued to the subhand receipt holders.

COMPONENT HAND RECEIPTS

The second task developed was for component hand receipts. This task automates the preparation and maintenance of the required component hand receipts. A data base containing 70 component hand receipts comes with the ULLS-S4 software. Each unit can expand the hand receipts on the computer as required. Component subhand receipts are also avail-

able for issuing end items and their components from the supervisor to the user. This task was combined with the subhand receipt task into a single software prototype. In the future, a complete data base of all component hand receipts will be included in the software.

SHORTAGE ANNEXES

The third task, which is under development, is the automation of shortage annexes. This task automates the preparation and maintenance of shortage annexes between the commander and the subhand receipt holder. When developed, automating shortage annexes will be added to the prototype, completing the automation of unit-level property accountability. This property accountability function will greatly reduce time required by the unit supply sergeant and improve property accountability. Work that formerly took hours or days can now be finished in minutes.

ULLS-S4 will automate S4 and company supply tasks, replacing the manual stubby pencil system. It will reduce the loss of government property, improve property accountability, and reduce the inaccuracies and delays in providing combat service support. With ULLS-S4, logisticians can quickly advise the commander and project combat service support capabilities. 

SFC Edward B. Scott is a Logistics Systems Noncommissioned Officer, Logistics Automation Directorate, U.S. Army Logistics Center, Fort Lee, Virginia.

Lost And Found

THE STANDARD PROPERTY BOOK SYSTEM - REDESIGN (SPBS-R)

SFC Willard C. Sabourin

The great care with which the Quartermaster Corps accounts for government property is not something new. Such, anyway, was the opinion of an employee in the Office of the Quartermaster General, who recently came across this old item, stated to be part of an affidavit regarding lost property in War Department records: "On November 21, 1924, at Noame Harbor, NY, about 8 o'clock A.M., Mrs. Lillian Stevens, cook, while emptying coffee pot from rear of Quarterboat No. 6, fell from the boat into the bay and the coffee pot was lost. Mrs. Stevens was drowned. Efforts were made to recover the pot, but could not be located." Source: Army Times, 2 May 1942 (p. 3).

The U.S. Army continues to place a premium on supply accountability and the Standard Property Book System - Redesign (SPBS-R) is designed to help with supply accountability. SPBS-R performs the automated functions of property accountability for the Army's tactical units. It originated in 1985 as a part of the ongoing move to streamline the accountability system and place microcomputers at the level where the work is done. The system replaces the centralized Standard Property Book System (SPBS) that depended upon the Decentralized Automatic Data Processing Service Support Computer System (DAS3) computer. SPBS-R operates on the Tactical Army Combat Service Support Computer System (TACCS). It automates several additional func-

tions previously performed manually, and sets up at the level of the property book officer.

SPBS-R has two basic applications: property accountability and asset visibility. For property accountability, SPBS-R manages current authorizations and quantities on hand for major end items, related lot/serial/registration numbers, and basic loads (Class I - rations, Class III - petroleum, oils, and lubricants (packaged), and Class V - ammunition.) For asset visibility, the system monitors excess and shortage data as well as unit readiness (equip-

"SPBS-R is a standardized, stand-alone, automation system designed to perform property accountability, equipment management, and asset reporting for tactical units."

ment on hand). It also assists in management of cross-leveling and equipment redistribution.

SPBS-R generally performs property accountability functions for a brigade-sized element. It can also be installed at lower levels for separate units. In a divisional environment, each property accountability site reports assets to an SPBS-R asset visibility section at the materiel management center (MMC). This enables the MMC to maintain asset visibility for the entire division at one location.

At the corps and above, SPBS-R will operate on the Corps/Theater Automatic Data Processing Service Center (CTASC-II) and support the corps and theater MMCs in both asset visibility and property accountability. SPBS-R also can

support reconstitution and cross-leveling at the corps and above.

SPBS-R interfaces with several other automated systems. It currently gets its supply support from the Standard Army Retail Supply System-1 (Interim) (SARSS-1 Interim) and/or the Direct Unit Standard Supply System (DS4) and the Standard Army Intermediate Level Supply System (SAILS). With SPBS-R, there is a continuous requisition status and receipt interface with these systems with SPBS-R as the customer. SPBS-R also receives a download (SB 700-20

and Army Master Data File (AMDF) data) from SARSS-1 Interim and/or SAILS that is tailored to only those items that the SPBS-R site has. When the objective SARSS system is fielded in third quarter of FY 90, all supply and catalog support will come

from that system. SPBS-R interfaces with the Tactical Unit Financial Management Information System (TUFMIS) for financial reporting. SPBS-R performs automated reconciliation and reporting with both the Continuing Balance System - Expanded (CBS-X) and Department of Defense Small Arms Serialization Program (DODSASP). SPBS-R also provides an automated download of equipment data to subordinate units using the Standard Army Maintenance System (SAMS) to build that system's Equipment Master File.

The benefits from SPBS-R are numerous. The system provides accurate records for property accountability, automates the organizational property book (DA

Forms 3328 and 3328-1), automates the production of hand receipts, reduces input errors by validating data against the system's catalog files, eliminates hard-copy Military Standard Requisitioning and Issue Procedures (MILSTRIP) transactions, automates maintenance of the document register (DA Form 2064), performs accurate reporting of data to the CBS-X, and automates reconciliation of small arms serial numbers to DODSASP at installation level. In short, SPBS-R performs automatically many of the manual functions and is more efficient because it reduces the chance for human error.

SPBS-R has been fielded to nearly 100 percent of the Active Component. Reserve Component fielding currently stands at about 20 percent, with fielding scheduled for completion in FY 92.

When SPBS-R comes to a unit, the U.S. Army Logistics Center (USALOGC) at Fort Lee, VA, sends contractors to train operators and mid-level supervisors. At the end of classroom instruction, the unit's property accountability files are loaded into SPBS-R, thereby converting the unit to the new system. The operators then take their new TACCS with an operational SPBS-R system back to their offices. A USALOGC representative remains with the unit for a short period to help with a smooth and successful start. When the conver-

sion is complete, the entire SPBS-R training package stays with the unit for reference and new operator training.

Automated logistics systems constantly undergo changes and enhancements which arrive at units as software change packages (SCP). For soldiers currently using SPBS-R, the following are some changes on the way --

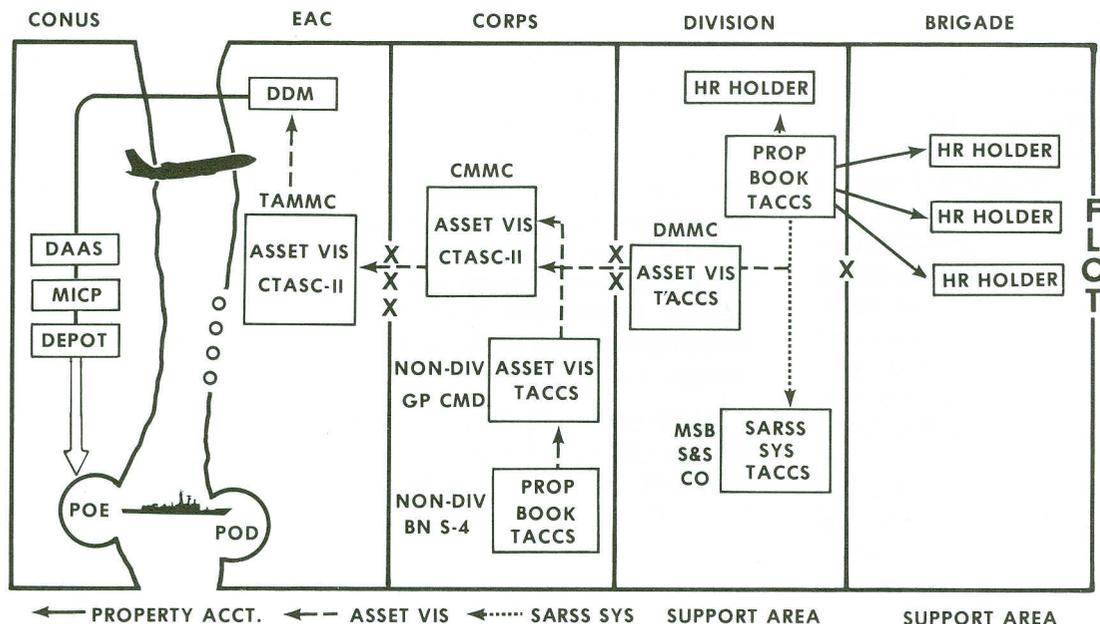
- **Automated Follow-ups To Request for Issue/Request for Cancellation Transactions.** As an enhancement to the automated document register, the operator will no longer manually enter follow-ups to requisitions and requests for cancellation. The SPBS-R will do it.
- **Changes To Automated Document Register.** When a transaction is complete, the last entry in the "status" column will now be deleted, and it will not appear on the inactive document register. Some units found this confusing. Also, the form number currently used to identify the type of property book transaction is being replaced by the document identifier code (DIC) and the property book identifier code (PBIC).
- **CBS-X Negative Reports Format.** If a unit has no discrepancies to report, a negative report will be produced on diskette for

processing through reporting channels.

- **Serial Number Tracking.** The Department of the Army requires tracking selected serially numbered items from the vendor through the wholesale and retail levels to the user. SPBS-R will perform the function of reporting through the retail level all transactions involving serially numbered items.
- **Garrison and Installation Property Accountability.** For garrison units and installations, SPBS-R is coming in the form of the Standard Property Book System - Redesign - Installation/Table of Distribution and Allowances (SPBS-R-I/TDA). SPBS-R-I/TDA is functionally identical to SPBS-R but will operate on a microsoft disk operating system which operates on a microcomputer rather than on TACCS. SPBS-R-I/TDA just successfully completed its software qualification test at the USALOGC. If the software acceptance test at Fort Myer, Military District of Washington, DC, is successful, fielding should begin this October.

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OBJECTIVE PROPERTY ACCOUNTABILITY SYSTEM



The SAAS Family

SFC Willard C. Sabourin

The ammunition community has its own automated system, appropriately named the Standard Army Ammunition System or SAAS. SAAS supports the management of munitions at the intermediate, storage, and issue levels. Currently, the SAAS family actually consists of two separate systems, with a new addition coming in the not-too-distant future.

SAAS is the only logistics automation system with levels numbered in sequence that begin at the top and work downward. SAAS-1/3 is the big brother of the ammunition system and was initially structured as two separate systems.

In its early stages, the system was designed with SAAS-1 at the theater level and SAAS-3 at the corps level. Both systems were performing management functions at their respective levels. While each system had its own unique functions performed only at that level, there were many functions that were similar or identical performed by both systems. Designers weighed the economics of managing and maintaining two separate software systems that were so similar before combining the two baselines to form one software system, called SAAS-1/3. The new, cost-effective SAAS-1/3 was fielded at both the corps and theater levels. It has the common functions that apply to both levels, as well as functions that apply to only one level or the other. SAAS-1/3 now operates on the van-mounted Decentralized Automated Service Support System (DAS3). It will operate on the Corps/Theater Automated Data Processing Service Center (CTASC-II) once that hardware system is fielded. In the theater and corps, SAAS-1/3 manages munitions at each level while providing

information to the National Inventory Control Point (NICP) through the Worldwide Ammunition Reporting System (WARS) and the Guided Missile and Large Rocket Report (GMLR).

Each level of the SAAS receives data from subordinate levels on available assets and planned or projected requirements. At this time, the workhorse of the system is SAAS-4. Designed for use at the storage/issue level, SAAS-4 functions at ammunition storage points (ASPs), corps storage areas (CSAs), and theater storage areas (TSAs). SAAS-4 automates am-

SAAS supports the management of munitions at the intermediate and user levels.

munition accountability functions by lot number and serial number to include the receipt, inventory, location survey, and issue processes. It also manages mobilization requirements for basic loads, theater war reserves, and operational projects. SAAS-4 provides improved procedures for recording ammunition receipts, issues and adjustments, and standardizes the stock status report to the materiel management center.

As a stand-alone management information system that interfaces with other levels of SAAS, SAAS-4 operates on the Tactical Army Combat Service Support Computer System (TACCS) hardware. SAAS-4 standardizes the ammunition support operations at all storage/issue activities.

There are several benefits from SAAS-4. First, SAAS-4 automates

many time-consuming manual processes. Other important benefits include providing better visibility of assets throughout all levels of the support system, planning inventories, and preparing inventory count sheets. SAAS-4 also prints location lists for location survey and automatically reconciles the survey. SAAS-4 will automatically prepare the Explosive Safety Report. An important feature for customer units is advance preparation of magazine placement information for unexpended training ammunition being turned in. This should dramatically speed up the turn-in process for customers at ASPs worldwide. There are several preformatted reports routinely available from SAAS-4. However, recognizing that many commands have a need for unique reports, a capability built into SAAS-4 enables the user to design reports based upon local needs.

A substantial enhancement to SAAS-4 is bar code technology (Logistics Applications of Automated Marking and Reading Symbols or LOGMARS) that will be integrated into the system in a future software change package (SCP). The LOGMARS application will be used first in the inventory and location survey processes and eventually in the receipt process when ammunition shipping documents become bar-coded. LOGMARS is expected to provide a tremendous improvement over the manual recording of lot and serial numbers. Also, ammunition managers at the Department of the Army level expect to be able to reconcile their lot number files

throughout the accountability chain as a result of bar code technology.

SAAS-4 is well along in its fielding process. It has already been installed at all locations outside the Continental United States (OCONUS) as well as CONUS table of organization and equipment (TOE) activities, and fielding is underway to selected CONUS table of distribution and allowances (TDA) activities (Reserve Components).

The U.S. Army Logistics Center (USALOGC) at Fort Lee, VA, provides new equipment training on all logistics automation systems to unit operators and supervisors. After the manual records are converted to the new system, USALOGC personnel remain with the unit for a short time to ensure the system runs smoothly. The unit keeps all SAAS training materials. Also, the USALOGC provides a comprehensive TACCS-based tutorial training system to each

SAAS-4 site for local use in operator sustainment and transition training. In addition to initial training, all ammunition personnel in stock control receive SAAS-4 operator training during Advanced Individual Training (AIT) at Redstone Arsenal, in Huntsville, AL.

In the future, a new system, well into development, will automate the division ammunition office (DAO) and comparable offices in separate brigades and regiments. Called SAAS-DAO, it will operate on TACCS hardware. SAAS-DAO will contain on-hand assets and forecasted requirements for each company-level unit by individual weapon system. The data also will be available by battalion and/or brigade. It will provide information on what is happening at each ammunition transfer point (ATP). Using the Department of Defense Identification Code (DODIC), an operator can determine the ammunition handled, the units sup-

ported, and the internal assets (equipment and personnel) of an individual ATP. SAAS-DAO works with the various supply rates for each supported unit. It also has a truck/trailer planning module for use in coordinating transportation requirements.

The system will contain a catalog file of all DODICs and related national stock numbers (NSNs). This file will come as a periodic automated download from SAAS-4 or SAAS-1/3, as appropriate. SAAS-DAO fielding will begin next summer to both Active and Reserve Components. 

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NAPOLEON'S MUNITION SUPPLY

In the two centuries preceding the French Revolution, wartime consumption of ammunition did not pose a significant logistical problem:

"Compared to the provision of subsistence, that of ammunition was to remain insignificant until well after the Franco-Prussian War of 1870. Indeed, so small were the quantities required that armies normally took along a single supply for the entire campaign, resupply from base being effected only on comparatively rare occasions--most frequently, of course, during sieges. In the first half of the seventeenth century, an army going on campaign

took along a basic load of 100 balls for each artillery barrel, which is not surprising in view of the fact that, even during a siege, no gun was expected to fire more than five times a day. Later in the century, Vauban calculated four rounds per gun per day, so that consumption of ammunition remained negligible beside that of food and fodder. The figures for field operations were lower still; during two battles in 1636-8, the Bavarian artillery only fired seven shots per gun in eight hours, though these figures owe their survival to the fact that they were regarded as a record low. Frederick II, who relied heavily on

his artillery, usually took along 180 balls on campaign, and instances when a shortage of ammunition forced him to alter his plans only occurred during sieges. Apart from this, there is no evidence that the problem of ammunition supply had any influence on the conduct of operations, nor is the issue mentioned by even those exponents of eighteenth-century warfare who most strongly insist on magazines as a *conditio sine qua non* for a successful campaign."

Source: Martin Van Creveld, Supplying War: Logistics from Wallenstein to Patton. London: Cambridge Press, 1977. Page 35.

SARSS

Richard Weinz

In response to the Army's need for worldwide standardization of supply automation, the Standard Army Retail Supply System (SARSS) concept was developed. The SARSS concept originally came into being to comply with recommendations from the July 1980 Automation of Wartime Functional Supply Requirement (AWFSR) study. This study concluded that the current Standard Army Intermediate Level Supply System (SAILS) could not adequately support the volume of logistics data required by a corps in wartime. The study called for multiple, smaller, functionally dedicated systems.

SARSS is a multilevel supply management and stock control system designed to operate in peacetime and wartime at every level from divisional direct support units (DSUs) through the theater Army materiel management center (TAMMC), and from warehouses in the Continental United States through Installation Directors of Logistics. SARSS consists of multiple levels: SARSS-1, SARSS-2A, SARSS-2B, and SARSS-3. The SARSS (Objective) system will replace the Direct Support Unit Standard Supply System (DS4) and SAILS. SARSS handles supply classes II, III (packaged), IV, VII, and IX. SARSS can handle military standard requisitioning and issue procedure (MILSTRIP) requisitions and can process any request with a national stock number (NSN), including requests from the U.S. Navy and Marine Corps.

The SARSS's software applications will run on the Tactical Army Combat Service Support Computer System (TACCS) and the Corps

and Theater Automatic Data Processing Service Center (CTASC-II). The TACCS AN/TAQ-33 microcomputer will be used throughout a theater of operations. CTASC-II is a stand-alone, shelter-mounted minicomputer that will be carried on three commercial utility vehicles. CTASC-II meets the requirements of the AirLand Battle doctrine for reduced battlefield electronic signature, tactical air transportability, and cross-country mobility. CTASC-II will be used at corps and above levels only.

The first step in the SARSS development was the fielding of SARSS-1 (Interim). The SARSS-1

"SARSS is a multilevel supply management and stock control system designed to operate in peacetime and wartime at every level...."

(Interim) outputs include interactive, near real-time receipt and issue processing, automated warehouse operations, material release orders (MROs), location survey lists, inventory count control lists, location consolidation lists, valid/invalid customer transactions, and location issue tickets. This system extends automation down to the lowest support echelon of supply -- the DSU. SARSS-1 (Interim) is completely compatible with the DS4 mainframe system through the Logistics Automated System Support Office (LASSO) Distribution Software.

SARSS-1 (Interim) puts automation in the hands of the storage

personnel who serve customer units directly and provides a software system that is highly responsive to customer needs. SARSS-1 (Interim) exchanges transaction data with the DS4 through the distribution system. Automated interfaces with SARSS-1 (Interim) are provided for customers with Standard Army Maintenance System (SAMS-1), Standard Property Book System-Redesign (SPBS-R), and Unit Level Logistics System (ULLS) software. The system replaces manual processing and local computer techniques. The advantage of SARSS-1 (Interim) is its responsive-

ness to customer needs. Its survivability on the battlefield is enhanced by its flexibility, redundancy, and mobility.

SARSS-1 (Objective) will replace SARSS-1 (Interim) beginning the third quarter of FY 90. The new SARSS-1 (Objective) system works independent of DS4 and will eliminate the need for it. SARSS is

designed to bypass nonfunctioning levels by going automatically to the next higher level. SARSS-1 (Objective) will maintain account balance data at DSU level, direct inventories, generate replenishment transactions at DSU, and automatically produce asset balance reports for SARSS-2A.

SARSS-2A is currently under development. This system will run on TACCS at division materiel management centers (DMMCs) and on CTASC-II at corps and echelons above corps materiel management centers (MMCs). SARSS-2A will be able to interface with SARSS-1, 2B, and 3, plus the Defense Automatic Addressing

System (DAAS) and the Combat Service Support Control System (CSSCS). The SARSS-2A will be used by brigade MMC (BMMC), corps MMC (CMMC), theater Army area MMC (TAAMMC), theater Army MMC (TAMMC), installation Directorate of Logistics (DOL), and Army National Guard at state level. SARSS-2A will perform time-sensitive services such as requisition routing, release of controlled items, gross obligation of consumer funds, and generation of disposition transactions. It will also centralize asset visibility and cover referral, local purchase, manager control of stock numbers, redistribution, catalog maintenance, and excess management.

SARSS-2B will perform non-time sensitive functions in support of subordinate divisional and non-divisional SARSS-1 DSUs and SARSS-2A systems. SARSS-2B will be employed at the CMMCs, TAAMMCs, and TAMMCs. SARSS-2B performs numerous backup

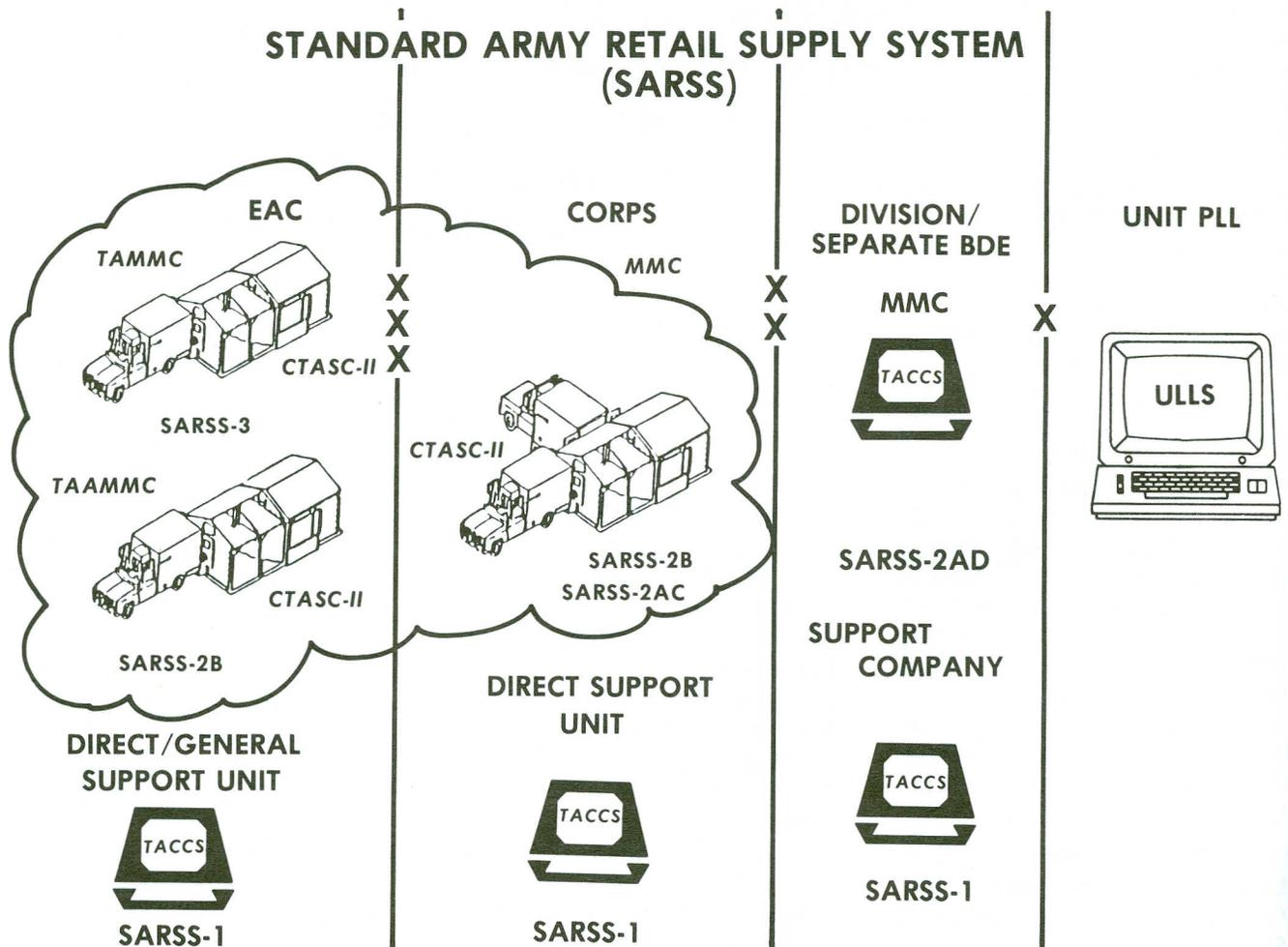
functions such as demand history maintenance, demand analysis, stockage level computations, and financial management interfaces. In addition, SARSS-2B will provide SARSS-1 and 2A systems with tailored catalog files and will maintain active and inactive document history data. SARSS-2B permits the reconstruction of software files and reconstruction of any SARSS-1 or 2A element.

SARSS-3 will maintain asset visibility of selected items and allow the TAMMC to direct redistribution or lateral issues. This theater system will perform unique functions such as financed and unfinanced war reserve computations, level adjustments, and allocations of selected items. SARSS-3 will be employed at the TAMMC such as the 200th TAMMC in Zweibrucken, Federal Republic of Germany. SARSS-3 has only been conceptually defined. Definition and design is expected to begin in FY 90, after the initial extension of the

Objective SARSS-1, 2A, 2B systems. It will interface with SARSS-2A and 2B and CSSCS. It will be employed at theater Army and major Army command (MACOM) levels. SARSS-3 will complete the replacement of SAILS in the theater.

Feedback from commanders, managers, and operators working with the SARSS-1 (Interim) has been used in the design and development of the objective system. When the entire SARSS system is operational it will provide a single integrated retail supply system that puts the supply system back in the hands of the combat service support forces in a manner which will most effectively meet their needs. 

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Automated Supply Training

Gary Liptrap

Editor's Note: These courses were being taught in the Supply Department before the U.S. Army Training and Doctrine Command (TRADOC) reorganized its schools under School Model 89. The Supply Department and the Logistics Career Department at the U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA, combined to form the Supply and Professional Development Department, effective 25 September 1989. The new department provides all supply training for both officer and enlisted personnel.

Most resident courses offered by the Supply and Professional Development Department, U.S. Army Quartermaster Center and School (PROV), at Fort Lee, VA, include training in automated supply.

Looking back to the early to mid-1980s, automation training was for selected personnel only. For example, Decentralized Automated Service Support System (DAS3) and Direct Support Unit Standard Supply System (DS4) training was available to these selected military occupational specialties (MOSs): 76P, 76Z, 920B warrant officer, and 92A commissioned officer personnel. Standard Property Book System (SPBS) resident training was another course available only to selected MOSs: 76Y (E4 and above), 76Z, 920B warrant officers, and 92A and 92B commissioned officers. However, by 1985, supply automation changed to such a degree that almost all supply MOSs at all skill levels required automation training.

In 1985, the Supply Department expanded its supply automation

training program. This effort was in preparation for the fielding of two new hardware systems and three new software systems introduced in 1986-87. The hardware systems were Tactical Army Combat Service Support Computer System (TACCS) and Logistics Applications of Automated Marking and Reading Symbols-Tactical (LOGMARS-T). The three new Standard Army Management Information Systems (STAMIS) were Standard Army Maintenance System 1 (SAMS 1), Standard Property Book System - Redesign (SPBS-R), and Standard Army Retail Supply System-1 (Interim) (SARSS-1 (Interim)). Currently, automation training in varying degrees has been implemented in

". . . by 1985, supply automation changed to such a degree that almost all supply MOSs at all skill levels required automation training."

two advanced individual training (AIT) courses (76P and 76V), six Noncommissioned Officer Advanced and Basic courses (ANCOC/BNCOC) (76P, 76V, and 76Y), and five functional courses requiring specialized MOS identification. Automated equipment that supports automated training at Fort Lee, VA, includes one DAS3 N/D mobile van, three DAS3 D/C fixed training systems, 156 TACCS V2 systems, and LOGMARS-T equipment consisting of 200 bar code readers, 48 bar code printers, and 200 laser scanners.

Specific information follows about automation training in supply:

DS4 Course

The DS4 course teaches officers, noncommissioned officers (NCOs), and selected enlisted personnel functional applications and management of a supply activity using DS4. The training is available to Active Component (AC) and Reserve Component (RC) 92A and 92B commissioned officers, 920B warrant officers, and enlisted personnel qualified as materiel control and accounting specialists (76P10/20/30/40), medical supply specialists (76J), or senior supply sergeants (76Z50) assigned or on orders for assignment to a division materiel management center (DMMC) or a non-divisional direct support unit (DSU) operating under DS4 automated supply procedures. An additional skill identifier (ASI) T8 is awarded to graduates of this four-week course. The DS4 course probably will be phased out in fiscal year (FY) 90-91 as SARSS 2AD is fielded. The DS4 course number is 8B-

F37/551-ASIT8.

DAS3/DS4 Operator Course

The DAS3/DS4 Operator course replaced the DAS3/Phoenix Operator course in January 1984. Offered to selected MOSs 76P, 76J, and 920B warrant officers, selectees must be working in or on orders to divisional/nondivisional DSUs and general support units (GSUs) operating DAS3 hardware. This six-week course provides DAS3 computer training combined with procedures in stock control, stock accounting, and asset reporting functions of the DS4 STAMIS.

Graduates receive ASI M6. Eventually, this course will phase out as the SARSS 2AD STAMIS is fielded. Most likely, the DAS3/DS4 Operator course will be taught with the SARSS 2AD course until the Department of the Army (DA) eliminates the course. The DAS3/DS4 Operator course number is 8B-F39/551-ASIM6.

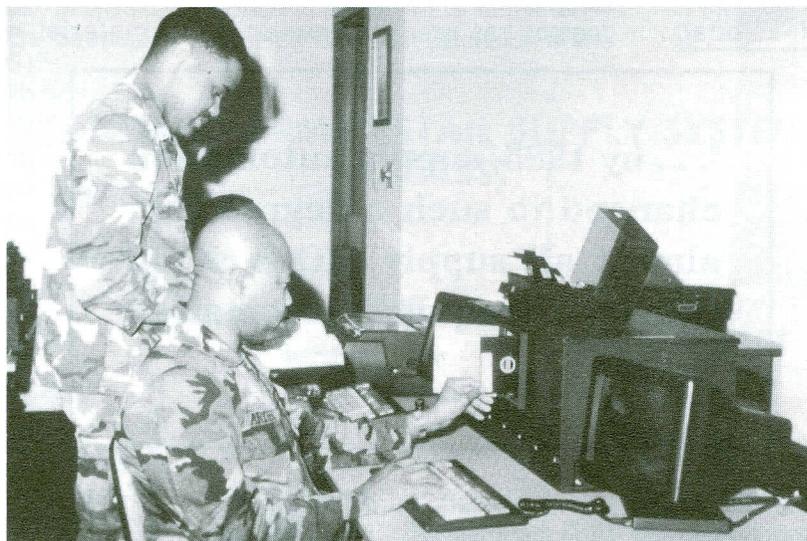
TACCS/SAMS Course

The three-week TACCS/SAMS course began 6 October 1986. This course is for AC and RC personnel qualified in MOS 76C with actual or anticipated assignment in a division/nondivisional unit using SAMS 1 STAMIS on TACCS. A standard test score of 100 or higher is a course prerequisite. Graduates receive an ASI B5. The course provides extensive hands-on technical training using the TACCS computer and SAMS 1 STAMIS applications. SAMS 1 STAMIS applications include, but are not limited to, managing intermediate (forward and rear) maintenance information, providing status on equipment and feedback for maintenance improvements, and scheduling. The TACCS/SAMS course number is 551-ASIB5.

SPBS-R Course

The SPBS-R course began 25 March 1987. This course is offered to selected AC and RC enlisted E4s

or above qualified in MOS 76Y or 76Z, 920A warrant officers, and 92A and 92B commissioned officers. Personnel must be assigned to or on orders to a division, separate brigade, armored cavalry regiment, nondivisional organization, or installation operating or scheduled for conversion to SPBS-R on TACCS. The course provides training in the policies, terms, management procedures, and functional operations of an automated property book system using TACCS. Training includes basic operational procedures and functions of TACCS hardware such as



TACCS being utilized during a supply course

operator maintenance, unpacking, and setup. SPBS-R STAMIS training includes administrative procedures, proper utilization of a user's manual and utilities functions, inquiry transactions into various files, interpretation of output listings, processing of property book, Military Standard Requisitioning and Issue Procedures (MILSTRIP) transactions, input data, and obtaining output listings for evaluation. Graduates of this four-week course receive proposed designated skill identifier (PDSI) N4S.

The SPBS-R course number is 8B-F46/551-F23.

Automation training added to 76P and 76V resident courses of instruction over the past two years involves TACCS and LOGMARS-T hardware and SARSS-1 (Interim) STAMIS applications. Extensive hands-on training on TACCS and LOGMARS-T equipment teaches the processes of the SARSS-1 (Interim) STAMIS applications.

The number of training hours in each course follows: 76P10 AIT-74 hours, 76V10 AIT-58 hours, 76P BNCOC-55 hours, 76V BNCOC-65 hours, 76P ANCO-40 hours, and 76V ANCO-8 hours. The 76V ANCO training hours will increase to 50 upon approval from Headquarters, U.S. Army Training and Doctrine Command. Eventually, SARSS-1 (Objective) STAMIS will replace the existing SARSS-1 (Interim). This could occur during FY 90. Probably, up to one week of training will be added to the 76P10 AIT and the 76P/V ANCO

/BNCOC courses to cover management aspects of SARSS-1 (Objective) that are not now a part of the present interim STAMIS. MOS 76Y40 ANCO and 76Y30 BNCOC are other skill levels with automation training at Fort Lee, VA. For example, the 76Y40 BNCOC soldier receives 40 hours of supply automation training which includes 25 hours in common areas such as supply STAMIS orientation, automation management, TACCS hardware, and LOGMARS-T applications. Soldiers also receive

15 hours on managing supply operations supported by SPBS-R. The 76Y30 BNCOC soldier presently receives 31 hours of automation training that includes 18 hours of hands-on training in TACCS/SPBS-R.

Effective June 1989, 64 hours of Unit Level Computer and Unit Level Logistic System (ULC/ULLS) training was implemented in the 76C10 AIT. The first class to receive this training was class 058. Class 058 began training on 27 June 1989 and graduated on 14 September 1989. Plans are underway to implement 72 hours of ULC/ULLS training in the 76Y30 BNCOC training course during the first quarter of FY 90.

Another functional course on the horizon for FY 90 is SARSS 2AD.

This course will ultimately replace the DS4 and DAS3/DS4 Operator courses currently taught at Fort Lee, VA. The SARSS 2AD functional course will teach selected enlisted 76P (E5 and above) personnel and 920B warrant officers to operate, supervise, and manage automated materiel control and accounting functions of SARSS 2AD on TACCS equipment. Personnel must be either assigned or on orders to a location where SARSS 2AD has been fielded and operating on TACCS. The course length is currently programmed at six weeks and is ASI-producing. To support this training, the Supply and Professional Development Department will receive 26 TACCS V2 systems in FY 90.

The Supply Department made tremendous progress during the 1980s to implement meaningful automation training concurrent with the fielding of new systems. Comments from the field are welcomed and encouraged. Address correspondence to:

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THE QUARTERMASTER CORPS

This poem by John McGroarty is reprinted from the May-June 1924 issue of The Quartermaster Review, Volume III, Number 6.

Not with gay martial air, not with trumpets loud blare,
That our pulses may quicken and throb;
Not with gaudy array, do we day after day,
Buckle into our difficult job;
And we feel not the need of spectacular deed,
Nor does our ambition incline
To Honor and Fame; but our resolute aim
Is "Service for the Line."
We've furnished the doughboy with his daily supplies,
From Washington's time until now.
We issue him shoes of a generous size
And we get his tobacco and chow;
And we see that he's neat, from the soles of his feet,
To the top of his militant head.
For his comfort we strive while the soldier's alive,
And we bury him after he's dead.

And we furnish the barracks in which he sleeps,
Secure from the cold and the storm;
And we furnish the fuel in generous heaps,
To keep him contented and warm;
And we furnish his bath and his water and lights,
And everything else that he needs,
Including the paper on which he writes
Of our failures and dark misdeeds.
Oh, the faucets that leak and the hinges that creak,
And the auto that ought to go faster,
And the scheming contractor--each one is a factor,
To worry the poor Quartermaster.
Does he lay down and quit? Or perhaps throw a fit?
Does he get all discouraged and blue?
No--he's busy explaining some jobs still remaining,
That he hasn't been able to do.
We expect at the most an occasional roast,
But we cheerfully shoulder the blame;

Every day do our best--trust in luck for the rest,
For it's all just a part of the game.
We don't feel aggrieved and we never get peeved,
We're used to surviving the shock.
No soldier was ever content with his lot,
Unless he had someone to "knock."
Where there's work to be done, afloat or ashore,
And there's nobody else to do it.
Each one does his part, down from General Hart,
To the humble methodical clerk;
And our ultimate story is not one of glory,
But only of effort and work.
While the waiting world reads of the valorous deeds
Of the Army, since days of yore,
'Tis but seldom we're seen in the limelight serene,
We men of the Quartermaster Corps.
Whatever goes wrong, why we're always the "goat",
But of credit we claim our share,
For nowhere on earth does "Old Glory" float,
That we didn't help place it there.

ARTIFICIAL INTELLIGENCE IN LOGISTICS

"THE FUTURE IS NOW"

CPT Ira S. Naiditch

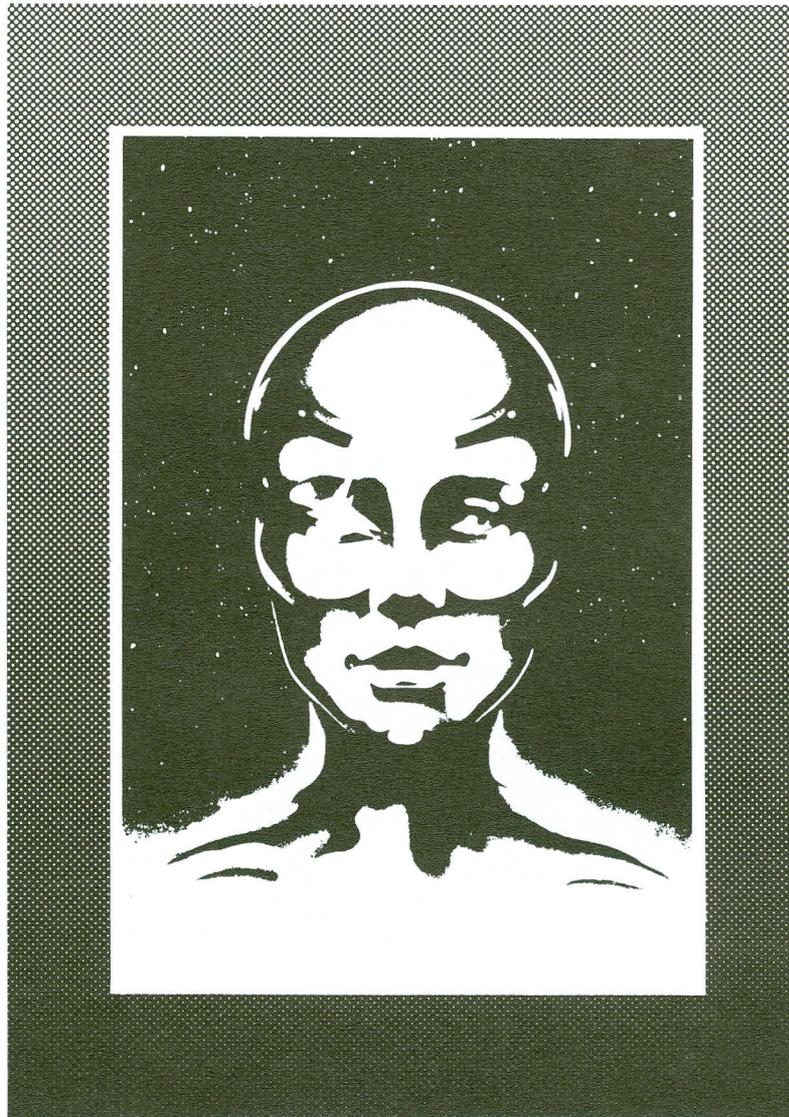
Military logistics systems are becoming more sophisticated and state-of-the-art every day. With this sophistication has come automation and the need for greater education. The U.S. Army has quickly come to a point in time when automation is everywhere from small units to major command headquarters. From the very beginning, technology increased productivity and enhanced warfighting skills. Logisticians must ensure that they are not left behind. Capabilities must be further enhanced and productivity further increased. Artificial intelligence can be the key to these improvements.

Artificial intelligence already plays a key role in most Fortune 500 firms. Many use artificial intelligence in logistics functions such as warehousing, inventory control, maintenance scheduling, purchasing, automobile diagnostics, and transportation. Use of artificial intelligence technologies is certainly providing those firms with tools aimed at achieving strategic and competitive advantages.

Artificial intelligence does not have to be reserved for use by rocket scientists, nor should computer scientists or management information system personnel be the sole owners/users. Artificial intelligence applications can be made

very user-friendly and pay dividends to all. It can make complex problems simple to solve. It can enhance our logistics operations by "making machines do

intelligence can help capture the knowledge and expertise necessary to provide the finest possible support and make it available throughout an organization.



Artificial intelligence is not one single technology. It is more than 100 different technologies: some still in the laboratory and some commercially available. The most readily available artificial intelligence technologies are expert system, natural language, speech recognition, vision, and intelligent robotics.

Perhaps the artificial intelligence technology with the greatest immediate pool of applications is the expert system technology. Brigadier General R. L. Dilworth, in an article published in *AI Exchange* entitled "Artificial Intelligence: The Time is Now," promoted the use of expert system technology. Its proper application would make immediate contributions towards improving logistics operations.

An expert system is a computer program that mimics the behavior of a human expert. It can solve problems, make predictions, and offer advice. It is not 100 percent correct all the time, any more than the best human expert would be. What an expert system can do is assist others in an organization to be approximately 80 percent as good as the best expert.

things that would require intelligence if done by humans."

Logistics Is Decision-Intensive, Labor-Intensive, Data-Intensive, and Capital-Intensive!

The result is that logistics is broad-based and complex. Additionally, its importance is known only too well by those on the battlefield waiting for support. Artificial

Natural language technologies ease database use. Operators use computers that understand English rather than more cumbersome computer languages.

Both General Motors and Ford Motor Company have begun using speech recognition where microphones replace keyboards. For non-typists, there are certainly efficiency advantages. A limiting factor in this artificial intelligence technology is that each system is generally limited to a single user.

Computers that can "see" are now available when utilizing vision artificial intelligence technology. Most applications of vision technology involve inspection. Although primarily two-dimensional, three-dimensional vision is beginning to emerge from the test laboratories.

Intelligent robotics are exactly that -- robots that know what they are doing. From removing rivets and fasteners to packing boxes to pulling customer orders, this technology is available. Tests are ongoing in many companies to further enhance intelligent robotics technology and improve customer service.

As logisticians, it is imperative that these technologies, and others, be explored for possible application. Budget reductions may cause inventory reductions. They do not, however, have to result in less readiness. Information can serve as a resource. Uncertainty

can be buffered with information instead of costly inventory. **Electronic Data Interchange (EDI) and "Just-In-Time"** are examples of using information technology in the civilian sector to the benefit of vendors and customers alike.

Innovative attitudes, at all levels of logistics, must prevail if combat service support is to be provided at the level our customers expect. Artificial intelligence can help. It can be key to increasing inventory velocity, reducing variance of workload, and simplifying transaction processes.

The Office of the Deputy Chief of Staff for Logistics greatly increased its attention to artificial intelligence in logistics when it included artificial intelligence as a separate section in the June 1988 Logistics Automation Master Plan (LAMP). The 1989 LAMP promises to be even more comprehensive. Additionally, other logistics commands actively engaged in developing artificial intelligence applications include --

- Army Material Command (AMC), Alexandria, VA
- Materiel Readiness Support Activity (MRSA), Lexington, KY
- Harry Diamond Laboratories, Adelphi, MD
- U.S. Army Logistics Center (USALOGC), Fort Lee, VA

- Defense Logistics Agency (DLA), Alexandria, VA

By acquiring a broader scope of knowledge concerning potential artificial intelligence applications, logisticians can lead the way in productivity improvements. User-friendly software is available as are nontechnical, managerial-level courses (both commercially and through the military). Additionally, Advanced Civil Schooling (ACS) and Training With Industry (TWI) is available to many qualified officers each year. In these programs, officers with highly technical backgrounds may become involved in programming and knowledge engineering. Other officers may receive user-level exposure while studying distribution, inventory control, transportation, or maintenance. As logisticians, the programming and knowledge engineering is best left to the professional. It is the use of the end product that requires our time and interest, and that time is now! 

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CORRECTIONS

Summer 1989

In the article "Lifeline To Sustainment: The European Military Pipeline System" by MAJ Raymond L. Rodon, the maps of the Donges-Metz Pipeline System (DMPS) and the Central European Pipeline System (CEPS) were reversed. The DMPS map actually was pictured on page 7, and the CEPS map was pictured on page 6.

Spring 1989

Figure 1 of the article "COMMAND" by CPT John Loomis on page 47 of the Career Notes section incorrectly reflected that the eight officers who were not selected for major were in command 12 months. The figure should have indicated that these officers were in command less than 12 months. A command of at least 12 months does branch qualify a Quartermaster Officer.



STEAM AND ELECTRICITY:

The Origins of Supply Automation in America

Dr. J. Britt McCarley

TACCS, ULC, ULLS, CTASC-II, SAILS, SARSS-1, SARSS-2A, SARSS-2B, SARSS-3, and SPBS-R! This bewildering welter of acronyms is enough to make ones head spin with confusion, but its all part of the U.S. Armys long-standing effort to automate its supply functions.

Nowadays automation means computerization, whose beginnings go back to the 1890s and early 1900s with the first use of mechanical data-processing equipment and punch cards for storing information. However, the process of automating--or mechanizing--military supply activities started long before the appearance of the technological innovations that permitted the development of computers. In fact, the origin of supply automation can be traced all the way back to the 1700s in England and the beginning of the Industrial Revolution. For thousands of years before, the operation of field armies the world over had been tied to the strength of winds and currents at sea and on rivers, and to the

stamina and stubbornness of animals on land.

MOTIVE POWER

Developed initially to pump flood water from coal mines in Cornwall, England, the steam engine was improved in the late 1700s by James Watt, a Scotsman, who then adapted it to produce rotary motion. This crucial improvement opened the way for the steam engine to supply motive power to a wide variety of machines for numerous purposes, including land and marine transportation. Watts enhanced engine and its countless applications freed such human pursuits as manufacturing and war, among many others, from the age-old limitations imposed by nature and animals.

Though Watt and others experimented with a steam-powered railway, it was not until Englishman George Stephenson's Stockton and Darlington line began operating in 1825 that the first practical railroad was in service. Railroading started

in the United States in the 1820s and 1830s when Atlantic coast cities lacking interior river or canal networks started using the railroad to ship products inland. The Baltimore and Ohio, one of the most famous of the early American railroads, opened for business in 1830. Over the next 30 years, railroad companies laid track at a prodigious rate, so that by 1860 about 30,500 miles of rails had been put down, most of them in the northern industrial states and extending into the first tier of states west of the Mississippi River. Comparatively few railroads existed in the South, and most of these were poorly constructed, maintained, and operated.

WATER TRANSPORT

Another significant application of steam power was to water transport. In 1807, Robert Fulton, an American, launched the first entirely successful steamboat, the Clermont, which chugged its way up the Hudson River from New York City to the state capital at Albany in only 32 hours, much quicker than a sailing sloop

***"What hath God wrought?" (Numbers 23:23)
Whether by God or man, what had been wrought
was a revolution in transportation and
communication that diminished time and distance
and was soon adapted to military use.***

could make the same voyage. Twelve years later, in 1819, the steamship Savannah, built by Moses Rogers, another American, completed the first successful transoceanic voyage by a steam vessel of any kind by sailing from Savannah, Georgia, to Liverpool, England, in 29 days. Over the next several decades, Americans and Europeans filled the worlds oceans and inland waterways with an ever-increasing number of steam vessels.

COMMUNICATIONS

At the same time that steam power was being applied to land and water transportation, automation was also coming to the field of communications. Since before recorded history, the sending of messages in all human enterprises, including war, had principally depended upon the speed and stamina of human and animal legs. During the early 1800s, two English inventors developed the first practical electric telegraph. Beginning in the late 1830s, an American, Samuel F.B. Morse, experimented with and in 1844 finally built the first long-distance telegraph, spanning the 40 miles between Washington D.C., and Baltimore, MD. Only two years later, a total of 1,200 miles of telegraph wire had been strung to connect several northeastern cities. By 1861, many small telegraph operations had been consolidated into the Western Union Telegraph Company, which had already installed a transcontinental line. Instantaneous, long-distance communication was now a reality.

WHAT HATH GOD WROUGHT?

On 24 May 1844, after completion of the Washington to Baltimore telegraphic connection, Morse sent one of his helpers the first message

over the line. In the form of Biblical verse, he tapped out a signal indicative not only of the importance of his electric telegraph but also of the significance of the railroad, steamship, and steamboat. Morses communication was: "What hath God wrought?" (Numbers 23:23). Whether by God or man, what had been wrought was a revolution in transportation and communication that diminished time and distance and was soon adapted to military use. The potential now existed for armies to harness machines to the problem of supply and to automate a process that had been bound to the unpredictability of nature and animals.

During the Mexican War (1846-1848), Americas first "overseas" conflict, the Army used the steamer, the railroad, and the telegraph to some extent. The telegraph and chartered steamboats assisted procurement of equipment, especially in the northeastern states. Though railroads were still in their infancy in the United States, wherever possible they carried troops and supplies to seaports. From there, steamships ferried them across the Gulf of Mexico to both American armies marching toward Mexico City. By the start of the Civil War, the potential of the telegraph-railroad-steamer trio had only been touched. From 1861 to 1865, however, they would permanently change the conduct of war.

MOBILIZATION

After Confederate forces fired on Fort Sumter in Charleston Harbor and war began, the immediate supply problem for the federal government became mobilization. Through bureaucratic procedures, the Army soon brought the telegraph and the railroad into the process of raising and sustaining

forces used to suppress the Southern rebellion. Colonel Anson Stager, formerly the general superintendent of the Western Union company, developed the Army telegraph network that by the end of the war encompassed 15,000 miles of lines and provided long-distance, instantaneous communications necessary to direct and support Union forces serving from Virginia all the way to Texas. Called the United States Military Telegraph, this paramilitary organization employed mainly civilian operators and only nominally came under the direction of the Quartermasters Department. The Secretary of War retained final authority over the Army's military telegraph system.

RAILROADS

As for railroads, the Army also relied on the business skills of former civilians. Assistant Secretary of War Thomas A. Scott, earlier an executive of the Pennsylvania Central Railroad, directed Union rail service during the initial mobilization. Throughout the war, as Federal troops advanced ever deeper into Confederate territory, the problem of administering and operating captured Southern rail lines arose. Using the authority granted by Congress in the Railroad Act of 1862, which empowered the government to seize railroad lines in the United States and operate them to transport and supply troops, the War Department organized the United States Military Railroads (USMRR). To direct the system, the Secretary of War appointed the former Erie Railroad superintendent, Colonel (later Major General) Daniel C. McCallum. As with the telegraph service, the USMRR also reported directly to the Secretary of War. To put captured Confederate rail lines back into service for the

"... the earliest form of the radio and the two versions of the internal-combustion engine, ushered in another revolution in communication and transportation, similar to the changes that the telegraph and the steam engine had brought decades before."

Union, the Army created within the Quartermasters Department an agency called the Railroad Construction Corps.

STEAMER OPERATIONS

On the numerous rivers that pierced the borders of the Confederacy and along the coastal waters of the same, the Union Army built, chartered, hired, or pressed into service about 3,000 ocean and river steam vessels. Unlike the bureaucratic agencies created to handle telegraphic and railroad service, steamer operations were entirely directed by the Quartermasters Department.

While using the telegraph, railroad, and steamer was difficult enough for the North during the Civil War, the same task for the South proved all but impossible. In part because of the Confederacy's commitment to the principle of states rights, the government in Richmond never succeeded in developing a national transportation and communication network. The network the South did possess broke down constantly because of poor maintenance and was universally a target for Union military operations. As a result, Confederate military supplies, especially commissary stores that frequently rotted in railroad terminals, often went undelivered to the evermore poorly equipped and fed Johnny Rebs.

TECHNOLOGY TRIO

In the process of applying the combined technology of the telegraph-railroad-steamer trio to logistics, the U.S. Army had managed to automate the delivery of supplies all the way from procurement to distribution at the railheads in the theaters of operation. From

the railheads, however, the movement of materiel forward to the troops in the field was as primitive as it had been for centuries. This limitation notwithstanding, steam and electrical power did contribute to several remarkable logistical feats during the Civil War.

Near the end of September 1863, Union forces under Major General William S. Rosecrans were defeated by Confederates under General Braxton Bragg in the Battle of Chickamauga. Following his defeat, Rosecrans retreated into nearby Chattanooga, Tennessee, where Bragg locked him in a siege. Reinforcements from several locations were soon on their way to Rosecrans. The movement of one group has been called "the accomplishment par excellence of Civil War logistics." The USMRR and several civilian railroads, in just 11 days, transported approximately 23,000 soldiers, their equipment, and 100 rail cars of baggage over the 1,200 miles of track from the Rappahannock River in Virginia to the Tennessee River in Alabama. The Northern transportation and communication system successfully demonstrated its superiority by moving more men in less time than its Southern counterpart was ever able to do. These soldiers later helped break the siege of Chattanooga and drive the Confederates southward into the mountains of north Georgia.

GENERAL SHERMAN'S CONTROL

On 5 May 1864, Union Forces from east to west launched simultaneous offensives against the Confederacy's few remaining field armies. From Chattanooga, Major General William T. Sherman's

100,000 Federal troops advanced south against their Confederate counterparts numbering about 50,000. During the two months prior to the beginning of the campaign, Sherman had supervised his commands logistical preparations. His three armies drew their supplies by river steamer and rail from Nashville, Tennessee, and Louisville, Kentucky. Because of the overriding importance of the railroads, Sherman personally directed railroad operations. He controlled all aspects of administering and supplying his forces by maintaining a headquarters detachment in Nashville, to which he was connected by telegraph.

Allowing nothing but military personnel and supplies to be carried on his rail lines and maintaining the track against accident and enemy action with detachments of the Railroad Construction Corps, Sherman could truthfully claim near the end of the campaign that "for one hundred days not a man or horse has been without ample food or a musket or gun without adequate ammunition. I esteem this a triumph greater than any success that has attended me in battle or strategy." Years later Sherman revealed how indispensable the railroad had been to his campaign against Atlanta. In his memoirs, he wrote that without his rail service it would have taken 36,800 six-mule Army wagons hauling 2 tons each and traveling 20 miles every day to have provided for his men and animals. This task would have been impossible considering the condition of north Georgia's roads in 1864.

It is proverbial these days to say that the Civil War was the first modern war, but the power of steam and electricity lend much truth to that claim. The telegraph-railroad-steamer trio not only

automated the supply process all the way to the railheads, but these three products of the Industrial Revolution would now permit nations to approach total mobilization of their economy and population for war, thus moving a step closer to total war.

FRONTIER POLICE FORCE

From 1865 to 1890, the small post-Civil War Army concentrated its effort and soldiers against the Indians on the ever-advancing western frontier. Because of the great distances between posts and the enormous territory over which its columns had to travel and fight, the Army made extensive use of the telegraph, railroad, and steamer. Increasingly during the late 1800s, the telegraph connected frontier posts with larger forts back in the more densely settled areas, thus providing instantaneous communications that could summon supplies forward for a march against the Indians. The Army used steamboats and railroads to transport those supplies to the troops waiting to go on campaign. The railroad was especially useful, because it delivered rations, warm clothing, arms, and ammunition even in winter when frozen rivers kept steamboats tied up at wharves. It was precisely during those cold months, when the Indians food supplies were low and their ponies hungry and thin, that the Army won its most decisive victories.

DECISIVE VICTORY

One in particular stand out. Following the Sioux and Northern Cheyenne Indians massacre of Lieutenant Colonel (Brevet Major General) George A. Custer and 215 troopers of the 7th U.S. Cavalry in

June 1876, Major General Philip Sheridan, commanding the Military Division of the Missouri, used the telegraph-railroad-steamer combination to gather and sustain a force of regular cavalry and infantry. Through the winter of 1876-77, these troops doggedly pursued the Sioux and Cheyenne braves that had earlier wiped out Custer and his detachment. By the next spring, the Army had broken the military strength of these most powerful of the Plains Indian tribes.

LOGISTICAL EXPERTISE LOST

Following years of troubles between the two, the United States and Spain went to war in 1898. Since 1865, the Army had functioned largely as a frontier police force, and the logistical expertise needed to raise and sustain a large army had been lost over the years. While procurement of supplies went well, transporting both soldiers and equipment to Tampa, Florida, the port of embarkation for the Cuban expeditionary force, went badly. About 1,000 freight cars filled with much-needed supplies clogged railroad sidings from Tampa all the way to Columbia, South Carolina, a distance of nearly 450 miles. At Port Tampa, the single-track railroad running back to Tampa and the ports one pier made loading the expeditionary force difficult. Because the Navy had already chartered the best private shipping for its own needs, Army Quartermasters could hire only small, slow, and unreliable coastal steamers for the voyage to Cuba.

Unloading the invasion force of 17,000 regulars and volunteers on the south coast of Cuba near Santiago was hard enough, and the supply problems did not end there.

Cuban roads were even worse than those in the American South during the Civil War, and there were no railroads and few wagons to haul supplies forward. In the end, far more soldiers died of disease during the Spanish-American war than in battle, and much of the blame rested with an army now clearly unprepared to fight anyone but native Americans. Had the United States fought any power but decrepit Spain, surely it would have lost.

INDUSTRIAL REVOLUTION

During the late 1800s, while the United States was acquiring numerous overseas possessions from Spain and becoming an imperial power in the process, three new products of the Industrial Revolution were going through the stages of development that would yield practical applications. In 1897, an Italian, Guglielmo Marconi, building on years of work by other scientists, transmitted a message 9 miles on a wireless telegraph. Within a few years, Marconi was transmitting messages 3,000 miles. Before long the wireless telegraph was being used aboard ships. This development led to a drastic change, for up to this point, seafarers had relied on visual communications. During the same period and again adding to the work of others, a German, Gottlieb Daimler, devised the first lightweight gasoline engine in 1882. However, development of the gasoline-powered engine was slow because of difficulties in refining crude petroleum into gasoline. A few years later, in 1895, another German inventor, Rudolf Diesel, developed the first compressed-ignition engine, which bypassed Daimler's principal problem by burning low-grade fuel oil.

ANOTHER REVOLUTION

All three of these inventions, the earliest form of the radio and the two versions of the internal-combustion engine, ushered in another revolution in communication and transportation, similar to the changes that the telegraph and the steam engine had brought decades before. Though applied first to civilian transport, they would soon free armies from the restrictions imposed by telegraph wires, railroad

rails, and bulky steam engines, and would bring automation at last to the supply train itself. In the second decade of the 20th century, the U.S. Army first put radio and the internal-combustion engine to work in making transport and communication more rapid and efficient first in the Punitive Expedition of 1916 and then during American participation in World War I. As with the telegraph and the steam engine in the Mexican War, only the potential of the radio and the internal-combustion engine was glimpsed in Mexico

and France, but together they began a new age of supply automation that would allow the world's armies to engage in still more complete exercises in total mobilization and total war. 

Dr. J. Britt McCarley is the Assistant Command Historian/Archivist, U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia.



Supplies on a congested road in France

Innovative Methods of Retaining Quality Female Soldiers

CPT Angela Neier

Editor's Note: The following article was a by-product of a research project completed during the Quartermaster Officer Advanced Course by CPT Neier. The focus of the research was to determine if there is a significant difference in the attrition rate between male and female Quartermaster officers, and, if so, what is the best method of retaining quality female officers. As surveys returned from the field, it was extremely interesting to note the responses. Some were indignant that the Quartermaster Corps would even explore these issues, while others were enthusiastic that the school was looking at a relevant issue. The intent was to gain a perspective of prevailing attitudes and to scratch the surface on the issues. Advance

course students do not normally change or create personnel policy, but the ideas generated in the study possibly merit further analysis. Some data from the study will be used in briefings to the Pre-Command Course, while other ideas on mentorship will be the focus of future articles in the Quartermaster Professional Bulletin.

We invite your comments, additional ideas, or criticism of the concepts. Retaining quality, trained, motivated officers, regardless of sex, is in every Quartermaster's interest!

Women are one of the fastest-growing sectors of the American work force. Out of those entering the work place, women make up 65 percent of new entrants. Forty percent of today's managers and ad-

ministrators are women. Of all graduating professionals, 13 percent are female engineers, 39 percent are female lawyers, and 31 percent are women with Master of Business Administration degrees (MBAs). No doubt organizations and top management have recognized the powerful impact of such a valuable commodity and have progressively integrated women's career goals and personal needs.

The U.S. Army is no different and has recognized women as a valuable resource as well. Eleven percent of today's active duty soldiers are female. Combat service support branches, more specifically, have the greatest concentration of women. In fact, by FY 90 the Quartermaster Officer Corps alone will be comprised of 29 percent women.

Has the Army maintained the pace of its civilian counterparts in



offering women programs for career development and personal needs? At one point in time, the Army led the way in offering women equal pay and equal opportunity. In fact, the Army has offered such benefits as maternity leave and joint domicile for over 15 years while civilian corporations have only recently offered leave after pregnancy. However, civilian organizations now have newer personnel programs surpassing those in the Army's personnel system. Will the Army start to lose, and has it already lost, qualified female professionals who are looking for some of these incentives?

The Quartermaster Corps recently explored these issues. To find out how Quartermaster officers view female officers and their role in the Army, a survey was sent to randomly selected male and female Quartermaster officers of all ranks and assignment backgrounds. A total of 118 officers responded to the questionnaire, which addressed issues such as attrition, retention, and keys to success in the military. Approximately 80 percent of those surveyed were women, and 55 percent had command time (company/battalion). The results were interesting in terms of Quartermaster officer perceptions and viewpoints on equal opportunity and attrition. Over 78 percent felt the Quartermaster Corps offered equal opportunity for career advancement and placement. A majority of the comments pointed out the versatility and diversity of the Quartermaster field that offers a variety of jobs and career paths for both women and men.

Yet, of those surveyed, 70 percent perceived women with a higher attrition rate than men; that is, women are more likely to leave active duty than men. However, ac-

cording to Department of the Army records, the annual attrition rates of female and male Quartermaster officers have been approximately the same, except for the fifth, eighth, and tenth years of service. During these time periods, female officers had a significantly higher attrition rate than men. Some of the factors

does it mean sacrificing family, children, and marriage for a promising career? Can the Army afford to lose qualified and experienced leaders in whom it has invested time, money, and opportunity?

Many women and several organizations have dealt with similar

The Army is different from most professionsBut for military women who accept this, does it mean sacrificing family, children, and marriage for a promising career?

that influence this rate are completion of required service obligations and civilian career transitions. The questionnaire directly asked why officers get out of the military. Responses varied but continually centered around five basic reasons:

- Poor performance.
- Job dissatisfaction.
- Having marketable civilian skills and the desire for a civilian career.
- Family reasons such as children and parenthood.
- Marriage to another soldier that becomes increasingly harder to manage for joint domicile and career progression.

The latter two reasons specifically emphasize the conflicts in family planning, parenthood, and career compatibility.

There's no big secret surrounding a military career; there are sacrifices -- personal ones. The Army is different from most professions; it demands 24-hour responsiveness and responsibility. But for military women who accept this,

conflict. Fortunately, they developed innovative programs to strike a balance between parenthood and a demanding career. Some of the more successful programs offered by corporate organizations such as International Business Machines Corp., Quaker Oats Co., and Corning Glass Works are job sharing, flexible scheduling, telecommuting, and on-site child care. These programs offer women an opportunity to slow down their careers for a specified time, start a family, and return into their professions with even greater vigor. Such programs have attracted and retained new talent as well as seasoned, top performers.

The Army presently does not offer comparable programs, even though substantial progress has been made for improving child care. An obvious question is this: can the Army incorporate similar programs without sacrificing readiness or breaking budget limitations?

There are possible alternatives the Army could explore that would retain talented leaders who want a military career. One possibility is promoting already existing alterna-

tive career paths such as the Active Reserves, the Individual Ready Reserve, the National Guard, and even Civil Service. This transition would benefit not only the individual but the government and Army as well because they would still retain the officers expertise and leadership. Another possibility is to use the Individual Ready Reserve as a temporary status for active duty officers. This status could include flexible scheduling, job sharing, and telecommuting. This alternative accomplishes several objectives. The Army retains a quality officer at a minimum cost while the officer maintains a professional career and stays current with military requirements. No doubt this program

would require major changes in the Army personnel system. The U.S. Army Personnel Command (PERSCOM), Alexandria, VA, and Reserve Components Personnel and Administration Center (ARPERCEN), St. Louis, MO, would have to coordinate and manage the transition of an officers career from active duty to reserves and then back to active duty again. However, officers, perhaps both female and male and possibly even enlisted soldiers, could use this temporary status as a time to start families and take care of personal matters. After a short period, they could return to active duty, possibly join another year group, and continue with a fruitful military career.

Ideas such as these are just some of the programs the Army could initiate in order to keep quality soldiers in the military. If the Army is going to invest millions of dollars in recruiting, educating, and training soldiers, then it should consider establishing effective ways of dealing with parenthood and the personal needs of its most valuable resource -- people.



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SENIOR RATER PROFILES

LTC MARK A. WILLIAMS

U.S. Army Active Component (AC) and Reserve Component (RC) officers may have three separate senior rater profiles.

One is the U.S. Army Reserve (USAR) profile created when a senior officer rates a reserve officer not on extended active duty, Individual Ready Reserve (IRR), or Individual Mobilization Augmentee (IMA). This group includes USAR officers on Active Guard Reserve (AGR) tours. This type of senior rater profile is managed by the U.S. Army Reserve Personnel Center (ARPERCEN).

Another is the U.S. Army National Guard (ARNG) profile that occurs when the rated ARNG officer is on special training duty and requires an efficiency report. This also includes

ARNG officers on AGR tours. The program is managed by National Guard Bureau (NGB).

The final profile is managed by the U.S. Army Personnel Command (PERSCOM) in Alexandria, VA. This includes AC and RC raters that have senior-rated Active Component officers.

Information on your USAR profile is available by contacting: Commander, U.S. Army Reserve Personnel Center, ATTN: DARP-PRE (Ms. Geneva Cole), 9700 Page Boulevard. St. Louis, MO 63132-5200, AUTOVON 623-7610.

Information on your ARNG profile is available by contacting: Commander, National Guard

Bureau, ATTN: NGB-ARP-CA (MAJ Sansing), 4501 Ford Avenue, Alexandria, VA 22302-1415, AUTOVON 289-4624.

An annual profile update is not automatically provided by ARPERCEN or National Guard Bureau.

Note -- The restart of one of your profiles does not automatically restart all of them. Each agency must be contacted individually for restart. The separate profiles ensure that you are making as fair a comparison as possible.



LTC Mark A. Williams is the U.S. Army Reserve Advisor to the Quartermaster General, U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia.

Sustainment of Theater Army Operations

MAJ Robert W. Grissom

Dr. Powell W. Owens

The most important mission of the U.S. Army in Europe (USAREUR) is to deter war. USAREUR, with other services and our allies, achieves this mission by projecting to numerically superior Warsaw Pact forces the capability to conduct and sustain combat. During peacetime and transition to war, the reserve storage activity (RSA) has direct responsibility for materiel operations at the Theater Army Area Command (TAACOM) level. The Reserve Storage Activity Kaiserslautern (RSAK) is the largest and most diverse RSA in the 29th Area Support Group (ASG), the largest ASG in the 21st TAACOM.

In peacetime, RSAK's mission is to receive, store, and issue operating stocks for the 200th Theater

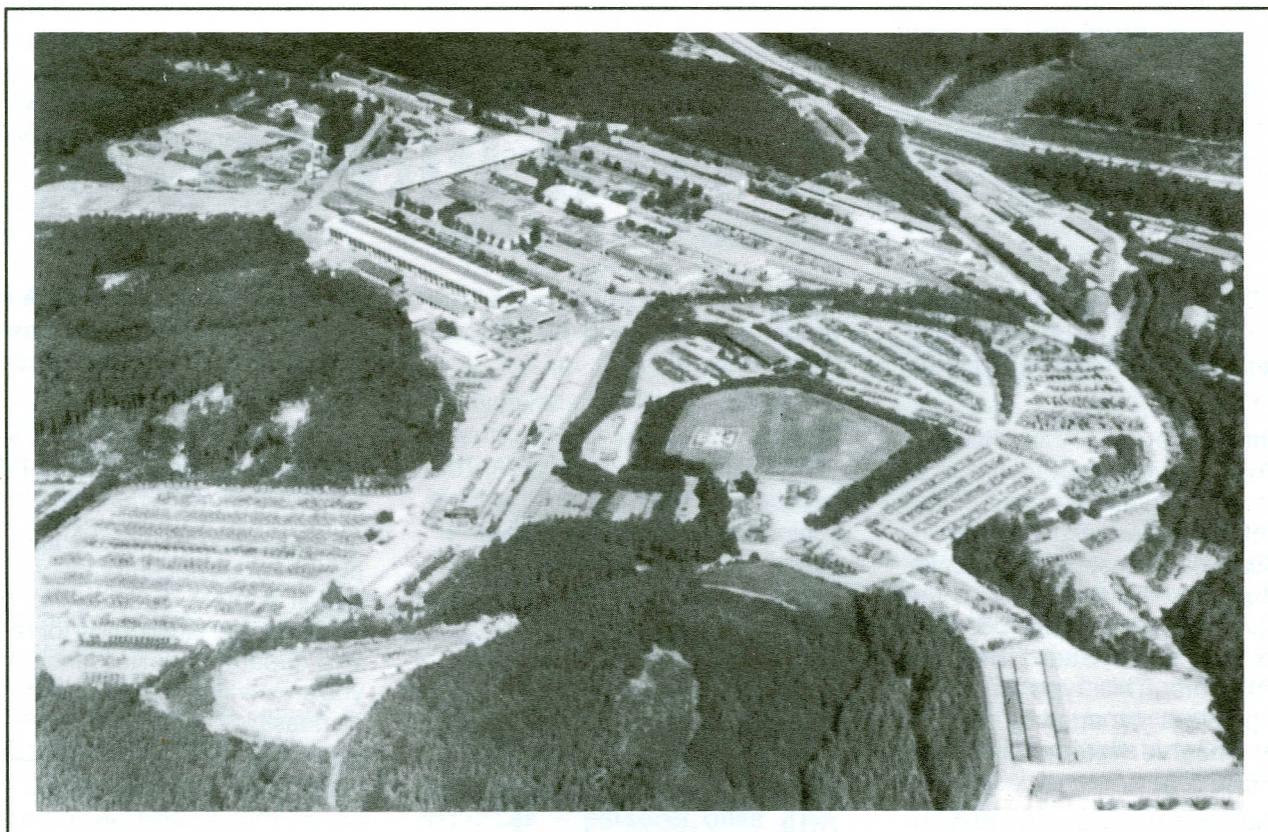
Army Materiel Management Center (TAMMC). In wartime, the RSAK also receives, stores, maintains, and issues decrement stocks (the difference between a unit's required and authorized equipment stored in war reserve), operational project stocks, and prepositioned war reserve materiel stocks.

RSAK also is responsible for 21st TAACOM's storage of forward prepositioned war reserve materiel, retrograde operations of USAREUR excess materiel and automatic return items, and a break bulk point for 180 customers in the Kaiserslautern, Pirmasens, Zweibruecken, and Baumholder area.

The RSAK is a diverse and multi-functional organization of more than 800 individuals consisting of

local nationals, Department of the Army civilians, and six soldiers. The austere command section consists of one officer, one civilian deputy, one noncommissioned officer in charge, and one secretary. The next higher headquarters, the General Support Center Kaiserslautern, provides staff support. The operational elements of RSAK include these four divisions: Materiel Management Division, Storage Division, Care and Preservation Division, and Transportation Division.

The Materiel Management Division provides centralized control of all supply transactions and maintains custodial records and the inventory program for 200th TAMMC-managed stocks at RSAK.



This aerial view of the Reserve Storage Activity Kaiserslautern (RSAK) shows the largest and most diverse reserve storage activity in the 29th Area Support Group (ASG), the largest ASG in the 21st Theater Army Area Command.

These stocks include more than 10,000 line items valued at approximately \$1.7 billion. The Materiel Management Division processes approximately 385,000 shipment and receipt transactions per year.

The Storage Division receives, stores and issues peacetime operating stocks, decrement stocks, operational project stocks, and prepositioned war reserve materiel stocks (more than 10,000 lines) as directed by the 200th TAMMC. It also operates the USAREUR Retrograde Processing Point which processes field returns and automatic return items. The Storage Division provides work places for 300 personnel in the areas of receiving and shipping, major items, warehousing, and storage planning. Its operational space includes 41 warehouses equaling more than 800,000 square feet of covered storage space and almost 3 million square feet of open storage space. The Storage Division physically handles the materiel represented by the nearly 385,000 receipts and shipments managed by the Materiel Management Division.

The Care and Preservation Division maintains theater reserve stocks. Maintenance requirements depend on periodic serviceability inspections, shipments in-theater and to CONUS, periodic operation of major items and secondary items, preservation of items returned to theater reserve stock from general support maintenance activities, and preservation of all field returns -- even if unserviceable or repairable. The workload includes more than 11,500 individual items in The Army Maintenance

Management System (TAMMS) ranging from .5-kilowatt generators to wheeled and tracked vehicles. Maintenance requirements on TAMMS items range from clothing and textiles to sets, kits, and outfits.

This tremendous workload is accomplished by more than 300 people backed up by 60 people in the 8593d Civilian Support Group (CSG) (Direct Support/General Support Maintenance). The 8593d CSG primarily performs maintenance on trucks, construction equipment, and bridging boats.

The Transportation Divisions primary mission is to request air, ground (truck and rail), and sea assets to support shipping materiel in-theater and to CONUS. This mission requires constant coordination and follow-up with U.S. Air Force and Army transportation units, terminal authorities, and the German Federal Rail System.

In addition, the Transportation Division operates Break Bulk Point Kaiserslautern, servicing approximately 180 dispersed customers by distributing CONUS-originated cargo. Further, it operates the USAREUR REFORGER CONEX (container express) pool to maintain accountability for the CONEXes. Finally, the Transportation Division provides military customs inspection services, ensuring that all cargo for shipment to CONUS is free of contraband and agricultural pests.

The 8910th CSG (Supply, General Support) operates the 21st TAACOM storage site for forward positioned prepositioned war reserve stocks under the operational control of RSAK. Its primary mission is receipt, inspection, and storage of air lines of communica-

tion (ALOC) Class IX materiel. Issues against the 7,000-line authorized stockage list are based on high-priority requisitions. The 8910th CSG participates in the Intra-Theater Air Delivery System that provides delivery of high-priority parts and equipment throughout Europe, and operates round-the-clock, seven days a week. It also provides direct supply support for a variety of U.S. and North Atlantic Treaty Organization exercises.

The 8121st CSG (Supply, General Support) is integrated throughout all divisions of RSAK to provide a highly desirable level of continuity in wartime. Its local national supervisor is responsible for depot-level operations in wartime.

RSAK is one of five comprehensive logistical activities providing supply, maintenance, and transportation coordination capabilities to the 29th ASG. RSAK offers its commander a unique opportunity and great challenge to hone logistical skills. More importantly, RSAK plays a key role in sustaining theater operations in USAREUR. 

MAJ Robert W. Grissom, Quartermaster officer, is the former Commander of the Reserve Storage Activity, Kaiserslautern, Federal Republic of Germany. He is now Director of Security, Plans, and Operations for the 29th Area Support Group.

Dr. Powell W. Owens is the Deputy Commander of the Reserve Storage Activity, Kaiserslautern, Federal Republic of Germany.

FAST TRACK

What is it?

Editor's Note: Fast Track training continued without interruption at the U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA, as it reorganized to implement the U.S. Army Training and Doctrine Command (TRADOC) initiative to standardize all TRADOC schools by 1 October 1989. To reach its goal of having only four training departments, the Quartermaster school combined the Supply Department with the Logistics Career Department to become the Supply and Professional Development Department. Also, a new Airborne and Field Services Department was formed from the existing Airborne Department and the field services military occupational specialties (43M-Fabric Repair Specialist and 57E Laundry and Bath Specialist) from the Liquid Logistics Department.

Commanders now can identify soldiers with strong leadership potential in the grades of E1 through E3 by the Fast Track seal on their Advanced Individual Training (AIT) diplomas.

FAST TRACK SEEKS SOLDIERS WHO VOLUNTEER FOR EXTRA HOURS.

The Fast Track concept was initiated by General Maxwell R. Thurman during his TRADOC command. This TRADOC initiative seeks to give AIT soldiers an edge in training and recognition that can enhance their military careers. The TRADOC-directed Fast Track program began in October 1988 for the 13 military occupational specialties (MOSs) taught at the U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA.

The reasoning behind Fast Track is to send a more highly qualified sol-

dier to the field and also to help retain quality soldiers. Fast Track is a voluntary program that should contribute to the Army's productivity.

Instructors in the Quartermaster Center and School's AIT training departments and Graves Registration Center evaluate potential Fast Trackers, who must be well-rounded soldiers as well as top students, during a minimum two-week observation period at the beginning of AIT. Academic excellence, however, does not guarantee entry into Fast Track. All AIT soldiers are assigned to the 23rd Quartermaster Brigade where drill sergeants evaluate soldiering skills before commanders approve a soldier's participation in the Fast Track program.

For example, in the supply MOSs, instructors look for the academic achiever who does better than most in AIT, as well as a soldier with a positive attitude who does well in tech-

FAST TRACK SOLDIERS MUST DEMONSTRATE LEADERSHIP.

nical tasks, common tasks, and physical training.

Incentives for Fast Track graduates include the special seal on the AIT diploma, a Letter of Commendation from the Quartermaster Center and Schools Commandant that goes into their permanent file (DA Form 201, Military Personnel Records Jacket, U.S. Army), a certificate of achievement, extra credit for promotion consideration, and letters or transcripts from several training departments specifying what the extra MOS training means to the field commander.

The Quartermaster Center and School follows the careers of Fast Trackers for one year after graduation to evaluate how beneficial the additional skills are to the soldier and to the soldier's first duty station.

The Directorate of Evaluation and Standardization will collect assessments from the field, and the training departments will use the data to modify Fast Track enrichment training.

Originally, TRADOC limited Fast Track participation to 20 percent of AIT soldiers. Currently, the Quartermaster Center and Schools individual training departments decide Fast Track quotas. Each department developed its own Fast Track program using broad criteria from TRADOC.

AIT soldiers in the Supply Departments four MOSs learn level 2 skills normally obtained through on-the-job training or through exported

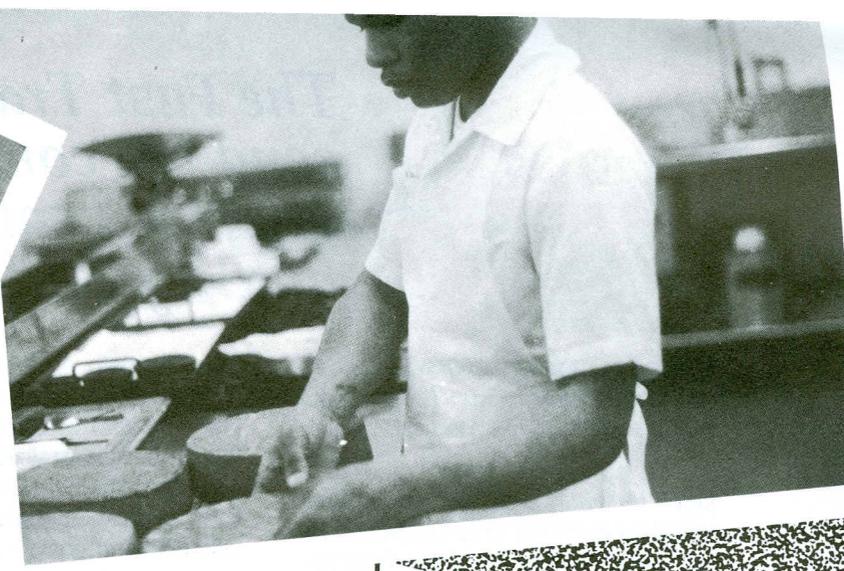
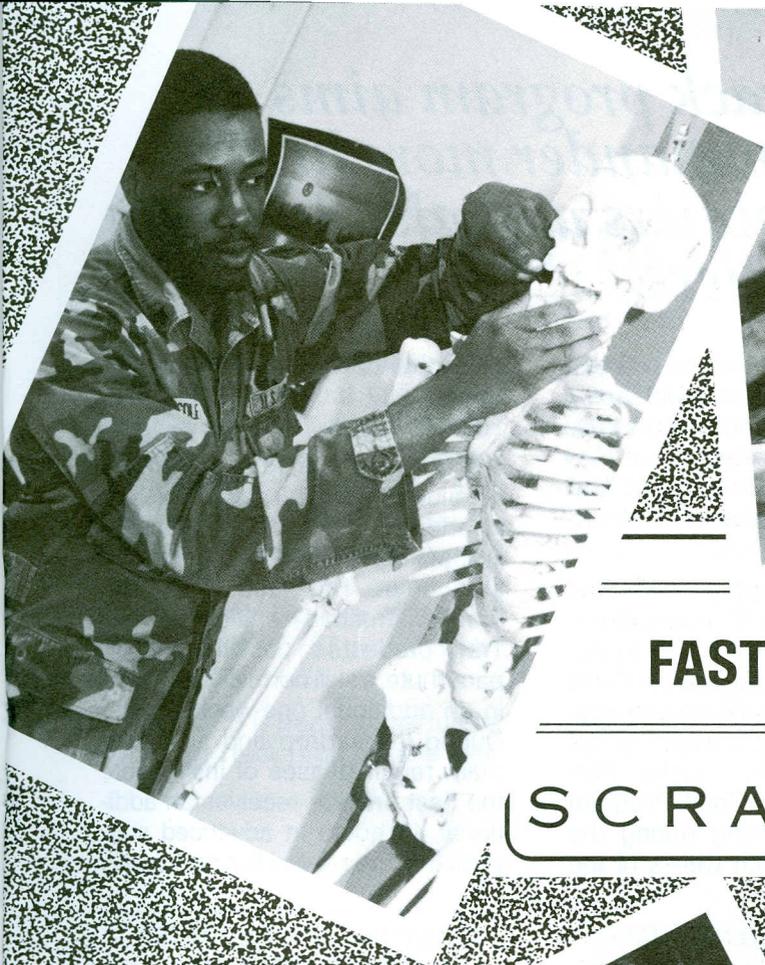
FAST TRACK STUDENTS MUST BE WELL-ROUNDED SOLDIERS.

training materials. Equipment records and parts specialists (76C) and unit supply specialists (76Y) merge into one class for Fast Track training. Materiel control and accounting specialists (76P) and materiel storage and handling specialists (76V) have separate Fast Track sessions. Fast Trackers receive the regular MOS training with peers plus an average of 25 extra hours of instruction that sharpens their MOS problem-solving skills.

The Liquid Logistics and Field Services Department (LLFSD) took the following three-pronged approach to Fast Track instruction:

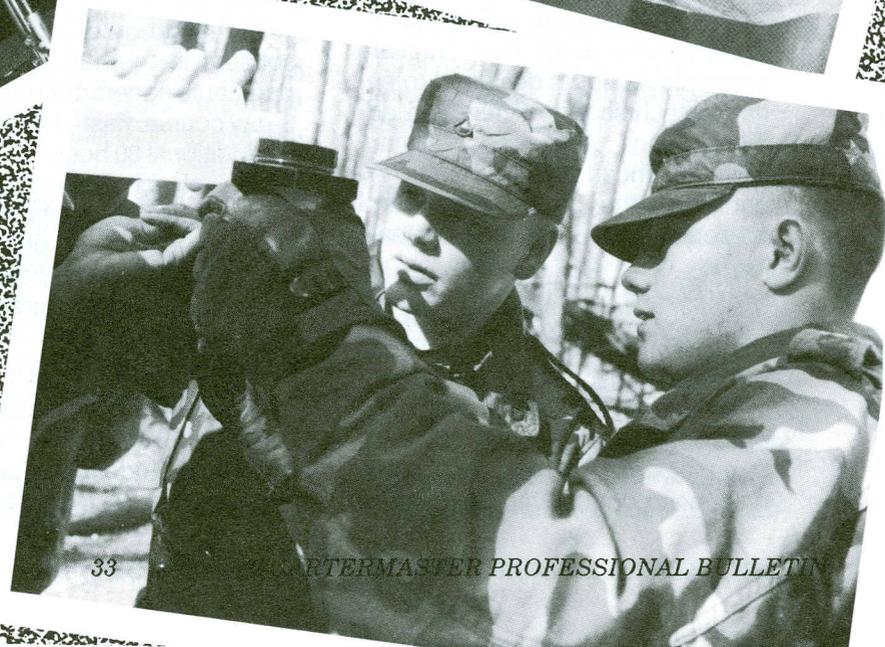
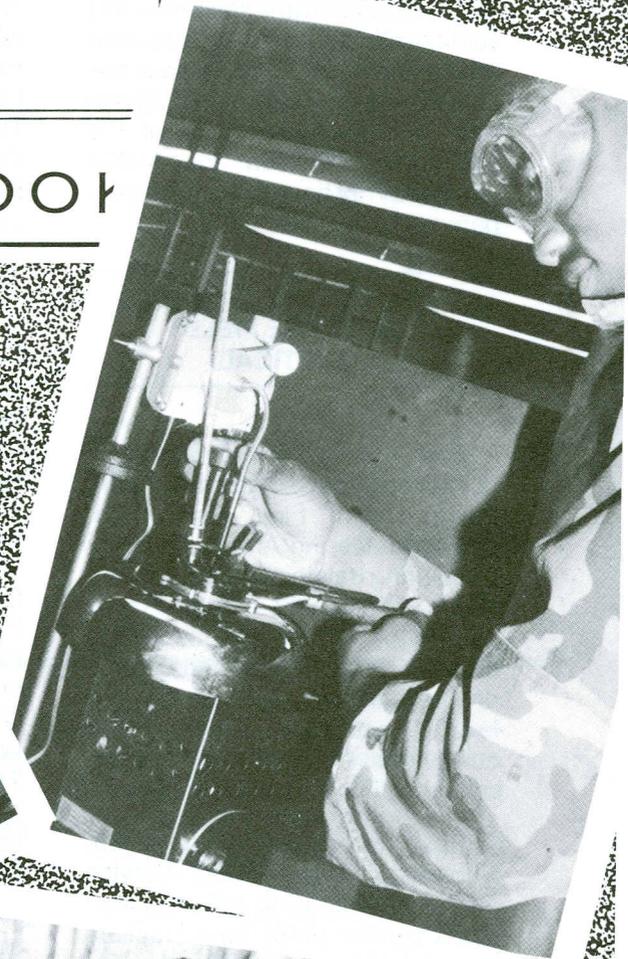
- cross-training,
- extensive hands-on training,
- and technical enrichment in upper level skills.

The LLFSD trains five military occupational specialties and one officer specialty. All Fast Track sessions are held in 6-hour blocks on Saturdays for AIT soldiers who are petroleum supply specialists (77F), laboratory specialists (77L), water



FAST TRACK

SCRAPBOOK



The Fast Track program aims to send the commander more highly qualified soldiers and also to retain quality soldiers.

treatment specialists (77W), laundry and bath specialists (57E), and fabric repair specialists (43M).

The number of Fast Track sessions for each MOS varies with the length of each AIT courses program of instruction, as does the time required to identify Fast Track nominees by both the academic and soldierization criteria. The extensive cross-training in LLFSD shows soldiers where they fit into "the big picture" and explores some of the differences between the MOSs which may not have been readily apparent.

FAST TRACK FEEDBACK FROM THE FIELD IS CRITICAL.

Fast Track coordinators in LLFSD point out a dual impact from the program. First, Fast Track demonstrates the Army's flexibility by tailoring training to meet soldiers needs. Secondly, Fast Track caused the departments leadership to review programs of instruction to ensure training is geared to the right level. If Fast Trackers can perform at higher skill levels in AIT, maybe other soldiers can too.

Fast Track participation in the Subsistence and Food Service Department is "icing on the cake." Food service (94B) Fast Trackers complete 36 hours designed to enhance technical proficiency in administration, advanced culinary skills, advanced pastry skills, and organizing the preparation and presentation of a five-course meal.

They complete enrichment duties during the sixth week of training. Classmates continue training in the large garrison phase. The whole class enters the field and the last phase of their nine weeks of training together. Fast Track instructors have been gold, silver, and bronze

medalists in worldwide culinary competitions such as the U.S. Army Culinary Competition at Fort Lee, VA; the National Restaurant Association Show in Chicago, IL; and the Culinary Olympics in Frankfurt, West Germany.

Subsistence supply (76X) Fast Trackers complete 45 hours of enrichment training designed to enhance technical proficiency in Class I (rations) operational procedures. The programs concentration is 76X skill level 2 critical tasks. Participants in the Fast Track Program complete the training during the second and seventh weeks of the AIT Course.

The Graves Registration Centers Fast Track instruction provides enrichment in existing graves registration specialist (57F) skill level 1 critical tasks as well as training in selected 57F skill 2/3 critical tasks. The Graves Registration Center teaches an additional 35 hours of instruction relating to the Army Casualty and Memorial Affairs Program, Modern Army Record Keeping System (MARKS), search and recovery (land navigation), fingerprinting and fingerprint comparison, and skeletal identification. This training is designed to enhance technical proficiency in administration and advanced graves registration skills.

In the Airborne Department, AIT soldiers in the 43E MOS train as parachute riggers during a 12-week, 3-day course. Fast Trackers receive an additional 80 hours in three more phases of technical instruction. The Airborne Departments Fast Track program strives to produce Fast Track graduates who possess more qualifications and are greater assets to their units.

Fast Track training begins the third week of AIT instruction in the Airborne Department, after two weeks of student evaluation. The first two weeks of the Parachute Rig-

ger Course also gives the soldier an opportunity to volunteer for Fast Track training.

During the parachute pack phase of training, the Fast Tracker receives an additional 35 hours of instruction in packing the MT1-XX Ram Air parachute. This additional Fast Track instruction certifies the Fast Track graduate to pack the Ram Air parachute, a skill normally mastered in an additional one-week course. During the airdrop and air equipment repair phases of instruction, the Fast Tracker receives an additional 45 hours in advanced subjects that are related but not usually

FAST TRACK GRADUATES OFFER MORE TO THEIR UNITS.

taught during the Parachute Rigger Course.

Feedback from the airborne community and the parachute rigger field about Fast Track soldiers has been very positive. The Fast Track Program enhances the rigger's motto of "I Will Be Sure Always."

The Army gains a highly qualified, motivated soldier with Fast Track. In turn, the soldier is challenged in ways the normal AIT soldier is not. Fast Track intends to keep better soldiers better. 

Contributors to this article were CPT M.G. Owens, Fast Track Coordinator for the Supply Department (now the Supply and Professional Development Department), U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia, and these Public Affairs Office staff writers responsible for a series of articles on Fast Track that appeared in the Traveller newspaper at Fort Lee: Barbara Bowen, Derryl Fields, Ann Harrison, Kent Kisselbrack, Karen Lundy, and Joy Whitmore.

FAST TRACK HOT LINE

Commanders with questions or comments about the Fast Track Program can dial directly a 24-hour answering service set up by the Directorate of Evaluation and Standardization (DOES) in the U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA. The Quartermaster Hot Line number is AUTOVON 687-3767 or Commercial (804) 734-3767.

The DOES is tracking graduates of the Fast Track Program and their

performance in the field. Commanders now receive notification letters to be on the alert for individual Fast Track graduates. To assist DOES in evaluating Fast Track effectiveness, supervisors also will receive a survey to help assess whether or not the Fast Track Program increases technical proficiency.

A 1-800 telephone service also is available for Fort Lee, VA. These 1-800 numbers connect a caller with

the Fort Lee operator, and the caller then provides the operator with the desired extension on post. The numbers are 1-800-554-4570 for callers outside Virginia and 1-800-552-4820 for callers inside Virginia. The operator does not accept collect calls. Units or individuals unable to call should send comments to Commandant, U.S. Army Quartermaster Center and School (PROV) Fort Lee, VA 23801-5000.



Shared/Integrated Supply Training

Jerry W. Henderson

Soldiers in the U.S. Army Quartermaster Center and School (PROV) Supply and Professional Development Department complete hands-on training, from computer screen to conveyor belt, in an innovative exercise designed to bring the real world closer to the classroom.

The 36-hour exercise, called the Shared/Integrated Training Program, recently placed Advanced Individual Training (AIT) soldiers under the supervision of Basic Noncommissioned Officer Course (BNCOC) soldiers to perform critical supply tasks. A model motor pool, a model supply room, a model direct support unit, and a model warehouse provide the training environment

similar to the soldiers' next duty station.

AIT soldiers in the department's four military occupational specialties better understand how they fit into the entire supply process. The program gives BNCOC soldiers from Fort Lee's NCO Academy realistic leadership training by placing them in simulated field situations where they will directly supervise supply operations.

The program also incorporates some Advanced Noncommissioned Officer Course (ANCOC) soldiers. Future plans include officer participation in order to portray realistic unit supply operations.

The four supply military occupational specialties (MOSs) in

the Shared/Integrated Training Program are 76C (Equipment Records and Parts Specialists), 76P (Materiel Control and Accounting Specialists), 76V (Storage Specialists), and 76Y (Unit Supply Specialists). The soldiers in these four MOSs work together on all supply actions required for repair parts or equipment.

By definition, shared training occurs when soldiers of various grades perform critical tasks within a single MOS. The soldiers work in a scenario-driven exercise in a simulated environment.

For integrated training, soldiers of equal ranks but different MOSs interact. It naturally occurs when

soldiers pass on supply actions for further processing.

For realism, each of the Supply and Professional Development Department's branches tailors the training exercise. In many cases, equipment is stored, shipped, and delivered exactly as in the field. The exercise deliberately incorporates unexpected problems, such as shipments delivered without any paperwork, to add to realism.

AIT soldiers appreciate the realistic preview of their future job site. They also learn from their interaction with NCOs. The department credits much of the program's success to its instructors who work

long hours and adjust the scenario to create a more genuine operation.

The shared training exercise with 76C AIT and 76Y BNCOC soldiers consists of 36 hours of hands-on reinforcement training. The 76C10 soldiers in a model motor pool work through a scenario-driven practical exercise requiring them to complete specific 76C10 tasks. The 76Y BNCOC soldiers provide technical assistance, guidance, and refresher training on each task. Additionally, the 76Y BNCOC soldiers check the accuracy of work completed by the 76Cs. When completed work goes to the 76P soldiers for processing, integrated training begins. Submit-

ting one request for issue to the 76P soldiers causes a chain reaction in the issue process and then to the 76C soldier in the receipt process.

The 76Y10 AIT soldiers perform the shared training exercise in a model supply room. Reinforcement training is in the areas of supply handling, administration, accounting, and accounting for individual and organizational clothing. The 76Y10 soldiers in simulated situations must complete specific 76Y10 tasks. The 76Y BNCOC soldiers lead and supervise the 76Y10 soldiers. In addition, the BNCOC soldiers assist 76Y10 soldiers in technical areas. In-



76V soldiers in a model warehouse receive and check in supplies brought on a conveyor belt from a truck outside on the loading dock.

egrated training for the 76Y MOS begins with the submission of supply documents to the 76P soldier at the simulated direct support unit (DSU) for processing.

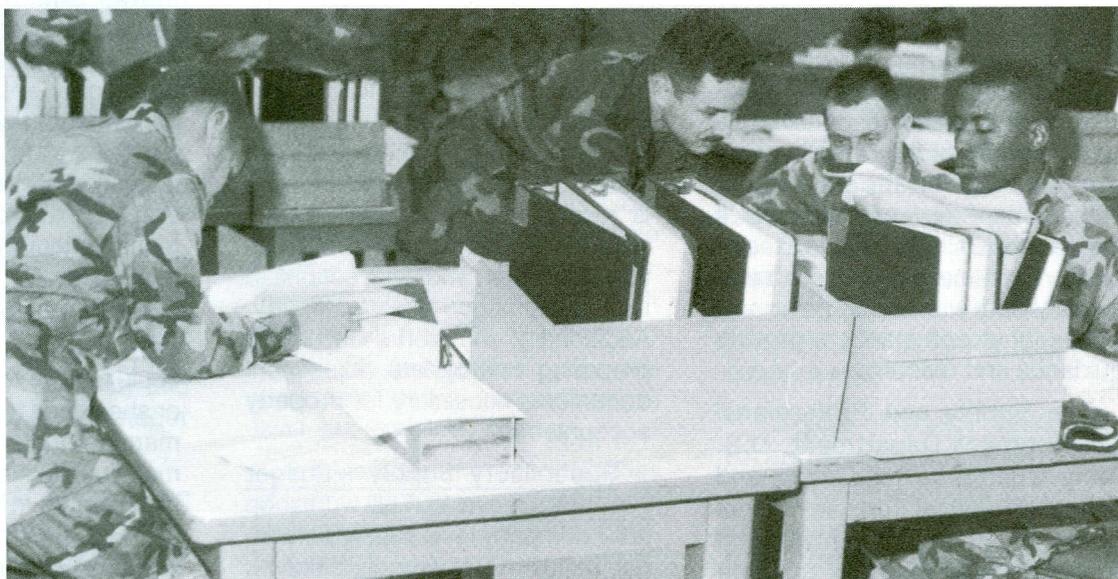
The 76P10 AIT soldiers work in a simulated DSU. Reinforcement training is in the areas of editing, document control, stock record keeping, reparable exchange, and the Tactical Army Combat Service

training is in the areas of storage and handling, receiving, shipping and issuing, preservation, packaging and packing, quick supply store, and TACCS/SARSS operation. The 76V BNCOC soldiers supervise. The receipt of processed output from the 76P simulated DSU launches integrated training among MOSs 76C, 76P, 76V, and 76Y soldiers. In all simulated training areas, soldiers rotate on a regular

tors conduct after action reviews (AARs) at the conclusion of each task within the Shared/Integrated Training Program.

The Supply and Professional Development Department is working toward an overlay of 76P40, 76V40, and 76Y40 ANCOB soldiers, the Officer Basic Course and ultimately the Officer Advanced Course students. As plans are real-

A 76Y BNCOC soldier polishes leadership skills by supervising three 76C AIT soldiers in a simulated supply action.



Support Computer System/Standard Army Retail Supply System (TACCS/SARSS) operation. The 76P BNCOC soldier performs supervisory tasks. Receipt of supply documents from the 76C or 76Y soldiers triggers integrated training with the four MOSs. Documents are processed, issues made, receipt actions taken, and records closed out.

The 76V10 AIT soldiers perform the shared training in a simulated model warehouse. Reinforcement

basis to ensure hands-on training in all tasks built into the training exercise for each of the four supply MOSs.

The department's training instructors observe the BNCOC soldiers to assess leadership skills and technical knowledge. Evaluations of each BNCOC soldier are posted to a leadership assessment form maintained within the training area. The BNCOC instructors receive these forms at the end of the exercise. The technical training instruc-

ized, the Shared/Integrated Training Program will be a few steps closer to providing soldiers with real-world, scenario-driven training for future job assignments. 

Jerry W. Henderson is a Supervisory Training Specialist in the Supply and Professional Development Department, U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia.



ORGANIZATIONAL SUPPLY MANAGEMENT SYSTEM

Nancy B. Briggs

To have a smooth-running supply system, all individuals in the chain of command must work together. Each must be knowledgeable of duties and responsibilities and be aware of the overall supply process. A battalion's supply management system works well if the leaders at all levels listen to each other. First-line supervisors must actually work with supply personnel while higher commanders provide guidance and resources.

The Supply and Professional Development Department, U.S. Army Quartermaster Center and School (PROV), at Fort Lee, VA, periodically offers Organizational Supply Management System (OSMS) facilitator training at Fort Lee on managerial supply at the unit level. Facilitator training is designed to hit three target audiences: the Total Army--Active, United States Army Reserve (USAR), and the Army National Guard (ARNG). These workshops are designed as a training tool to assist personnel managing supply operations. Participants examine supply responsibilities at a specific level, from the battalion commander to the subhand-receipt holder. A description of each of the three OSMS workshops follows:

Primary Supply Manager Workshop (Level 1). This supply management workshop is for first-

line supervisors, platoon leaders, platoon sergeants, and subhand-receipt holders. They learn how to order supplies, set up a library, and maintain publications needed for proper operations. They also learn about property accountability, who is responsible for property transferred from one individual or location to another, and what actions to take for damaged or lost property. Additionally, the workshop covers preparing appropriate adjustment documents necessary for property accountability.

Supervisory Supply Manager Workshop (Level 2). This workshop is for company level supply personnel, battalion S4s (supply officers), and property book officers. They learn what to look for in reviewing the work of first-line supervisors on supply actions. Some of the topics in the Primary Supply Manager Workshop are also in this workshop, but are presented from a review and evaluation perspective. This workshop also includes procedures used for evaluating a prescribed load list (PLL) and The Army Maintenance Management System (TAMMS) records.

Command Supply Manager Workshop (Level 3). This workshop is for battalion commanders, battalion executive officers, and command sergeants major, or others who must deal with supply matters at a battalion command level. The

duties and responsibilities of personnel at each of the previous workshop levels are discussed thoroughly so that commander's understand the supply functions within their command. The workshop provides additional information on overall program management and problem-solving techniques.

It is unreasonable to assume that any of these training packages could teach everyone everything he or she needs to know about supply management. In the field today, many publications already teach all the details of supervision and management. The OSMS workshops supplement and tie together some of the data in the field: workshops do not duplicate data. Because each workshop targets a specific audience, no one needs to participate in all three.

Each workshop module presents a task, teaches that task, and follows it with a performance test. The workshops encourage participants to comprehend subject matter and relate it to their own particular situation. Hopefully, workshop participants will then be able to evaluate their own supply management problem areas and determine methods for improvement.

Organizational supply involves numerous tasks ranging from requi-

sitioning, issuing, and turning in supplies to handling personal and organizational laundry. Each of these tasks either directly or indirectly affects unit readiness. If supplies are not requested and issued in a timely and efficient manner, unit readiness suffers. For the most part, the functions peculiar to organizational supply require the precise application of procedures outlined in a multitude of military publications. It is, therefore, essential that the unit supply sergeant and other key unit personnel have a ready means for problem solving and for conducting an accurate assessment of the unit supply procedures. The Supply Managers Guide in the workshop series provides one way to accomplish such an assessment and serves as a handy problem-solving guide. A checklist appears at the back of the guide in both the Supervisory Supply Manager Workshop (Level 2) and the Command Supply Manager Workshop (Level 3).

For OSMS workshops, existing management models were reviewed to determine their application to the job. One of the more popular models includes planning, organizing, staffing, directing, and controlling functions. Each supply manager exercises these functions to one degree or another. Each supervisor or manager must recognize these functions and give clear and proper direction to each subordinate. The supervisor or manager must decide what the battalion and unit goals will be, what authority and responsibility he or she wishes to delegate, and what management level will function properly. Each commander must follow through

with frequent checks in all of these areas. The OSMS workshops provide participants with a sound foundation for these actions.

Each workshop consists of several sections, each containing a number of task-oriented modules. At the end of each module is a performance test. If at any time participants feel that they can already perform a task adequately, they are free to take the performance test. If participants can meet the test standard, they may skip the module entirely.

Generally, Level 1 takes three days to complete. Level 2 takes four to five days, depending on the ratio of facilitators to students (ideally 1:8). Level 3 takes three days. Considering the target population of the Level 3 workshop, modular sections are presented either in total or spread over a three-day period.

Overall objectives of the workshop series, regardless of level, are explained below:

a. To describe the responsibilities of unit level supply personnel and their relationship to the Army supply system.

b. To provide a detailed description of unit level supply operations, including the organization of the supply room, key aspects of property accountability, and security of the arms room and supply room.

c. To provide the supply manager with methods for identifying, diagnosing, and correcting problems in the supply operation.

Another alternative to sending individuals to Fort Lee is to request the OSMS workshop through the mail. The Supply and Professional

Development Department will furnish one complete OSMS workshop series or any one of the three levels directly to units in the field. Copies of the 1988 workshop series are being forwarded to those requesting materials along with the authorization to reproduce materials locally. The Supply and Professional Development Department also has trained facilitators who conduct workshops in the field. The National Guard Bureau does, however, print, store, and distribute copies of the OSMS workshops through its regular publication ordering system.

In summary, OSMS workshops contain valuable information for both supply and nonsupply personnel. Commanders who encourage maximum participation in these workshops receive maximum benefits of a properly operating supply system.

To order or receive additional information about the OSMS workshop series write:

Commandant
U.S. Army Quartermaster Center
and School (PROV)
ATTN: ATSM-SUP-DM (N. Briggs)
Fort Lee, VA 23801-5039



Nancy B. Briggs is the Chief of the Doctrine and Management Office, Supply and Professional Development Department, U.S. Army Quartermaster Center and School (PROV) Fort Lee, Virginia.

LOGEX 89

How The Third World War BEGAN:

On 23 March 1989, the Soviet buildup in Europe for a planned exercise, carefully timed with other seemingly harmless land and sea movement, allowed the Soviet government to achieve a position sufficient for their idea of favorable odds in the next world war. Other events staged as accidents of nature or inevitable routine repair work reduced traffic across the East-West German border to a minimum. This allowed the Warsaw Pact forces further undetected movement.

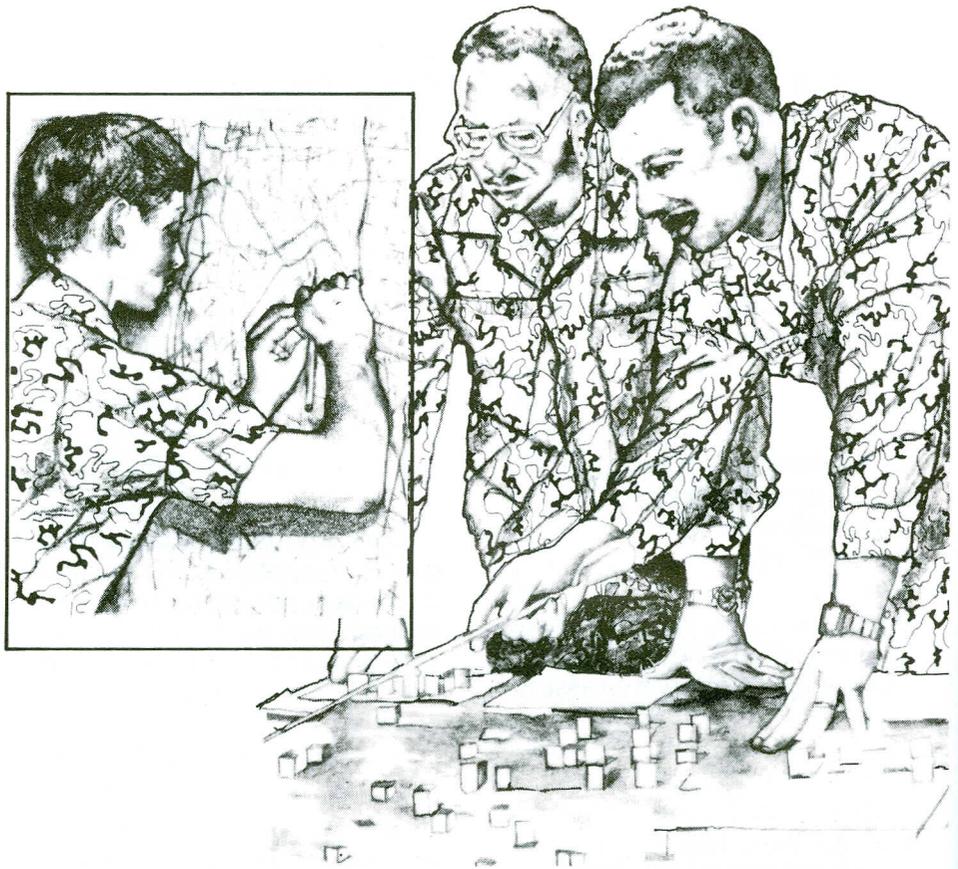
On 1 May 1989, the Soviet government orchestrated these unrelated events into a combined and coordinated attack on the North Atlantic Treaty Organization (NATO) forces. Their plan was to secure four strategic objectives:

1. Capture North Sea and English Channel ports.
2. Seize the Troms Defensive Area in Norway.
3. Seize the Bosphorus and Dardanelles straits in Turkey.
4. Seize at least one base on the Persian Gulf.

Each objective would gain mobilization for the Warsaw Pact and cut mobilization from NATO.

Intense commanders and nervous staffs played out the third world war in earnest during the worlds largest combat support and combat service exercise, LOGEX 89, 4-16 June, last summer at Fort Pickett, VA. However, rather than to "win the war," the objective of the more than 2,500 LOGEX players was to solve some of the most complex logistics and support problems facing modern armies. The scenario was a fictitious situation for training purposes only.

Players from American and NATO allied services discussed strategy in several languages be-



side map boards and troop movements. This immense exercise tested the abilities of commanders and staff of logistical units to solve the problems of how to arm, fuel, fix, and move soldiers on the AirLand Battlefield. LOGEX 89 also evaluated the reception, staging, and deployment of reinforcing units, as well as emphasizing host nation missions in support of NATO.

The joint and combined operations dealt with resource constraints that would affect efforts to resolve realistic battlefield crises. Participants sought the answer to this underlying question: Can the logistics lifeline work as it should?

An important benefit to LOGEX players was the opportunity to work within an extensive force structure

extending from the division support command (DISCOM) to Continental United States (CONUS) national inventory control points (NICPs). In the real world, logisticians seldom have the opportunity to practice the extensive internal and external staff coordination necessary to get the job done. LOGEX provided that training opportunity.

For example, materiel managers influenced the battle, positively or negatively, through day-to-day management of supply and maintenance operations. Timely processing of requisitions and materiel release orders enhanced combat power. Players at all levels, particularly at Materiel Management Centers, broadened their experience using automated reports as a management tool. Selected reports from the Maintenance

Control System (MCS), Standard Army Ammunition System (SAAS), and Standard Army Intermediate Level Supply System (SAILS) provided data for management decisions.

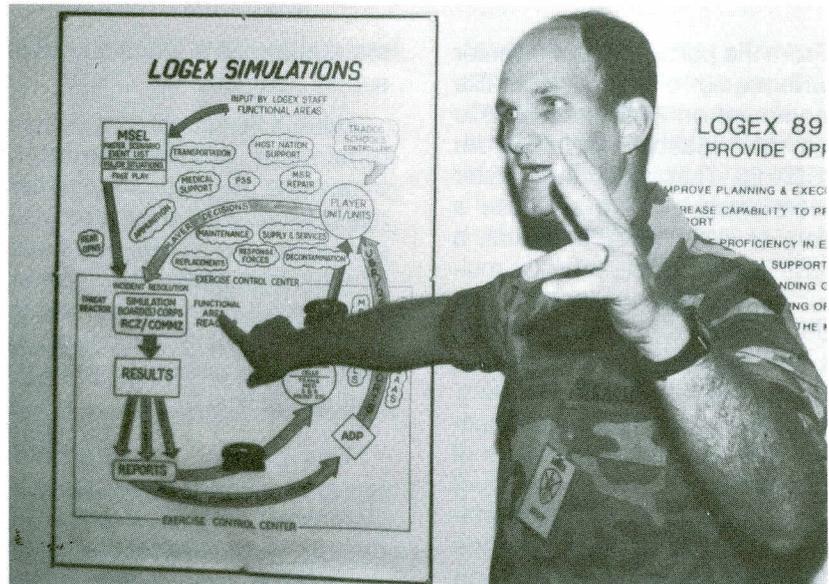
Training opportunities came from supply management problems at direct support (DS)/general support (GS) levels, capability analysis and employment of field service organizations, management of graves registration activities, and petroleum storage and distribution operations.

U.S. Army participants came from 31 states, the District of Columbia, and Puerto Rico. They included 23 active Army, 37 National Guard, and 50 U.S. Army Reserve organizations. The interaction of Active and Reserve components in their capstone alignments allowed units to train with the people they will deploy with.

Senior participating logistics headquarters were the 7th and 310th Theater Army Area Commands and the 13th Support Command (Corps). Player, controller, and support personnel also included both Active and Reserve representatives from the U.S. Navy, Air Force, Marine Corps, and Coast Guard.

Allied players hailed from Belgium, Canada, Denmark, the Federal Republic of Germany, The Netherlands, and the United Kingdom. Observers came from as far away as France, Greece, Japan, Spain, and the Republic of Korea. Representatives from 33 Department of Defense training community agencies, 6 allied nations, and 12 theater headquarters staffed the exercise control organization.

LOGEX began during World War II as a series of map exercises for



A logistics staff officer from the U.S. Army Logistics Center at Fort Lee, VA, explains LOGEX 89 goals at Fort Pickett, VA.

the Quartermaster School at Camp Lee, VA. In 1948, the Transportation School participated to inject realistic supply transport activities into the exercise at Camp Lee. In 1950, the Engineer School at Fort Belvoir, VA, conducted the exercise that became known as LOGEX. In 1951, no exercise was held because of the Korean Conflict.

In 1957, U.S. Army Reserve personnel participated in LOGEX for the first time. In 1964, National Guard units played for the first time. By the mid-1960s, LOGEX was directed by the Department of the Army and included students from all Army combat service support schools as well as Navy and Air Force elements. In 1971, LOGEX became part of the Joint Chiefs of Staff (JCS) coordinated exercise program.

From 1971 through 1974, the exercise was conducted twice each year to increase training opportunities for Reserve com-

ponents. Active Army unit participation began with LOGEX 76. In 1981, U.S. Army, Europe (USAREUR) personnel participated as players. Thus, the exercises grew from a single service schools endeavor to a JCS-coordinated, Headquarters, Department of the Army-sponsored exercise developed by U.S. Army Training and Doctrine Command (TRADOC) for U.S. Forces Command (FORSCOM) forces, with participation by Navy, Air Force, Marine, Coast Guard, and NATO/allied personnel. The U.S. Army Logistics Center (USALOGC) at Fort Lee, VA, as the executive agency for TRADOC, plans, develops, and supervises the execution of LOGEX exercises. For further LOGEX information, contact LTC Roger Bergh by writing USALOGC, ATTN: ATCL-LE, Fort Lee, VA 23801-6000 or by phoning AUTOVON 687-1368.



LESSONS LEARNED FROM LOGEX 89

LTC James C. Yule

From the perspective of a senior Quartermaster officer, I would like to comment on what I consider to be a vital lesson learned from LOGEX 89. That is: Quartermaster officers must acquire and use a variety of skills. In other words, a Quartermaster officer must be multifunctional. It is no longer sufficient to be a supply; services; petroleum, oils, and lubricants (POL); water; airdrop; or subsistence expert. Each officer must be knowledgeable in all Quartermaster areas of concentration. Each officer must also be conversant in transportation management, maintenance management, and ammunition supply.

During the past 10 years, the concept of multifunctional logistics has fully evolved at division level. First, forward area support coordinators (FASCOs) coordinated medical, maintenance, and supply support in the brigade support areas (BSAs). This was the basis for the transition to the current structure of forward support battalions (FSBs) where battalion commanders now are responsible for all support for a tactical brigade within a division. FSBs consist of a

maintenance, a medical, and a supply company.

LOGEX 89 sought to test the extension of this multifunctional concept to the corps support command (COSCOM) using corps support battalions (CSBs) configured into multifunctional organizations with a mixture of supply, service, transportation, ammunition, and maintenance units tailored to support the tactical force.

This presented some unique learning experiences. Logistics Command and Control (LOGC2) doctrine was tested for the first time on a large scale. Corps support groups and CSBs were task-organized into multifunctional logistical units with varying mixes of supply, service, maintenance, ammunition, and transportation companies assigned as missions dictated. The concept was to provide a CSB with the resources necessary to provide all required support for customer units in its respective area of responsibility. This greatly simplified and streamlined support by establishing one single point of contact to which a unit could look to for all its support needs. This concept is an extension

of the FSB structure at division level.

LOGEX 89 demonstrated that Quartermaster officers with broad experiences in logistics were able to successfully perform as multifunctional staff officers and commanders within the COSCOM under the emerging LOGC2 doctrine. They readily evaluated and resolved maintenance, transportation, ammunition, POL, general supply and service problems. On the other hand, those officers (Active and Reserve) who lacked training and experience in the multifunctional role struggled to manage the complex and interrelated logistics play of LOGEX 89.

Multifunctional CSBs worked extremely well during LOGEX 89, but reinforced this strong message. Commanders and staff must be trained in and understand all elements of support provided to be effective. A solid, working knowledge of maintenance, ammunition supply, and transportation is as essential to Quartermaster officers as is knowledge of Quartermaster specialty areas. Officers of today and the future must be competent



A U.S. Marine works with Danish Army and Air Force officers on host nation support for play in LOGEX 89.

as multifunctional leaders and staff officers.

Testing of reconstitution concepts was also a main goal of LOGEX 89. Reconstitution is more than just a greatly expanded weapon system replacement operation (WSRO). Doctrine calls for Corps/COSCOM to reconstitute a brigade-size element. Assigning a CSB the on-order mission to reconstitute up to a brigade-size element was just the beginning of a massive planning effort. Unit morale and training are of equal or greater importance to the reconstitution effort than providing supplies and materiel. Logisticians need to understand this

and ensure that planning is a total staff effort.

LOGEX 89 was a highly successful and positive training opportunity and provided a solid test bed to verify evolving doctrine for LOGC2, Med Force 2000, reconstitution, rear operations, and many other important logistics issues. In the opinion of many, it has provided the initial validation on the use of a multifunctional support concept within the COSCOM.

Quartermaster officers must aggressively seek to acquire multifunctional skills including maintenance, ammunition, and transportation through training, self-study, and assignments.

Senior Quartermaster officers must provide the mentoring that fosters the multifunctional concept. They must encourage the young officers of today to properly prepare to be the multifunctional experts of tomorrow. 

LTC James C. Yule is Chief of the Course Development Division, Directorate of Training and Doctrine, U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia. He was a controller for Assistant Chief of Staff Materiel and Assistant Chief of Staff/Services, 13th COSCOM, at LOGEX 89, Fort Pickett, Virginia.

End Of An Era: Taps For The Jeep

On January 28, 1986, the last Jeep CJ rolled off the assembly line at the American Motors plant in Toledo, Ohio, and into a nearby museum. It marked the end of an era. This vehicle was the last direct descendant of the original "jeep" created at the outset of World War II.

In the early 1930s certain Quartermaster Corps motor engineers felt the need for a light motorized vehicle that would take the place of the motorcycle with side-car. Other branches of the service, especially the Infantry, recognized the same need.

As a result the Army purchased an open two-seated commercial passenger car in 1933 and tested it under field conditions at Fort Benning. News of the test aroused considerable interest throughout the military. By 1937 there was a growing clamor from those desiring to speed up the Army.

Writing in the Infantry Journal of November-December, 1937, Captain Wendell G. Johnson said: "What is wanted is merely a gasoline-propelled conveyance not much higher than a man crawling that will be able to carry a one- or two-man crew, a gun, and plenty of ammunition, and scoot from one firing position to another at 5 to 10 miles an hour."

Credit for the original design of the jeep may not be claimed by any single individual or any single manufacturer. Rather it was a combined effort, the result of much research and many tests. However, Army engineers, both military and civilian, at the Holabird Quartermaster Depot did the bulk of work in designing it.

The Army's truck-1/4-ton, 4x4-- its official designation-- was at first called a "Light Command and Reconnaissance Car." But once the press and public became more familiar with this versatile little

vehicle, it became known rather affectionately as a "jeep." (At many camps it was also called a "peep.")

During World War II, Willy-Overland and Ford Motor Company built nearly 600,000 jeeps. They served in every theater of operations and proved to be ideal for hauling men, weapons, and material over rugged terrain. Even to this day, many of those original jeeps can be found on the roads and back lots across the country, as well as in some of the remotest spots around the globe.

"Jeep," "peep," "bantam," "pud-dle-jumper," or "bug." Regardless of what you call it, there can be no doubt that the Army's smallest four-wheel vehicle contributed immeasurably to the war effort. Its development, moreover, has a definite place in the history of the Quartermaster Corps.

This excerpt is reprinted from an article in the Spring 1986 issue of The Quartermaster, Association of Quartermaster Officers, Newsletter Number 15.

SCHOOL MODEL 89

The U.S. Army Training and Doctrine Command's (TRADOC's) most recent attempt to standardize the organization of all of its schools is called School Model 89. The impact of this initiative on the U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA, is as follows--

- Even though TRADOC encouraged combining the brigade and the school, the decision was made to keep them as separate entities.
- The Office of the School Secretary has been eliminated, but the assets were kept in the school. Most were moved to the Directorate of Training and Doctrine, with only a few going to other areas.
- To reach the goal of having only four training departments, the school had to make two major changes in its organizational structure.
- First, the Logistics Career Department was combined with the Supply Department. The new department will be the Supply and Professional Development Department. It will provide all supply training for both officer and enlisted personnel.
- Second, the Airborne and Field Services Department was formed from the existing Airborne Department and the field service military occupational specialties (MOSs) (43M-fabric repair specialist and 57E-laundry and bath specialist) from the Liquid Logistics Department. Even though the Graves Registration (GRREG) Center is a field service, the decision was made not to destroy the Graves Registration Center's autonomy. The GRREG Center was established last year to provide joint warfighting support to unified commanders, as well as a centralized location for disaster response. In addition to those duties, it will continue to perform a doctrinal and training mission.
- A separate Resource Management Office was created to support the school because of the recent realignment of the command structure at Fort Lee.

TRADOC mandated that all of these changes be implemented not later than 1 Oct 89. The school's effective date of implementation was 25 Sep 89.

BATTLE-FOCUSING THE SQT

Beginning in FY 90, the U.S. Army Quartermaster Center and School (PROV) will start fielding "Battle Focus" skill qualification tests (SQTs) for those military occupational specialties (MOSs) that meet the criteria. Battle Focus requires the development of tracked SQTs which focus on evaluating soldiers on only those individual tasks which support a unit's wartime collective tasks. Those MOSs that are job specific/single duty positions will be reevaluated to ensure that the critical tasks support Battle Focus and Continental United States (CONUS) Base Sustainment training competency. Until the affected soldiers manual is revised reflecting the tracking of a given MOS, the field will have to rely upon the SQT Notice for track identification and subsequent refresher training.

MOBILITY CONTAINER SYSTEM (MCS)

The U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA, is developing the requirements for a Mobility Container System (MCS). The MCS will consist of two subsystems of pallets and containers. This system will meet the operational requirements for authorized stockage list/prescribed load list (ASL/PLL) mobility within the heavy and light divisions. Institutional training will be conducted for military occupational speciality (MOS) 76 series soldiers at Fort Lee. This new system will be expanded for use by the Total Army. The MCS will be used primarily by the direct support unit/general support unit (DSU/GSU) maintenance, repair parts, aviation logistics, missile and general repair parts units; and also combat, combat support, and combat service support units. The MCS does not replace a specific system. However, it will reduce the need for specially configured semitrailer repair parts vans and eliminate the need for locally fabricated bins and shelving. The containers will have various configurations and will be used for both storage and transport of supplies. The MCS will have a North Atlantic Treaty Organization (NATO)

standard pallet base and be forklifted from any side by rough terrain forklifts. Coordination is underway with Britain, Canada, Australia, NATO, and other services to establish the potential for standardization and interoperability.

FIELD MANUAL 10-XXX, QUARTERMASTER PRINCIPLES MANUAL

Field Manual (FM) 10-XXX will be the capstone manual of the U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA, field manual hierarchy and will serve as the basic Quartermaster publication to develop all proponent combat service support (CSS) doctrinal and training literature products. The content will apply to Army forces worldwide from theater to the lowest possible level. Doctrine in this manual will complement FM 100-10 (Combat Service Support (CSS) Operations), while establishing a link with FM 100-5 (Operations), FM 100-1 (The Army), and the basic tenets of the AirLand Battle. Distribution should be made Armywide by second quarter FY 91.

EVALUATION AND STANDARDIZATION

HOT LINE INFORMATION

The Directorate of Evaluation and Standardization (DOES) in the U.S. Army Quartermaster Center and School (PROV) (QMC&S PROV), Fort Lee, VA, has assumed the responsibility for collecting of immediate feedback from the field. With a 24-hour telephone answering service, DOES records incoming calls after normal duty hours and responds to the caller the next duty day. DOES requests comments on strengths and weaknesses of all officer, warrant officer, and enlisted Quartermaster graduates. Comments on the comparison of Quartermaster soldiers graduating from Fort Lee, Fort Jackson, SC, and Fort Dix, NJ, are also needed. In addition, DOES encourages feedback on acceptability, use, errors, and recommended changes to Quartermaster doctrine, equipment, field manuals, technical manuals, Army training and evaluation programs, soldiers training publications, skill qualification tests, and training extension course instructional packages. Questions about the above subjects are also welcome. THE QUARTERMASTER HOT LINE NUMBER IS AUTOVON 687-3767 or COMMERCIAL (804) 734-3767. A 1-800 number has been established for Fort Lee. These numbers will connect the caller with the Fort Lee operator. The caller then provides the operator with the desired extension. The numbers are 1-800-554-4570 for callers outside Virginia and 1-800-552-4820 for callers inside Virginia. Collect calls cannot be accepted. Units or individuals unable to call should send comments to:

Commandant
U.S. Army Quartermaster Center and School (PROV)
Fort Lee, VA 23801-5000

Send requests for training materials to Commandant, U.S. Army Quartermaster Center and School (PROV), ATTN: ATSM-DTO-ET, Fort Lee, VA 23801. Only requests for QMC&S (PROV)-prepared materials will be honored. No Department of the Army publication-related materials will be supplied by the QMC&S (PROV). To order doctrinal publications such as field manuals, Department of the Army pamphlets, Department of the Army circulars, soldier's training publications, and Army training and evaluation programs, use Department of the Army Form 4569 (USAPC Requisition Code Sheet) or Autodin and send to USA AG Publications Center, 2800 Eastern Blvd, Baltimore, MD 21220. Emergency publications of Army regulations may be obtained (5 copies) by calling Baltimore, AUTOVON 584-2533. Unit identification code is required.

SAFETY MISSION

The director of the Directorate of Evaluation and Standardization (DOES) will be the Quartermaster Branch safety focal point for equipment already fielded, for Quartermaster training in units, resident training, and the interfacing with the Safety Center to assure that adequate means exist to monitor accident reports involving Quartermaster personnel or equipment. Safety will become an integral part of the DOES evaluation program, CALL interaction, evaluation team visits, major exercise interactions, the evaluation information management system, and evaluation of data analysis. The program is designed to provide systematic, objective evaluations of safety-related problems in the school and proponent equipment in the field. To accomplish this goal, DOES asks that all personnel pay constant attention to safety-related shortfalls. Anyone encountering safety problems or shortfalls in Quartermaster training, doctrine, or equipment is encouraged to use the Quartermaster Hot Line to relay any questions or feedback directly to the school. The Quartermaster Hot Line number is AUTOVON 687-3767 or Commercial (804) 734-3767.

FAST TRACK PROGRAM

The U.S. Army Quartermaster Center and School (PROV) Fast Track Program was designed to identify exceptional Advanced Individual Training (AIT) soldiers and provide them with additional military occupational specialty (MOS) training to enhance technical proficiency and lead to a higher retention rate. Training above and beyond the regular AIT program is given. The training is restricted to MOS technical training. Specifically, the Fast Track graduate receives enrichment training on existing MOS skill level 1 critical tasks as well as training on selected MOS skill level 2 critical tasks. A memorandum, signed by the school commandant, will be forwarded to the commander of each Fast Track graduate explaining the merits of the program. The memorandum will contain a list of tasks that the graduate received while a Fast Tracker. This memorandum will accompany the soldier's records to the next unit.

The QMC&S (PROV) Directorate of Evaluation and Standardization (DOES) will track the program's graduates and their performance in the field. The information from the gaining commanders through tracking will be used to assess the quality of the program and its impact on the field. The DOES will use the students personnel file to forward a notification letter to the gaining commander. To assist in the evaluation of Fast Track, the DOES asks supervisors to complete a survey mailed to them at a later date. Commanders are encouraged to be on the alert for Fast Track graduates and provide supplementary aid in evaluation of the Quartermaster program by using the Hot Line. The Quartermaster Hot Line number is AUTOVON 687-3767 or Commercial (804) 734-3767. Data collected from surveys will be analyzed to assess whether or not technical proficiency was increased as a result of Fast Track.

AIRBORNE AND FIELD SERVICES

AIRDROP MALFUNCTION REVIEW BOARD

The Quarterly Airdrop Review and Malfunction Analysis Board, hosted by the U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA, met again 4-5 October 1989. Persons in the airborne community were invited.

RIGGER WARRANT OFFICER HALL OF FAME

The Airborne and Field Services Department and the U. S. Army Quartermaster Center and School (PROV) hosted the annual Warrant Officer Hall of Fame on 6 October 1989. The induction ceremony was held during the same week as the Airdrop Malfunction Review Board and the Rigger Ball.

ANNUAL RIGGER BALL

The second annual Rigger Ball was hosted by the Airborne and Field Services Department, 6 October 1989, at the Fort Lee NCO Club in the main ballroom. The Rigger Ball is for all parachute riggers worldwide.

SUPPLY AND PROFESSIONAL DEVELOPMENT

FY 1989 SUPPLY SQTS BASED ON UNIT SUPPLY UPDATE 11

FY 1989 skill qualification tests (SQTs) for military occupational specialties (MOSs) 76C, 76P, 76V, and 76Y are based on unit Supply Update 11. Development schedules for these supply SQTs were modified in 1988 to align with the new January distribution cycle of the unit Supply Update. This would allow the SQTs to be validated and administered to the soldier in the field using the Supply Update for the same year. However, since Update 12 was not published and distributed on schedule in January 1989, the Supply Update and supply SQTs are not aligned for FY 1989.

QUARTERMASTER CORPS TO ASSUME MAP DISTRIBUTION ROLE

The June 1988 edition of the Quartermaster Professional Bulletin included an item titled "Quartermaster Picks Up Map Supply From Engineers." At that time, an Interim Operational Concept (IOC) was under development at the U.S. Army Quartermaster School. It was proposed that a general support (GS) unit assume the responsibility of stocking and distributing standard maps and map products.

Since its establishment, the Defense Mapping Agency (DMA) has assumed an ever-increasing role in the distribution of maps and the storage and stockage of maps located in current forward deployed theaters. The DMA provides maps in bulk as a wholesaler to topographic engineer units that, in turn, issue to Army units in theater. The Quartermaster Corp's assumption of the map supply mission only revises the general support level of map supply.

The concept proposes forwarding requests for standard maps and map products through the Army supply system, using automated supply procedures. The use of national stock numbers (NSN) or acceptance and use of map catalog numbers as "part numbers" are integral to the processing by automated systems. The Map Distribution Proponency Transfer concept will not apply to classified map distribution. Classified maps will be ordered and distributed according to AR 380-5 (Department of the Army Information Security Program) and applicable operations security (OPSEC) standing operating procedures (SOPs) rather than through supply channels. Stockage of classified maps will not be provided at the direct support unit (DSU) level.

An adequate and timely supply of maps and map products is vital for all military activities within a theater of operations. The assumption of unclassified map distribution by the Quartermaster Corps will hopefully be a simpler method to obtain much-needed maps on a timely basis.

This concept of the Map Distribution Proponency Transfer to the Quartermaster Corps is not finalized. When approved, the transfer concept will be published in the appropriate field manuals, Department of the Army pamphlets and other documents. Until then, continue to order maps and map products using current procedures.

OFFICER ADVANCED COURSE PHYSICAL TRAINING

Graduates of the Quartermaster Officer Advanced Course (QMOAC) are physically fit and getting fitter. Indications from the field are that QMOAC graduates enjoy a relatively high level of physical stamina when compared to their counterparts from other branches. This has resulted from a comprehensive QMOAC five-day and sometimes six-day physical training program which emphasizes endurance, strength, flexibility, and overall physical toughness. Variety and focus are the hallmarks of the QMOAC program. Class runs, ability group runs, competitive athletics, stretching, and strength building are developed through a variety of activities designed to create physically tough company commanders with the stamina to lead in combat.

OFFICER ADVANCED COURSE FTX

The Quartermaster Officer Advanced Course (QMOAC) has returned to the field after many years of absence. Each QMOAC class now undergoes a week-long field training exercise (FTX) which emphasizes both tactical and technical tasks. Conducted at Fort Pickett, VA, the QMOAC officers deploy to the field, establish a defensive perimeter, repel assaults by aggressors, set up a forward support battalion tactical operations center, conduct land navigation, hone their artillery forward observer skills, feed T-rations tactically, conduct night tactical road marches, perform a night tactical displacement, conduct site selection for tactical logistics operations, and qualify with the M-16 rifle.

QUARTERMASTER WARRANT OFFICER MANDATORY PREREQUISITES

On 17 January 1989, the mandatory prerequisites for Warrant Officer Candidate (WOC) students changed. The old mandatory and preferred prerequisites were considered inadequate to provide the Army with top-notch individuals for entry into the Quartermaster Warrant Officer Corps. (See the draft of DA Circular 601-89-1, Warrant Officer Procurement Program.)

MOS 920A - Property Accounting Technician and MOS 920B - Supply Systems Technician

- Must have completed Basic Noncommissioned Officer Course (BNCOC) or Advanced Noncommissioned Officer Course (ANCOC) in applicant's military occupational speciality (MOS).
- Must be in grade E6 or above with a minimum of eight years most recent experience in MOS. Additionally, two years of experience must be in a supervisory position.
- Must have on file the most recent Noncommissioned Officer Evaluation Report (NCOER) or Enlisted Evaluation Reports (EERs) which reflect outstanding and exceptional duty performance in MOS.
- Must have completed a minimum of six credit hours of college-level English. Successful completion of the English College Level Examination Program (CLEP) is the only acceptable substitution.
- Must have a strong endorsement or recommendation by a field grade officer in the applicant's chain of command.
- Must have a score of 85 or higher on the skill qualification (SQT) test.

MOS 921-A Airdrop Systems Technician and MOS 922-A Food Services Technician remain unchanged.

LIQUID LOGISTICS

267TH OPERATES FPTM, DEPLOYS

The 267th Quartermaster (QM) Company (Petroleum Operating (PO)), 240th Quartermaster Battalion (PO) on 1 May 1989 set up and operated the new FORSCOM Petroleum Training Module (FPTM) at Fort Pickett, VA. The petroleum pipeline and terminal operating facility was specifically designed for soldiers to train on a fixed pipeline. The first phase of the exercise consisted of classroom instruction. The second phase was hands-on training under the supervision of the contractor. The third and final phase was the 267th setting up and successfully operating the module.

The FPTM at Fort Pickett is a smaller version of the Southwest Asia Petroleum Distribution Operation Project (SWAPDOP). This system consists of 1,200 miles of pipeline, 66 pumping stations, 24 tactical petroleum terminals (TPT), and suspension bridges. The FPTM consists of one TPT, 18 miles of pipeline, five pumping stations, and several suspension bridges.

The 267th QM Company (PO) was the first unit to train on the module. According to 1LT Charles Hamilton, pipeline platoon leader, the company was responsible for set up, operation, pipeline repair, and all maintenance. The job was to get the TPT up and running. A TPT is set up to receive fuel for re-issue to soldiers in the field. The TPT also can provide 3.3 million gallons of fuel by using 18 20,000-gallon collapsible bags. The units can then line-haul fuel by using 5,000-gallon tanker trucks.

The 267th QM Company (PO) deployed to Okinawa, Japan, last August to participate in Exercise HABU SAKUSEN 89. The unit set up and operated an Amphibious Assault Fuel System in a joint mission with the 3rd Forces Services Support Group (U.S. Marines). Also, the 267th operated the fixed pipeline that provides fuel for the entire island. The 267th received training in offshore refueling and spill control. The company augmented the 505th Quartermaster Battalion, Okinawa, Japan, and was supported by the 10th Area Support Group (ASG).

RESERVE COMPONENT TRAINING FOR WATER UNITS

Selected units from the Second and Fourth Army provided backup water supply to the 1989 Boy Scout Jamboree at Camp A.P. Hill, VA, last summer. Personnel from the 79th Water Supply Company and the 316th Tactical Water Distribution Team provided over 1 million gallons of water storage and distribution to the 30,000 Boy Scouts attending this annual event.

U. S. Army Reserve and National Guard water supply units from around the country converged at several regional training sites during June and July 1989. National Guard water supply units from Alabama trained on purification, storage and distribution equipment, and operations at Camp Shelby, MS. Camp Shelby, the nation's largest National Guard training facility, is located 60 miles north of Gulfport, MS.

U.S. Army Reserve and National Guard water supply units from the Fifth and Sixth Armies conducted extensive water training at Camp Pendleton, CA. The 419th Water Supply Battalion commanded the 316th Water Supply Company from San Diego, CA, and the 122th Water Supply Company from Great Falls, MT.

A special configured package (SCP) for training, created by the Liquid Logistics Department of the U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA, was used during these training exercises. Anticipated results from this training include an increase in the number of military occupational specialty (MOS)-qualified soldiers in these units and improved individual skill qualification test (SQT) scores.

PETROLEUM TRAINING FACILITY

Plans are underway to replace the 1950s-era coupled pipeline, pumps, and bolted-steel storage tanks in the Basic Petroleum Logistics Division (BPLD) Petroleum Training Facility (PTF) in the Liquid Logistics Department of the U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA. After a complete spill containment system is built, soldiers and marines will install the Army's new Inland Petroleum Distribution System (IPDS) in the PTF. This system consists of joints of 6-inch aluminum pipe, 800 gallon-per-minute (GPM) mainline pumps, and various other components for a state-of-the-art training facility. Components of the tactical petroleum terminal (TPT), as well as welded-steel storage tanks, will complete the new PTF. The design is nearly complete, and construction should begin in mid-FY 90.

600-GPH ROWPU: SALT WATER OPERATIONS

Numerous units in the field report corrosion problems with their 600-gallon-per-hour (GPH) Reverse Osmosis Water Purification Units (ROWPUs) such as locking up because of salt buildup, reverse osmosis pump piston shafts corroding at a rapid pace, and elements becoming impacted when salt crystallizes inside the membranes. Resolve corrosion problems by following the guidelines listed below:

1. While shutting down for movement, pump a 1,500- to 3,000-gallon tank full of DECHLORINATED water. Operate the ROWPU in a normal manner. Operators must ensure that the chlorine is not turned on.
2. Once the tank is full of DECHLORINATED water, then shut down the unit using normal shutdown procedures. Then the operator must take the raw water intake hose from the source and put it in the DECHLORINATED water tank. Start the ROWPU and operate normally until the DECHLORINATED water tank is empty.

By taking these actions, the operator will flush a high percentage of salt out of the ROWPU's internal system. This will bring corrosion to the unit's components to the minimum and also stop impaction of the reverse osmosis elements caused by salt not being flushed out of the vessels.

NOTE: Operators, there will be no (MEICKO Models) parts manual available for the 600-GPH ROWPUs until November 1989. For further information, contact the Water Training Division, Liquid Logistics Department, U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA 23801, or phone AUTOVON 687-3991/1030, Commercial 734-3991/1030.

GRAVES REGISTRATION

SOLDIER'S MANUAL OF COMMON TASKS

A Graves Registration (GRREG) Mortuary Affairs task has been approved by the U.S. Army Training Support Center, Fort Eustis, VA, for the Soldier's Manual of Common Tasks (SMCT) Skill Level 1. The task title is "Perform Search, Recovery, Evacuation, and/or Burial of Remains." This is a task all soldiers must prepare to perform on the battlefield. The next SMCT is scheduled for fielding during the fourth quarter of FY 90.

NEW GRAVES REGISTRATION FILM: 'WALK SOFTLY STRANGER'

During the first quarter of FY 90, a new film depicting the Army's Graves Registration (GRREG) Service will be available. This informational film highlights the important and sensitive roles of GRREG personnel. It depicts GRREG services from initial formulation as a wartime activity to continuing response to major military disasters. This film will be released under the television tape (TVT) 10 series as an Armywide videotape. Obtain copies through your local Training Audio-Visual Support Center.

RESERVE COMPONENT CONFIGURED COURSEWARE (RC3) PROGRAM

Beginning the first quarter of fiscal year 90, the Reserve Component Configured Courseware (RC3) Program will be available to graves registration noncommissioned officers in skill levels 10, 30, and 40. This program will allow Reserve Components to conduct formal, group-paced instruction with training materials of the same task standards as the 57F10, 57F30, and the 57F40 resident courses. Appropriate schools or academies will be sent training materials through a basis of issue plan (BOIP) based on requisitions from the requesting institution.

UNIT LEADER GRAVES REGISTRATION TRAINING

All unit-level leaders (officers and noncommissioned officers (NCOs)) should know how to care for and handle deceased personnel during hostilities. The U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA, recently developed a Graves Registration (GRREG) Training Support Package (TSP) and graphic aids supplement for the unit level. Company commanders are responsible for the search, recovery, and evacuation of deceased personnel to a designated collection point or temporary burial whenever required by the operational situation. The TSP contains the necessary materials and doctrine to train NON-GRREG personnel. The TSP has been forwarded to U.S. Army schools for use in the Basic Noncommissioned Officer Course (BNCOC), Advanced Noncommissioned Officer Course (ANCOC), Sergeants Major Academy, Officer Advanced Course, Combined Arms Services Staff School, and Command and General Staff College. The U.S. Army Quartermaster Center and School (PROV) has a limited number of copies. Request Department of the Army (DA) Pamphlet 10-2-C002 TSP (Perform Unit Graves Registration (GRREG) Functions (NON-GRREG) Personnel)) by writing the U.S. Army Quartermaster Center and School (PROV), ATTN: ATSM-GR, Fort Lee, VA 23801-5000, or by calling AUTOVON 687-3831.

GRAVES REGISTRATION DOCTRINE AND PROCEDURES

As noted in earlier editions of the Quartermaster Professional Bulletin, the primary graves registration doctrinal publication, Field Manual (FM) 10-63, is being revised. The revision will mandate many procedural changes in temporary layout, collection point operations, search and recovery operations, and handling of contaminated remains. The revised FM includes chapters on identification of the dead, mortuary operations, personal effects depot operations, and joint service planning considerations. The rewrite is scheduled for fielding in fourth quarter of FY 90. Send questions or comments about the revision to the U.S. Army Quartermaster Center and School (PROV), ATTN: ATSM-GR, Fort Lee, VA 23801-5000.

NEW GRAVES REGISTRATION OFFICER COURSE (8B-SI4V)

Starting October 1989, commissioned officers in the Total Army, who complete the Officer Basic Course or its equivalent and currently hold or anticipate assignment to a graves registration position, will be eligible for a newly approved two-week Graves Registration Course at the U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA. In addition to preparing officers for command and staff positions in graves registration battalion and companies, this course will prepare officers for staff responsibilities in the Joint Mortuary Affairs Office of a unified command. Officers who successfully complete the course will be awarded the additional skill identifier of 4V, graves registration officer. Submit requests to attend through normal training channels. Send questions about the FY 90 training schedule to the Commandant, U.S. Army Quartermaster Center and School (PROV), ATTN: ATSM-DTO, Fort Lee, VA, 23801-5036, or call AUTOVON 687-2449/4222.

SUBSISTENCE AND FOOD SERVICES

NOTICE TO COMMANDERS

Commanders now have an excellent incentive to encourage the best first-term food service personnel to reenlist. Starting second quarter FY 90, the U.S. Army Quartermaster Center and School (PROV), Fort Lee, VA, will offer a three-week class called the Advanced Food Preparation and Nutrition Course. This specialized class, initiated by General Maxwell R. Thurman, former Commander of the U.S. Army Training and Doctrine Command (TRADOC), will only be offered once a quarter and will accept only 12 students per class. The class will involve individualized training in advanced culinary cooking and baking procedures and techniques, preparation of fitness bars and low-calorie, low-sodium, low-cholesterol buffets, as well as field bread baking procedures. Prerequisites are that the soldier possess the 94B military occupational specialty (MOS), be in grade E4 and above, and be eligible for first-term reenlistment. Because the course is only offered four times a year, the soldier may have already reenlisted by the time for attending class. To enroll a soldier in the class, submit a DA Form 4187 (Personnel Action) through proper channels. Temporary duty and return expenses must be borne by the parent unit. The first class will be held 12-30 March 1990. Enrollment will be on a first-come, first-serve basis. For further information, contact Steve Posser, AUTOVON 687-2346 or SFC Betsy Lowe, AUTOVON 687-5382.

TRANSFER OF GARRISON OPERATIONS

The Army Chief of Staff decided 27 Sep 88 to realign all Army field feeding operational missions from the U.S. Army Troop Support Agency at Fort Lee, VA, to the U.S. Army Quartermaster Center and School (PROV) at Fort Lee, VA. In February 1989, the Deputy Chief of Staff for Logistics announced a follow-on decision by the Army Chief of Staff to realign all remaining garrison feeding operational missions from the U.S. Army Troop Support Agency to the U.S. Army Quartermaster Center and School (PROV) by 1 Oct 89.

In the message to field Army units announcing the realignment, the Deputy Chief of Staff for Logistics said that "this functional transfer is a critical element in the establishment of the Quartermaster School as the Center of Excellence for Army Feeding. For the first time, all elements of the Army food service process will be under one roof and focused toward providing our organizations and people with comprehensive doctrine, individual training, and the equipment required to ensure a viable program in both garrison and field operations."

The transfer of the U.S. Army Troop Support Agency's Directorate of Food Service and 56 military and civilian personnel authorizations also means the transfer of the Philip A. Connelly Awards Program for excellence in food service and the U.S. Army Troop Support Agency's representation on several Department of Defense food committees, such as the Armed Forces Product Evaluation, Armed Forces Menu Service, and Armed Forces Recipe Service Committees.

The U.S. Army Troop Support Agency's representative to the Joint Technical Staff, U.S. Army Natick Research & Development Command, Natick, MA, will be operationally assigned to the Office of the Deputy Chief of Staff for Logistics, Department of the Army, Washington, DC.

The U.S. Army Troop Support Agency will continue to furnish an equipment specialist and an officer to provide sanitation support for the Food Management Assistance Teams from the U.S. Army Quartermaster Center and School (PROV).

The U.S. Army Troop Support Agency and its predecessor organizations have been involved in the Army Food Program for the past 31 years when the Army Subsistence Center was established in Chicago, IL, 1 Dec 57, as the initial step in centralizing food management in the Army.

The U.S. Army Quartermaster Center and School (PROV) and the U.S. Army Troop Support Agency established an inter-agency task force to ensure a smooth transfer.

ARMY FIELD FEEDING SYSTEM (AFFS) UPDATE

The Army Field Feeding System (AFFS) concept, approved 18 May 89, is being implemented. Force structure changes are underway in Consolidated Table of Equipment (TOE) Update (CTU) 8910. Approximately 75 separate actions have been categorized into personnel, rations, equipment, doctrine, and training groupings and consolidated into the Headquarters, Department of the Army, AFFS Master Action Plan. A General Officer Steering Committee (GOSC), composed of permanent representatives from the U.S. Army Quartermaster Center and School (PROV), Deputy Chief of Staff for Logistics (DA, DCSLOG), Washington, DC, Troop Support Command (TROSCOM), St. Louis, MO, Defense Personnel Support Center (DPSC), Philadelphia, PA, and major army commands (MACOMs) will provide centralized direction for implementation. Representatives from other agencies may be added as required. The next GOSC meeting will be in late October 1989. With support by the Center Of Excellence For Army Feeding, this AFFS management overview process entails reviewing and acting upon recommendations from the AFFS Joint Working Group (JWG).

REVISION OF RESERVE COMPONENTS WARRANT OFFICER TRAINING (922A)

The Reserve Component warrant officer training system has been extensively revised. Training takes place at the Reserve Component Warrant Officer Candidate School at Fort Rucker, AL, or the Reserve Component Course at the Army Reserve Readiness Training Center, Fort McCoy, WI.

The Reserve Component's version includes a 153-hour correspondence course followed by a two-week resident phase at Fort McCoy. After completing this course, the candidate must attend either the Active or Reserve Component Food Service Technician Warrant Officer Technical/Tactical Certification Course (FSTWOTTC). Both courses are taught at Fort Lee, VA.

The Active FSTWOTTC is nine weeks long, and the Reserve Component FSTWOTTC is two weeks. Upon successful completion of one of these courses, the candidates receive their warrants from the U.S. Army Quartermaster Center and School (PROV) commandant.

Food service technicians between career years 9 and 13 should attend the Food Service Technician Senior Warrant Officer Training Course. The active component course, open to reservists as well, is 11 weeks. Like the entry-level course, the Senior Warrant Officer Training Course is also available in a two-week module for reservists. Food service technicians wishing to attend the two-week course must first successfully complete the non-resident portion of the course through enrollment in the Reserve Forces School program.

SUBSISTENCE OFFICER TRAINING

The Subsistence Officer (92G) Course is specifically designed to produce officers with area of concentration (AOC) 92G, subsistence officer. There is no other course designed or taught to train officers for subsistence operations. The course supports a low density military occupational speciality (MOS) 92G and was formerly a portion of the Quartermaster Officer Advanced Course.

The course provides officers with an advanced understanding of subsistence supply and usage in the Army and prepares them for a staff assignment in food management. Food management skills taught include the Army Field Feeding System, subsistence supply, commissary operations, dining facility operations, food sanitation, and nutrition.

WANTED!! YOUR RECIPES

The U.S. Army Quartermaster Center and School (PROV) is working on a project to reduce the sodium, fat and cholesterol in recipes. Initial efforts will emphasize modified and new recipes used for the breakfast meal. Because of the high cholesterol content of egg yolks and the high sodium and fat content of sausage and bacon, alternatives to the bacon and egg breakfast are being explored.

Why not have a low sodium cheese/vegetable pizza or a crispy waffle topped with seasonal fresh fruit? Perhaps you have some exciting or creative recipes to share. If you have recipes that are low in sodium, fat and/or cholesterol, please send to the U.S. Army Quartermaster Center and School (PROV), Subsistence and Food Service Department, Culinary Skills Division, ATTN: Recipe Task Force, Fort Lee, VA 23801-5401.

New ideas can help improve the breakfast menu as well as other meals and add to enjoyment at mealtime. Long-range plans are to test new recipes and add to the Army Menu System.

APPRENTICE COOKS COMPETE ON NATIONAL LEVEL

On 19 May 1989, the U.S. Army Culinary Arts Team (USACAT) champions participated in the National Restaurant Association's Culinary Arts Salon held at McCormick Place East in Chicago, IL. USACAT gained five gold medals, two silver medals, and the "Best in Show" award in the apprentice category. Two of the three Special Judge's Awards were also presented for best centerpieces in salt dough and best display of elegant seafood platter.

The USACAT was started in the early 1970s to promote the exchange of ideas in food service and to further enhance the image of the Army Food Service Program. The 1989 USACAT consisted of apprentice E4 and E5 soldiers from the United States and Europe competing for the first time on a national level.

NEW - 76X40 SPECIAL CONFIGURED PACKAGE (SCP)

The new special configured package (SCP), which includes the course management plan (CMP), program of instruction (POI), and student guide, has been compiled to train reserve personnel assigned the 76X duties of subsistence supply management at skill level 4. This course presents a series of combat critical tasks for training during the two major training phases. Phase I is common leader training (CLT), developed by the U.S. Army Sergeants Major Academy, Fort Bliss, TX. Phase II consists of training which relates specifically to the soldier's MOS. This training is conducted during active duty training (ADT), the two-week period of annual training. The total course can be taught in 99 academic hours. The training program within the course management plan is compatible with resident instruction taught by the U.S. Army.

THE SEMIANNUAL FOOD SERVICE TRAINING CONFERENCE

The 16th Semiannual Food Service Training Conference, hosted by the U.S. Army Quartermaster Center and School (PROV), Subsistence and Food Service Department, Fort Lee, VA, was held 23-25 May 1989. This conference was originally organized to develop a close working relationship and to standardize 94B Advanced Individual Training (AIT) among the three food service schools. The food service specialist (94B) AIT course is developed and maintained at Fort Lee, VA. This same course is taught at two other locations: Fort Jackson, SC, and Fort Dix, NJ.

The semiannual conference facilitates good communication and exchange of ideas--all intended to continually improve the 94B AIT course. The conference site is normally rotated among the three schools. However, since the conference now includes food service personnel from the Reserve Components and the Hospital Food Service, it was decided to hold the conference at other locations such as the Academy of Health Sciences (AHS), Fort Sam Houston, TX.

The first conference was held 15-16 January 1981. There were representatives from each of the three schools, the Directorate of Training and Doctrine (DOTD), and Directorate of Evaluation and Standardization (DOES). Everyone had the opportunity to get acquainted, ask questions, get immediate feedback, make suggestions and recommendations, and confer on training strategies. Surprisingly, it was discovered that there were a lot of differences and some misunderstanding among the attendees. There seemed to be never-ending problems. Fifteen conferences have passed, and the differences have now been channeled into productive arguments--arguments which produce innovative changes.

Since the early days, the conference has extended its list of attendees to include representatives from:

- U.S. Army Reserve (USAR) Readiness Groups and Training Battalions - so that they can receive current information and be made aware of the training available to them. They also provide valuable input to courses and specially configured packages.
- Academy of Health Sciences (AHS), Fort Sam Houston, TX, (94F) - so that schools can receive current information in the medical food service field and the 94F training. They also provide input for AIT course revisions. The 94B AIT course is a prerequisite for the Hospital Food Service Specialist (94F).
- U.S. Army Personnel Command (PERSCOM) - to provide us with a personnel update for the 94B military occupational speciality (MOS), on the strengths, authorizations, promotions, and bonuses. Coordination with PERSCOM also ensures that receiving the highest quality noncommissioned officers (NCOs) for instructors.

- U.S. Army Training and Doctrine Command (TRADOC) - to obtain current information from TRADOC and to have questions that pertain to TRADOC answered on the spot. There are several different topics presented at each conference. All attendees discuss these topics until they come to a consensus. The following are some of the topics presented--

- | | |
|--------------------------------|------------------------------------|
| - Program of Instruction | - Course Management Plan |
| - Lesson Plans/Tests | - End-of-Course Comprehensive Test |
| - Educational Television Tapes | - Army Field Feeding System |
| - Fast Track | - DOES Evaluations |
| - Personnel Update | - Future Training Strategies |
| - Doctrinal Update | - Base Realignment |
| - Medical Update | - Reserve Component Comments |

When the conference is at Fort Lee, representatives also are invited from--

- U.S. Army Natick Research & Development Command, Natick, MA - to brief the latest information on field feeding equipment and rations.
- Foreign Science and Technology Center, Charlottesville, VA - to educate participants on Allied and Soviet field feeding.
- Directorate of Combat Developments, Fort Lee, VA - to update participants with a threat briefing related to food service.
- U.S. Army Troop Support Agency, Fort Lee, VA - To update participants on upcoming changes to the food service "administrative bible," AR 30-1 (The Army Food Service Program).

Of course, there is the normal exchange of ideas on the 94B10 course, and instructors and management of all the schools receive the latest information on emerging doctrine and systems through these briefings.

Over the years, a lot has been accomplished because of these conferences. The Army's food service specialists now are able to--

- Ensure standardized training at the three schools.
- Maintain an excellent working relationship with the USAR, AHS, and the three schools.
- Have the best training product possible for the 94B AIT course after input from all attendees.
- Ensure that the training centers receive the most current information on Army food service and training. The conference also enables the training centers to understand what the 30/40 level courses are teaching. This way the schools know what must be included in the base AIT training.
- Visit each other's training site, and exchange ideas on ways to improve training by direct observation of training in progress.

As a result of the conferences, the three schools are working closely. Instead of a lot of differences, there are more similarities, friendly communication, and better understanding.

FOOD SERVICE EQUIPMENT QUALITY DEFICIENCY REPORT

The U.S. Army Troop Support Agency (TSA) emphasis on Quality Deficiency Reports (QDR) has resulted in credits or refunds of scarce funds. All Quartermaster elements should report equipment conditions, such as unreliability, poor quality, and/or not meeting contract specifications. Food service items of equipment failing to perform satisfactorily because of defect(s) in design, construction, or operation must be reported on SF 368 to the Commander, U.S. Troop Support and Aviation Readiness Materiel Command, ATTN: LOTA-EM-F, Fort Lee, VA 23801-6020. This program commands top-level management attention; as equipment becomes more sophisticated and more costly, users should be encouraged constantly on reporting defects.

COMBAT DEVELOPMENTS

MOBILE PETROLEUM LABORATORIES

During World War II, fuel quality became a problem. The Army answered this problem by constructing a Mobile Petroleum Laboratory in a semitrailer van. After the war, the Army used this mobility by upgrading the semitrailer vans and assigning them to the Pipeline Within Europe.

During the Vietnam conflict, use of the semitrailer Mobile Petroleum Laboratories increased. The Army is in the process of upgrading and constructing 17 new Mobile Petroleum Laboratories. Two prototype semitrailer laboratories have been fielded. The first is assigned to the 240th Pipeline and Terminal Operating Battalion, Fort Lee, VA, and the second to the 260th Petroleum Supply Battalion, Hunter Army Airfield, Savannah, GA.

Mobile Petroleum Laboratories are housed in an M822E1 semitrailer van and powered by a trailer-mounted 60-kilowatt generator. The laboratory can be towed by a M800/M900 series tractor and air-transported by C130 or larger aircraft. One officer, one reports clerk, and seven petroleum laboratory specialists (77L) staff the laboratory.

The testing capabilities include limited procurement testing on aviation turbine fuels, quality surveillance (B2) testing on motor gasoline (less octane rating), and diesel fuel. Additionally, this laboratory can perform limited tests on oils, hydraulic fluids, and greases that may be required during a combat scenario.

In the near future, the reserve petroleum battalions will receive the new Mobile Petroleum Laboratories. This will give the Total Army new and complete quality surveillance capabilities on the battlefield.

RESTRUCTURING OF THE MAM PROGRAM

LTC DANIEL D. ZIOMEK

Editors Note: LTC Daniel D. Ziomek's explanation of major changes in the Materiel Acquisition Management (MAM) Program originally appeared in the Army RD&A Bulletin, May-June 1989. The professional bulletin of the research, development, and acquisition (RD&A) community is published bimonthly by Headquarters, U.S. Army Materiel Command, Alexandria, Virginia.

Note from Quartermaster Proponency Office: With the multitude of procurement reforms initiated under the Presidency of Ronald Reagan and continued in the Bush Administration by Secretary of Defense Cheney, significant changes continue in the Army's Materiel Acquisition Management (MAM) Program. The following article by LTC Daniel D. Ziomek, Army Proponent Manager for the MAM Program, outlines the major changes pending for the Army and provides a "MAM Proponents" view of career progression.

Requirements for certification in the MAM Program make dual tracking a challenge. Un-

less MAM assignments are timed to provide troop experience at key intervals, officers may in fact become single tracked into MAM. Officers must understand this risk and be prepared for possible single tracking in MAM.

The Quartermaster Corps has a need for MAM-qualified officers holding a 51 or 97 Functional Area. Having MAM-qualified Quartermaster officers supporting developmental programs such as Clothing and Textiles, Subsistence, Petroleum, Airdrop Equipment, and General Quartermaster Equipment is essential. Consequently, the Quartermaster Corps must develop a pool of MAM certified officers to ensure that we can get the right Quartermaster officers to those programs that support Quartermaster Corps missions.

Some see these reforms final objective as forming an "Acquisition Corps" for the Army. Currently that decision has not been made. However, expect to see change in the Army MAM Program and acquisition world as the Army continues to adjust to

MAM-RESTRUCTURED

BRANCHES	FUNCTIONAL AREAS	
15	45	FUNCTIONAL AREAS 51 97 + 4M/4Z
25	49	
74	51	
88	52	
91	53	
92	97	
+6T		

FIGURE 1.

CAREER NOTES

the procurement reform initiatives of the Bush Administration and Congress.

In response to recent changes in public law and direction from the Department of Defense, the Army plans a major restructuring of Materiel Acquisition Management (MAM) Program. Since 1983, the MAM Program has provided for the professional development of Army acquisition management officers. While the program has grown in size and importance, recent studies have identified significant limitations in the ability of a skill based personnel management system, like MAM (skill 6T), to adequately meet Army requirements for properly trained and highly experienced acquisition leaders.

The Army Leader Development Study (LDS) Final Report, published in April 1988, recognized the need for the Army to look at a possible new

career management field (CMF) for materiel acquisition management officers in order to ensure proper professional development. The LDS went as far as proposing consideration of a separate Army acquisition track. While the restructured MAM Program does not implement an acquisition track, it is viewed as a logical step in correcting current MAM professional development problems; and, it facilitates possible future transition to a separate track for Army acquisition officers, should further CMF changes prove necessary.

The current MAM Program is described in Chapter 101 of DA Pamphlet 600-3, Commissioned Officer Professional Development and Utilization. For those readers interested in a more thorough understanding of the changes included in the restructuring effort, a review of the DA pamphlet is recommended. The following paragraphs summarize

MAM CANDIDATE = .4m

FA 51 of FA 97

...BY DESIGNATION (MOST)
...OR APPLICATION (SOME)
...BASED ON FOLLOWING CRITERIA:

- (1) CPT THROUGH COL
- (2) CPT/MAJ-APPLICANTS MUST BE SERVING OR RECENTLY COMPLETED DUTY IN AN FA 51 OR FA 97 POSITION
- (3) MAJ(P)/COL-MUST MEET MAM CERTIFICATION STANDARDS FOR AWARD OF SKILL 42
- (4) AT LEAST 4 YEAR AFCS REMAINING
- (5) APPROPRIATE MEL
- (6) BACCALAUREATE DEGREE OR HIGHER IN TECHNICAL, SCIENTIFIC, OR MANAGERIAL FIELD
- (7) DEMONSTRATED OUTSTANDING PERFORMANCE AND POTENTIAL
- (8) APPLICANT APPROVAL FROM CONTROL BRANCH OR FUNCTIONAL AREA (SINGLE TRACK OFFICERS)
- (9) APPLICANTS MUST EXPRESS A DESIRE TO SERVE IN PM AND OTHER-DESIGNATED CRITICAL MAM POSITIONS

Figure 2.

CAREER NOTES

the most significant changes in the restructured MAM Program.

MAM Candidate Officers; however, it will not be used with positions.

REVISED OBJECTIVE

The primary MAM Program objective is to "develop a pool of qualified officers to fill designated critical acquisition management positions responsible for the full range of functions in the materiel acquisition life cycle." This revised objective significantly narrows the focus of the MAM Program on the development of officers to fill product/project manager (PM), program executive officer (PEO), general officer (GO) and other designated critical materiel acquisition management positions at the grade of O5 and above. It is anticipated that requirements will be reduced from the current 3,000-plus skill 6T positions (CPT-COL) to approximately 250-400 skill 4Z (LTC-GO) positions. Skill "4Z" has been designated as the new code for Certified MAM officers and critical MAM positions. Skill "4M" has been designated as the new code for

FOCUS ON FA 51 AND FA 97.

Functional Areas 51 (Research, Development and Acquisition) and 97 (Contracting and Industrial Management) will form the acquisition career development base which will provide qualifying experience, training and education for award of skill 4M and 4Z. Public Law 99-145 (the Department of Defense Authorization Act for 1986) and DODD 5000.52 (Defense Acquisition Education and Training Program) establish minimum criteria for the selection, training and career development of DOD personnel involved in designated critical acquisition management positions. The new MAM Program implements the law for selected positions through the use of skill management (4M and 4Z). There are many other positions with in the Army acquisition management structure which are not tied to the law or DOD directive. These positions are

CERTIFICATION = 42

MAJ(P)/LTC

LTC(P)/COL

MEL 4

MEL 4

PMC GRADUATE*

PMC GRADUATE*

DEGREE IN TECHNICAL,
SCIENTIFIC OR
MANAGERIAL FIELD

DEGREE IN TECHNICAL,
SCIENTIFIC OR
MANAGERIAL FIELD

3 YEARS EXPERIENCE IN
THE ACQUISITION,
MAINTENANCE AND
SUPPORT WEAPONS
SYSTEMS.

8 YEARS EXPERIENCE IN
THE ACQUISITION,
MAINTENANCE AND
SUPPORT OF WEAPONS
SYSTEMS WITH 2 YEARS
IN A PROCUREMENT
COMMAND (AMC)

PERFORMANCE

PERFORMANCE

*OFFICERS MAY BE GRANTED CONDITIONAL CERTIFICATION PENDING
COMPLETION OF PMC

FIGURE 3.

CAREER NOTES

best defined through the use of FA 51 and FA 97. Officers will begin their acquisition careers by being designated in either FA 51 or FA 97. Some, who pursue the MAM Program objective, will be awarded skills 4M and 4Z. Viable career development in FA 51 and FA 97 will remain independent of, yet support participation in the MAM Program. As depicted in Figure 1, FA 51 and FA 97 together with skill 4M and 4Z define a restructured Army materiel acquisition management career field.

COMBINED FA/SKILL MANAGEMENT.

The establishment of an Army materiel acquisition management career field, incorporating FA 51 and FA 97 with skills 4M and 4Z, provides the capability to fully implement personnel life cycle functions, a capability which does not exist with the current skill based MAM Program. Through the use of FA 51 and FA 97, the MAM Program gains the inherent functional area capability of performing all personnel life cycle management functions: structure management, officer acquisition (accession), individual training and education, distribution

management, sustainment, professional development, and officer separation. Skill codes 4M and 4Z provide a further capability to identify and intensively manage a designated population of officers within FA 51 and FA 97.

CANDIDATES AWARDED 4M

Entry into the MAM Program will be by designation or application. Selection and award of skill code 4M (MAM Candidate Officer) is to be made by a U.S. Army Personnel Command (PERSCOM) selection board based on the criteria shown in Figure 2. Skill code 4M applies to "candidate" MAM officers - those desiring to work toward qualification for PM selection and assignment. Skill code 4M is not used to code positions! Positions for MAM candidates to gain experience are designated by FA 51 or FA 97. The need for 4M is dictated by the overall size of the FA 51 and FA 97 population. It is not possible or necessary to develop 100 percent of those officers awarded FA 51 and FA 97 against the demanding criteria in PL 99-145 and DODD 5000.52. Because of the limited need (caused primarily by the small

CRITICAL (4Z) POSITIONS

- (1) ALL POSITIONS MANDATED BY PL 99-145 AS IMPLEMENTED IN DODD 5000.52
- (2) ALL CENTRALLY SELECTED AND GO PM POSITIONS
- (3) ALL PEO POSITIONS
- (4) ALL COL POSITIONS AUTHORIZED IN LIEU OF GO REQUIREMENTS IN AMC
- (5) ALL LTC/COL POSITIONS REPORTING TO A PM OR PER
- (6) THE MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY (RESEARCH, DEVELOPMENT AND ACQUISITION), ASA (RDA) STAFF POSITIONS
- (7) SELECTED ARMY LTC/COL ACQUISITION INSTRUCTOR POSITIONS AT DSMC, ALMC, AND MEL 1 LEVEL SCHOOLS
- (8) OTHER HQDA OR MACOM POSITIONS, BY WRITTEN APPROVAL OF THE MAM PROGRAM PERSONNEL PROPONENT OFFICE

FIGURE 4.

CAREER NOTES

number of PM and other designated critical position requirements), a smaller career development population from within FA 51 and FA 97 can adequately support the MAM (4Z) position structure.

SPECIFIC MILITARY EDUCATION

Training for officers in the new MAM Program will not change significantly from the current program. All FA 51 and FA 97 (4M) officers should attend the nine week MAM Course at the Army Logistics Management College (ALMC) prior to their first FA assignment. All officers awarded skill code 4M will attend the Program Management Course (PMC) at the Defense Systems Management College (DSMC) prior to their second MAM assignment. One new feature will be the use of mandatory assignment utilization tours following attendance at the MAM Course and PMC. PERSCOM will initiate "inhibit" coding procedures to ensure utilization.

DUAL AND SINGLE TRACKING

The MAM Program requires extensive acquisition experience to qualify for certification at the rank of COL. Most officers, however, should be able to retain branch affiliation, with alternating branch and functional area assignments, through the rank of LTC. A few officers will continue to dual track after promotion to COL. These officers will

generally be both eligible for certification and highly competitive for command selection.

At the rank of LTC, officers will be required to assess their career status and goals in the MAM Program. The increased experience requirement for certification at COL versus LTC (eight years for COL, three years for LTC) may require individual officers to choose to single track early in order to achieve qualifying experience.

Some officers, because of special education, training, and experience, may choose to single track as early as the rank of MAJ. The new MAM Program will have a mix of both single and dual officers, with the goal of retaining a viable dual track career development pattern through LTC.

A preliminary analysis of MAM Program position requirements, at the grade of O6 has been completed. In order to reduce total officer inventory in the MAM Program (CPT-COL), and the corresponding drain on other branches and functional areas, single tracking for most FA 51 4Z and FA 97 4Z officers at promotion to COL will be a program objective. Because of the stringent qualifications imposed by PL 99-145, a large MAM officer inventory is not supportable given limited school quotas and procurement command (AMC) FA 51 and FA 97 authorizations. Allowing officers in the program to freely dual track at the rank of COL could greatly inflate the required inventory.

PROMOTION/SELECTION FLOORS			
FLOOR FA 51/FA 97	SUBFLOOR SKILL 4M	SUBFLOOR SKILL 4Z	SUBFLOOR SINGLE TRACK FA 51/FA 97
MAJ	MAJ	COL	LTC
LTC	LTC	SSC	COL
COL			SSC
SSC			

FIGURE 5.

CAREER NOTES

CERTIFIED OFFICERS AWARD 4Z

Officers who enter the MAM Program will automatically be considered for certification by a HQDA Certification Board upon selection to the rank of LTC. Those found qualified will be awarded skill code 4Z. MAM Program certification supports Army implementation of the requirements contained in PL 99-145 and DODD 5000.52. It is a two-level process (LTC/COL) with up to three consecutive annual reviews or opportunities for certification at each level. Officers who clearly meet all qualifying standards may apply for early certification. Figure 3 outlines certification criteria. Officers failing to achieve certification after three successive annual reviews will be administratively removed from the program without prejudice. Officers removed from the program will continue to receive assignments in FA 51 or FA 97 but will not be eligible to fill skill code 4Z positions.

CRITICAL POSITIONS CODED 4Z

Unlike skill code 4M, skill code 4Z will be used to identify both officers and positions. The assignment of all certified officers will be intensively managed by PERSCOM to ensure maximum utilization of these officers in designated critical positions. Critical positions, identified by skill code 4Z, must meet one of the criteria listed at Figure 4.

The criteria for selection and designation of critical positions, like the officer certification process, supports Army implementation of PL 99-145 and DODD 5000.52. Strict compliance with the coding criteria should greatly reduce the number of MAM Program positions requiring intensive management (estimated reduction is from 3,000-plus to approximately 250-400 positions).

PROVISIONS IN THE LAW APPLY TO GENERAL OFFICERS

Public law 99-145 amended 10 USC and established specific education, training, and experience requirements for general officers (GOs) assigned to duty in a procurement command (defined by the law as AMC). DODD 5000.52 implements the public law as it affects GO positions. The MAM Program certification standards have been revised to comply with the public law and DOD directive and will provide a mechanism, skill code 4Z, for identifying officers eligible for assignment to GO positions. Af-

fect GO positions will also be identified with skill code 4Z. The specific GO requirements in the law are:

- The secretary of each military department shall prescribe regulations establishing requirements for the education, training, and experience of general or flag officers assigned to duty in a procurement command (AMC). Such regulations shall be subject to the approval of the secretary of defense.
- Regulations prescribed shall require that in order for an officer of a military department to serve in a flag or general officer grade while assigned to duty in a procurement command (AMC), the officer must meet the education and experience requirements for program managers: attendance at DSMC PMC and eight years experience in the acquisition, support, and maintenance of weapon systems, at least two of which were performed while assigned to a procurement command (AMC).
- The secretary of the Army may waive the requirements for assignment. The authority to waive such requirements may not be delegated.

The effective date of GO assignment provisions in the law is 1 July 1990. The use of the MAM Program to implement the law will provide at least three benefits:

- A virtual career development track from CPT to GO will be identified. This should help to attract and retain quality officers.
- A pool of officers will be identified and intensively managed to ensure compliance with the law. MAM certification (at the rank of COL) will become a validation of each officer's qualification under the terms of the law.
- Use of skill code 4Z with each GO position in AMC will identify that position as one requiring compliance or secretary of the Army waiver.

PROMOTION/SELECTION FLOORS

A general officer panel met in June 1988 to approve the proposed changes to the MAM Program. That panel clearly identified the issue of fair and equal promotion and selection opportunity as critical to the success of the restructured MAM Program. Short of establishing a separate acquisition career development track, with separate

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promotion and selection boards, a comprehensive set of floors and subfloors must be established. The planned floors are summarized at Figure 5. The intent of the floors is equity and insurance that a sufficient number of quality officers are available at the rank of LTC and COL who comply with the public law and are fully qualified for assignment to designated critical acquisition positions.

OFFICER RECLASSIFICATION

All officers in the current MAM Program, who have achieved certification, will be grandfathered - skill code 4Z awarded in place of skill code 6T. All officers on the certification standing list, maintained by PERSCOM, will be grandfathered -- skill code 4M awarded in place of skill code 6T. The files of all remaining 6T officers, who are not grandfathered, will be reviewed individually for retention and possible reclassification into FA 51 or FA 97. Officers presently holding or reclassified into FA 51 or FA 97 will be awarded skill code 4M. A primary goal of the reclassification effort will be to retain an adequate pool of experienced officers for future selection and assignment in critical acquisition positions.

EXCEPTED PROGRAMS

Not all critical Army acquisition management positions can be identified through the use of FA 51 and FA 97. There is a recognized need for a small number of uniquely qualified PMs and PEOs in such fields as FA 52 (Nuclear Weapons Research, AOC 52B), FA 53 (Systems Automation Officer) and Branch 15C35 (Aviation/Intelligence). On an exception basis, with the approval of the MAM Program personnel proponent office, officers outside of FA 51 and FA 97 will be identified by proponents and PERSCOM for entry and certification in the MAM Program. Program exceptions will be based on the identification of firm requirements and will be tightly controlled.

RELATED ACTIONS

Because this proposal affects the current FA 51 and FA 97 career fields, some minor changes to those functional areas are required and have been incorporated in the MAM Program restructuring. Following are the most significant changes:

- (1) The title for FA 51 is being changed to "Research, Development and Acquisition" to better reflect the purpose of the FA and subordinate AOCs.
- (2) AOC 51C (Combat Developments) is being fully integrated into FA 51 professional development.
- (3) Assignment progression for FA 51, culminating in the award of AOC 51D (Acquisition), is clearly defined.
- (4) The FA 97 structure is being reduced to a single AOC (97A).

SUMMARY

The planned changes to the MAM Program will have significant impact on how the Army manages personnel assets as we move to develop a pool of professional materiel acquisition managers. This comprehensive restructuring effort is driven by public law and DOD directive. We must begin early to directly influence the career decisions of our acquisition personnel and get them on the appropriate career glidepaths. The acquisition of our current and future weapon systems is vitally important, highly visible, and will continue to draw close scrutiny from all venues, especially Congress. The message is clear, systems acquisition management in our TDA Army is as important as troop leadership in our TOE Army.

LTC David D. Ziomek is the Army proponent manager for the MAM Program and editor-in-chief of the Army RD&A Bulletin, Alexandria, Virginia.

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CAS3

CPT GARY G. FURNEAUX

The Combined Arms and Service Staff School (CAS3) is a Department of the Army initiative designed to fill the gap in the professional development of all Army officers between their Officer Advance Course (OAC) and the Command and Staff College (CSC). The purpose of CAS3 is to train officers to function as competent military staff officers. The Combined Arms and Service Staff School accomplishes this by teaching students to analyze and solve military problems. In order to accomplish this, a student must learn to interact and coordinate as a staff member, improve communication skills, and gain a basic understanding of Army organizations, operations, and procedures.

The Combined Arms and Service Staff School is a requirement for all Army officers who are in year group 1979 or later and must be completed prior to the officers tenth year of service. The course is divided into two phases - a nonresident phase (Phase I) and a nine week resident phase (Phase II).

Phase I is a 140-hour extension phase which provides the background knowledge and skills necessary for Phase II. The School of Corresponding Studies (SOCS) of the Command and General Staff College manages Phase I. Officers have 18 months to complete this phase, but can finish earlier by devoting more time to Phase I study. The accelerated program expands the officers window of opportunity to attend Phase II. Phase I consists of 15 modules and culminates in a self-administered, open book comprehensive examination. (See Figure 1.) Each of the modules contains an end-of-module examination which the officer returns to the SOCS for grading. When the officer successfully completes all end-of-module examinations, SOCS sends the comprehensive examination to the officer. End-of-module examinations must be passed by a minimum score of 85 percent. Officers who fail an end-of-module examination must repeat the examination until successful. Upon passing the comprehensive examination (minimum score: 80 percent) at the completion of Phase I, officers are then qualified to attend the resident phase.

Phase II - Resident Phase is conducted at Fort Leavenworth, KS, in a nine-week, scenario-structured course. Each class is organized into 12-person staff groups with a lieutenant colonel as staff

leader. The staff group is designed to include a mix of combat arms, combat support, combat service support, and specialty branches. The Resident Phase is an interactive, hands-on course that emphasizes problem analysis, solution development, and coordination. Each student must demonstrate an ability to communicate verbally and in writing. The scenario is divided into exercises. The first is a short course in staff techniques followed by realistic staff problems in training, planning, logistics, budgeting, mobilization and deployment, preparation for combat, and a European exercise.

Additionally, CAS3 has recently added a low-intensity scenario exercise. This subcourse provides an excellent setting for logisticians and allows the student to experience the complexities of accomplishing multiple staff actions in a tactical "bare-based" operation (such as deployment to Honduras). The CAS3 process includes assigning students to staff roles that are identical to real-world staff roles. The staff leader presents problems that are similar to real-world staff problems. Staff leaders present models and give some advice, but allow students to grapple with the problem -- and if necessary, to learn through their errors. The experienced lieutenant colonel will apply the stresses of time, workload, and quality throughout the process. The basic premise of the evaluation process is immediate feedback through after-action reviews, from both peers and the staff leader. The course is non-competitive. The final grade is pass or fail with a letter of completion sent to U.S. Army Personnel Command (PERSCOM).

Students are housed in the 616-person Unaccompanied Officers Quarters (UOQ). The remaining students are billeted in off-post contract quarters. Officers are billeted two or three to an apartment. Kitchen facilities are available in both contract quarters and UOQ units.

The bottom line on CAS3 is that it is a success. Whatever your perceptions are about the course prior to attendance, once completed you will probably feel that CAS3 is sending you back to your unit as a better thinker, commander, mentor, staff chief, and soldier.

CPT Gary G. Furneaux is the Aide-de-Camp to the Quartermaster General, U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia. He is a 1989 CAS3 graduate.

THE MODULES OF THE PHASE I ACADEMIC YEAR 88/89

E101	Communicative Arts
E102	Historical Development Of Staffs
E103	Staff Skills, Roles, Relationships
E104	Military Decision Making
E105	Quantitative Skills
E106	Personnel Service Support
E410	Fundamentals Of Tactical Sustainment
E308	Training Management
E413	Budget
E515	Reserve Components/mobilization
E517	Staff Leadership And Management
E614	Soviet Army Equipment, Organization, And Operations
E709	Organization Of The Army In The Field
E716	Combined Arms Operations
E020	Comprehensive Exam

*PHASE 1 modules are constantly updated. Therefore, titles and contents will change periodically.

FIGURE 1

**CAREER
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INTERMEDIATE MILITARY EDUCATION LEVEL (MEL 4) STUDY

MAJ MARK G. COLE

BACKGROUND

The Army recently changed the methodology for selecting Command Staff College (CSC) attendees. A driving force behind the changes was the Panel on Military Education of the House Committee on Armed Services. This panel, chaired by Congressman Ike Skelton, a Democrat from Missouri, recommended revision of the Joint Professional Military Education (JPME) system at the National Defense University (NDU). The resulting changes precipitated the loss of 204 seats from the Command and Staff College total student capacity. Other factors in the change were recommendations from the Leader Development Plan (LDAP) and the increase in the CSC deferred population (950-plus officers).

INTERMEDIATE MILITARY EDUCATION LEVEL (MEL 4) RESULTS

The following summarizes the Chief of Staff of the Army's decision on the MEL 4 Study:

- a. Maintain a selection rate of approximately 50 percent for each cohort year group.
- b. Officers selected for Below the Zone (BZ) promotion to Major automatically selected for CSC.
- c. Select cohort year group CSC attendees over 5 years. The breakdown for each year group, less BZ seats, will be 40 percent/40 percent/15 percent/5 percent.
- d. Expand Leavenworth Command and General Staff College (CGSC) to 1,290 in Academic Year (AY) 90/91.
- e. Establish a CSC class composition of Combat Army (61 percent, Combat Support Army (20 percent), and Combat Service Support (19 percent). (See Figure 1.)

f. Provide Branch selection bands to CSC boards to ensure Branch health and class composition are attained.

g. Hold CGSC attendance of International Officers to 100; Reserve Component to 90; Sister Service to 64; and Special Branches (AMMED, JAG, Chaplains) to 54.

h. Reduce the deferred pool to 700 maximum.

i. Reject the awarding of MEL 4 credit for specialized training (such as LEDC and MAM).

j. Reject consolidation of Majors and CSC Selection Boards.

IMPACT ON THE QUARTERMASTER CORPS

The approval of the MEL 4 Study should provide Quartermaster Corps officers the opportunity to gain a larger pool of resident CSC graduates. Under these new guidelines, Quartermaster officers will compete only against other Quartermaster officers for a CSC seat. Integrating more Quartermasters into the "Warfighters" school develops responsive, aggressive support for the Army. It provides us an opportunity to develop the Quartermaster Corps understanding of the AirLand Battle and the inherent support requirements. It is also an excellent chance to educate combat arms officers in logistics. Developing officers capable of providing support to combat soldiers and their systems is our mission. Having more resident CGSC graduates helps the Quartermaster complete that mission.

MAJ Mark G. Cole is the Chief, Officer Personnel Systems Division, Office of the Quartermaster General, U.S. Army Quartermaster Center and School (PROV), Fort Lee, Virginia.

**COMMAND AND STAFF COLLEGE SEATS
COMPOSITION MODEL CAPACITY 1,076**

BRANCH	SEATS	PERCENT
IN	145	13
AR	93	9
FA	124	12
AD	58	5
AV	122	11
SF	31	3
EN	78	7
CA TOTAL	651	61
SC	81	8
MP	45	4
MI	72	7
CM	22	2
CSA TOTAL	220	20
AG	50	5
FI	16	1
OD	59	5
QM	55	5
TC	25	2
CSS TOTAL	205	19

Figure 1.

SUBMISSION GUIDELINES FOR QUARTERMASTER PROFESSIONAL BULLETIN

TO ASSIST YOU IN PLANNING YOUR ARTICLES, WE OFFER THE FOLLOWING GUIDELINES:

Submit articles in the form of typewritten, double-spaced drafts, consisting of no more than 10 pages to:

**COMMANDANT
U.S. ARMY QUARTERMASTER CENTER AND SCHOOL
ATTN: ATSM-ACZ-PB (EDITOR, QMPB)
FORT LEE, VA 23801-5032**

- Ensure that all articles relate to and support the mission of the Quartermaster Corps. Articles should address technological developments, tactics, techniques and procedures, "how to," practical exercises, training methods, historical perspectives, and viewpoints.
- Per TRADOC guidance, the Quartermaster Professional Bulletin (QMPB) cannot publish personal notices (to include routine notices of promotions, assignments, and graduations); personality oriented articles (except for those with historical significance); and routine news items.
- The target audience for the QMPB is Corps-wide. It includes junior enlisted soldiers, noncommissioned officers, warrant officers, commissioned officers and DA civilians within the Quartermaster Corps. The reading level of articles submitted should reflect this. (The editorial staff will provide you with assistance if you have any questions).
- If graphics are desired to support your article, please let the staff of the QMPB know in advance of submission. They will then have the time to develop the artwork, allowing you to review it for accuracy before the final camera-ready mechanicals are sent to the printer.
- When submitting photos or art, please provide clear, original prints or negatives whenever possible. Black and white photos are preferred. All photos and artwork will be kept on file at this office unless otherwise requested.
- When preparing your articles, please recall that the QMPB is more interested in content than in style. Our staff is here to help you during the writing process, if you need it, and is responsible for editing your submissions for grammar, syntax, and format. Our basic requirement from you is information.
- POCs for the Quartermaster Professional Bulletin are CPT Randolph B. Sapp, Linda B. Kines, and Delthea Holmes, AUTOVON 687-4382/4741, Commercial (804)734-4741/4382.

COMING UP IN THE QMPB

Winter 1989 – Class IX Support
Spring 1990 – Reserve Components

In order to better accommodate our reading audience, the Quartermaster Professional Bulletin is now being distributed individually to Active Duty personnel at the grade of E8 or higher. Unit distribution will continue at the Battalion level for other Active Army personnel. In the Reserve Components, distribution will continue at the company level.

Officers can ensure that they receive their individual copies by making sure that the address listed on their Officer Record Brief is accurate.

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OFFICIAL BUSINESS

Quartermaster Corps

Purpose

Arrange for or provide supplies, materiel management, distribution, procurement and field services to support and sustain soldiers, units and their equipage in peace and war.

Mission

Arrange for or provide in peace and war:

Major end items, repair parts, rations, water, petroleum, individual and organizational clothing and equipment, personal demand items, storage and distribution of maps, fortification and barrier material and materiel to support military and non-military programs.

Field services including laundry and bath, clothing exchange, bakery, fabric repair, graves registration, classification, reclamation, salvage and property disposal.

Parachute packing, maintenance, and aerial delivery.

Training and professional development of Active, Reserve Component and Civilian personnel in proponent and common skill areas.

Doctrine, systems, and force integration to include research, development and acquisition in proponent areas.

Post Exchange and Commissary support.

Paul J. Vanderploog
Paul J. Vanderploog
Brigadier General, USA
The Quartermaster General