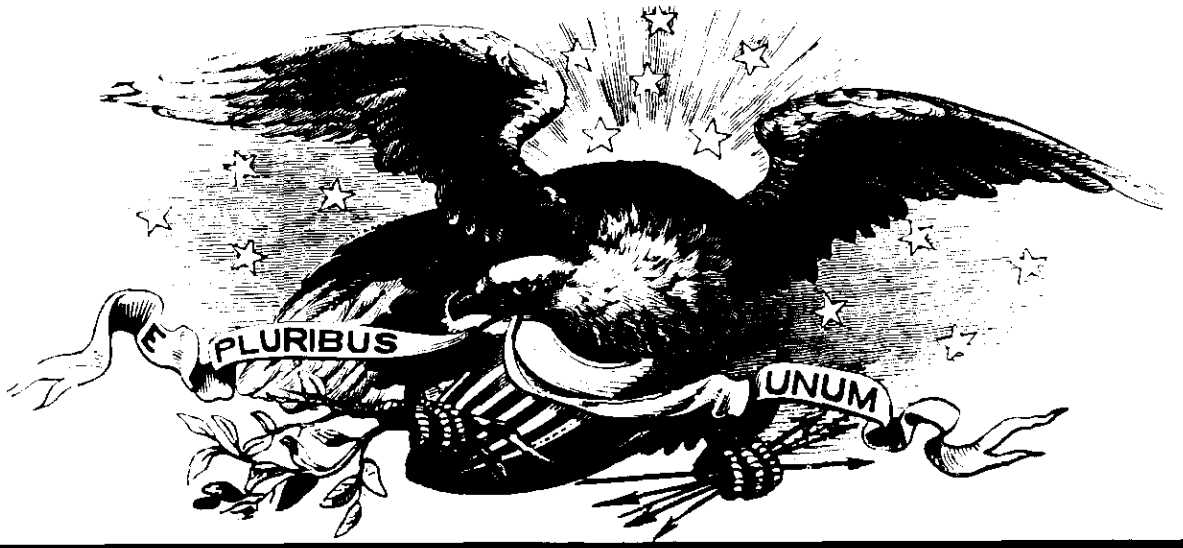
DLA
DIMENSIONS
VOLUME 3, NUMBER 6

DLA & Air Force contracts

The Carlucci initiatives



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You may register and vote as you choose

You may assist in voter registration drives

You may express your opinion about candidates and issues

You may participate in campaigns where none of the candidates represent a political party

You may contribute money to a political organization or attend a political fundraising function

You may wear or display political badges, buttons, or stickers

You may attend political rallies and meetings

You may join a political club or party

You may sign nominating petitions

You may campaign for or against referendum questions, constitutional amendments, municipal ordinances, etc.

You may not campaign for partisan candidates or political parties

You may not work to register voters for one party only

You may not make campaign speeches or engage in other activity to elect a partisan candidate

You may not be a candidate or work in a campaign if any candidate represents a national or State political party

You may not collect contributions or sell tickets to political fundraising functions

You may not distribute campaign material in a partisan election

You may not organize or manage political rallies or meetings

You may not hold office in a political club or party

You may not circulate nominating petitions

You may not campaign for or against a candidate or slate of candidates in a partisan election

Caution: An employee's conduct is also subject to the regulations of his or her agency.

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DLA DIMENSIONS

Volume 3, Number 6 April 1982

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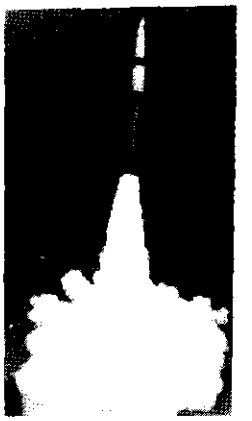

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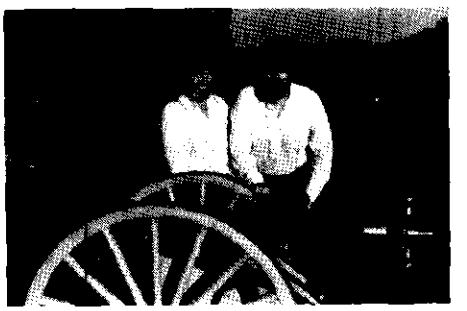
DEPARTMENTS

On front cover:

A Cobra helicopter emerges from the belly of a C-5A aircraft. (USAF photo)

On back cover:

A C-130 Hercules takes off over the shoreline on a weather reconnaissance flight. (USAF photo)



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The Carlucci Initiatives and the agency

Deputy Secretary of Defense Frank Carlucci in April 1981 announced his intention to make significant changes in defense acquisition philosophy and policies. The new policies, which have since become known as the Carlucci Initiatives, are directed at reducing weapon systems costs and shortening acquisition time, improving readiness, increasing the stability of procurements and strengthening the industrial base.

Following consultations with members of Congress, the military services, industry leaders, DoD officials and program managers to learn their concerns, Carlucci identified 31 improvement actions and in July 1981 added a 32nd.

The 32 acquisition improvement actions reflect the commitment of the secretary of defense to being a good steward of DoD resources especially in a fiscal year in which the DoD budget is scheduled to grow substantially.

What distinguishes Carlucci's initiatives from similar improvement programs is that he has demonstrated his determination to replace rhetoric with actions and to shift the emphasis from studying problems to implementing solutions.

An Acquisition Improvement Task Force, chaired by the deputy under secretary of defense (acquisition management), was established in November 1981 to review the progress of implementation of each initiative, identify barriers to implementation and recommend actions required to assure implementation. The Defense Logistics Agency is represented on the task force by Brig. Gen. Charles F. Drenz, USA, deputy director (acquisition management). He also represents DLA on the Acquisition Improvement Steering Group which monitors implementation, including follow-up actions recommended by the task force.

The Carlucci Initiatives are expected to set the tone for acquisition management over the next few years. Accordingly, they are a matter of continuing professional interest to all personnel concerned with acquisition.

Most of the Carlucci Initiatives are directly concerned with weap-

by Earl Nichols

on systems acquisition and management and must be addressed by DoD, the military services or Congress.

DLA's primary involvement centers around five initiatives:

Initiative #1

The objective of Initiative #1 is to reaffirm eight major acquisition principles and spread the word through the acquisition community.

Among the principles enumerated are: place responsibility, authority and accountability for programs at an organizations' lowest level having a total view of the program; give program managers authority, resources and flexibility to tailor acquisition strategy to program priorities and risks; use a lower risk approach to technology and build in pre-planned product improvements; maintain a government-industry relationship which is "arms length" but not adversarial; and realistically budget and fund research and development, procurement, logistics and manpower costs to protect acquisition schedules and readiness levels.

DLA is holding briefings for key managers on the Carlucci Initatives and disseminating material detailing the initiatives to program operators throughout DLA. By giving its people an understanding of the program, DLA is preparing them for implementing changes, such as those to be made to the Defense Acquisition Regulation (DAR).

Initiative #5

Initiative #5 requires DoD contract officers to assure the "negotiation of profit levels commensurate with risk and contractor investment."

DLA administrative contracting officers (ACOs) were directed in a letter dated April 13, 1981, to (1) assure that profit ratios used in negotiations are established in accordance with DoD profit policy outlined in the Defense Acquisition Regulation and that (2) price/cost analysts assure that their comments on profit in field pricing reports reflect current DoD profit policy and related initiatives. Additionally, headquarters financial services personnel will continue to review field pricing reports during staff assistance visits to assure that adequate comments on profit are provided ACOs and procurement contracting officers (PCOs).

Initiative #13

Initiative #13 deals with the impact of various requirements and regulations on the efficiency and effectiveness of the DoD acquisition process.

One important aspect of this initiative is that it seeks to raise to $25,000 thresholds in certain socio-economic programs to coincide with the proposed rise in the threshold for small purchases. Statutes proposed for amendment include the Davis-Bacon Act, which establishes the prevailing wage rates to be paid on federal contracts; Employment of the Handicapped Act; and the Walsh-Healey Public Contracts Act, which requires that the government do business only with firms which actually produce a product rather than agents getting a percentage of a contract. DLA has acted as the lead agency for developing legislative proposals to implement raising the dollar thresholds.

Another aspect of this initiative is a proposal to simplify contractual documents. DLA is working with the military services on a milestone plan to develop simplified documents. Initially, the effort will focus upon the area of procurements for supplies valued between $25,000 and $500,000. Present plans call for formulating and field testing specific recommendations for simplification. Industry associations will have an opportunity to comment on the field test results.

Frank C. Carlucci
Before his appointment as Deputy Secretary of Defense in February 1981, Carlucci was deputy director of Central Intelligence. Previously he was U.S. Ambassador to Portugal. He is a retired career minister in the U.S. Foreign Service, and has held posts as under secretary of the Dept. of Health, Education and Welfare; deputy director of the Office of Management and Budget; and director of the Office of Equal Opportunity. He is a graduate of Princeton University and attended Harvard Graduate School of Business Administration. He served two years as a Navy officer.

What distinguishes Carlucci's initiatives from similar improvement programs is that he has demonstrated his determination to replace rhetoric with actions and to shift the emphasis from studying problems to implementing solutions.

. . . when one service cuts a program, the effects of a cutback on the contractor's business may impact the cost of other services' programs with the same contractor.

Initiative #19

Carlucci determined that DoD failure to consider adequately the business base at key defense plants contributed to cost growth for certain weapon systems. In effect, when one service cuts a program, the effects of a cutback on the contractor's business may impact the cost of other services' programs with the same contractor. The intent of Initiative #19 is to provide cost analysis visibility over a few major defense contractors which have a significant amount of cross-service contracts, so that if one service cuts back on a program, the cost impact on other services' programs can be measured.

Based on data from procurement offices which had more than $25 million in contracts with any of the 17 contractors, DLA's ACOs are developing, and must have by the end of April, a five year business forecast to be used by the DoD Cost Analysis Improvement Group, which will track Initiative #19.

Initiative #32

This initiative seeks to increase competition in the acquisition process. The military services/defense agencies have been tasked to establish goals for increasing competition and to take a number of other actions targeted for implementation by June. The Logistics Management Institute, a private organization, will conduct a study to determine which commodities or programs offer the greatest opportunity for increased competition and which offer little or no such opportunities.

Other actions to be considered include developing policies to expand competition based on factors other than price. Such factors could include the total cost of ownership of equipment and what the best value would be to the government over the life cycle of equipment.

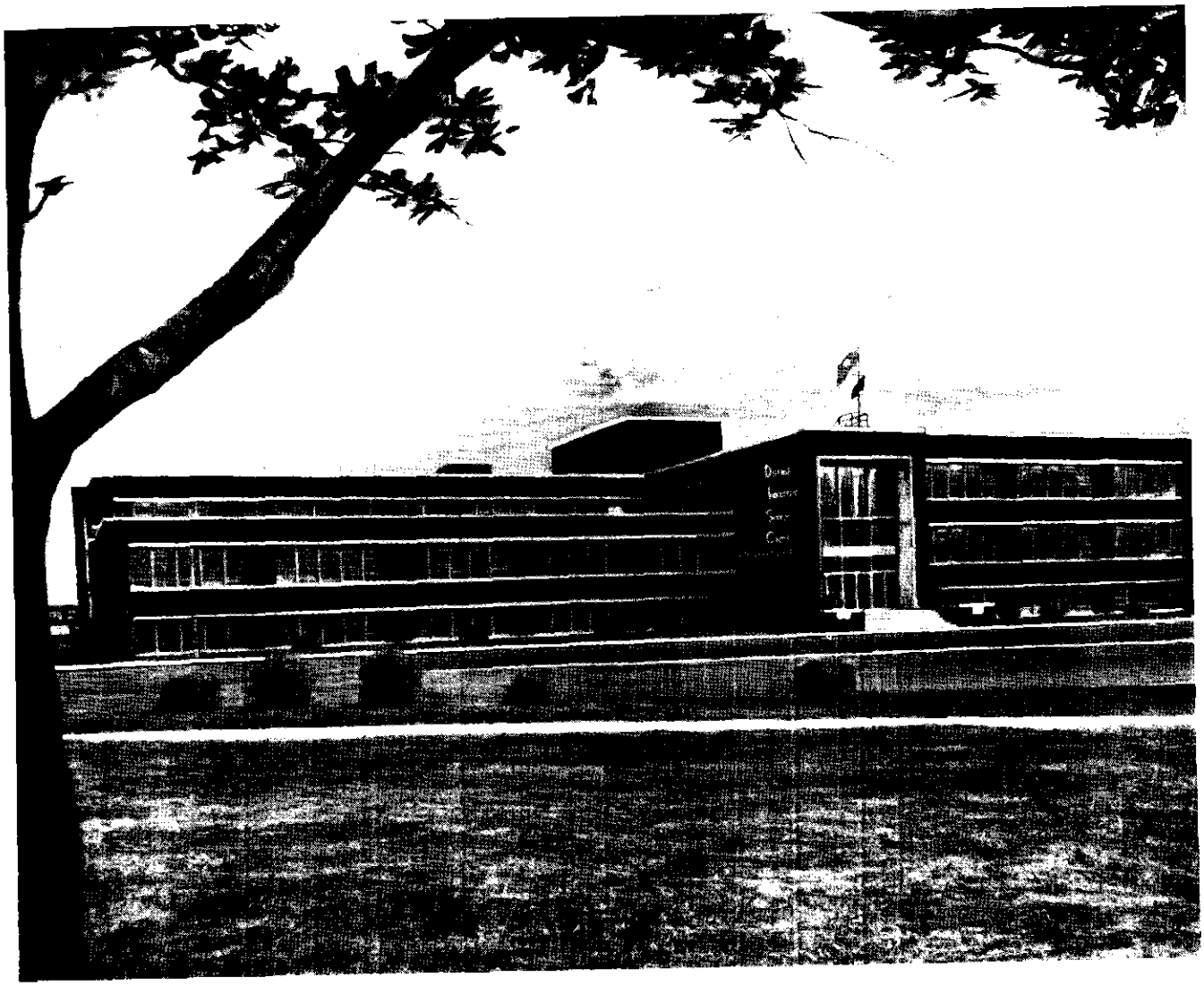
A competition subgroup has been established within the DoD Acquisition Improvement Steering Group to focus on competition in contracting. The subgroup is co-chaired by General Drenz.

DLA has established goals and directed each supply center and depot to designate an advocate for competition. While competition is built into the procurement process, this will provide a special focus on the need for competitive contracting. DLA's letter to center and depot commanders re-emphasized their responsibility for ensuring competition. These actions were required of the services and defense agencies by the under secretary of defense (research and engineering).

DLA has been engaged for some time, too, in streamlining fuel contracts to encourage firms to bid on government contracts and thereby make fuel contracting more competitive.

The eight major acquisition management principles announced by Secretary Weinberger

1. We must improve long-range planning to enhance acquisition program stability.
2. Both OSD and the services must delegate more responsibility, authority, and accountability for programs; in particular, the service program manager should have the responsibility, authority, and resources adequate to execute efficiently the program for which he is responsible.
3. We must examine evolutionary alternatives which use a lower risk approach to technology than solutions at the frontier of technology.
4. We must achieve more economic rates of production.
5. We must realistically cost, budget, and fully fund in the Five Year Defense Plan, and Extended Planning Annex, procurement, logistics, and manpower for major acquisition programs.
6. Readiness and sustainability of deployed weapons are primary objectives and must be considered from the start of weapon system programs.
7. A strong industrial base is necessary for a strong defense. The proper arms-length relationships with industry should not be interpreted by DoD or industry as adversarial.
8. DoD managers at all levels should expand their efforts to obtain maximum competition for their contractual requirements.



More than 2,000 military and civilian personnel at the Defense Industrial Supply Center help maintain a constant flow of hardware to customers.

Hardware store to the services

by Jim DeFrancesco

"For the want of a nail, the battle was lost."

A dusty old legend? Hardly. This oft-heard phrase has never rung more true than it does today among the people of the Defense Industrial Supply Center (DISC) in Philadelphia who provide vital industrial hardware support to the nation's armed forces on a round-the-clock basis.

The old "want of a nail" legend still remains fresh in the minds of these nearly 2,000 military and civilian professionals and their commander, Brig. Gen. Rano E. Lueker, USAF, since they supply not only nails to the military services, but nearly a million other industrial hardware items as well.

Literally the world's largest hardware store, DISC gets nearly six million item requests per year, makes over 16,000 individual sales each calendar day, has a catalog containing nearly 800,000 separate hardware items, maintains an inventory valued at more than $506 million and purchases over $477 million a year in industrial supplies from American industry for use by all four of our military services throughout the world.

Since 1952, U.S. military units throughout the world have entrusted DISC with the task of supplying them with needed items

DISC's catalog is more than twice the size of the famed Sears and Roebuck wishing book.

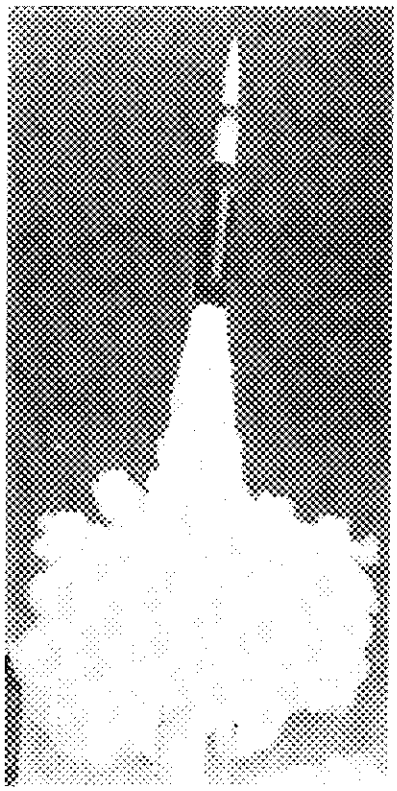
used in the maintenance, overhaul and repair of their weapon systems and equipment. Originally known as the U.S. Navy General Stores Supply Office (GSSO), the Philadelphia center evolved into the Military Industrial Supply Agency (MISA) on Jan. 1, 1960, when the secretary of the Navy was designated as single manager for military industrial supplies. In April 1962, MISA became a DLA primary field activity under the new name of the Defense Industrial Supply Center.

The DISC catalog of merchandise ranges from rope to nails, chain to shipboard cable, and bearings to hull plate and brass fittings. Altogether, 80 percent of the requisitions DISC receives from its military customers are for basic hardware items. All in all, DISC's catalog is more than twice the size of the famed Sears and Roebuck wishing book. New items are added daily, with ores, minerals and precious metals being the latest commodities to enter the DISC catalog.

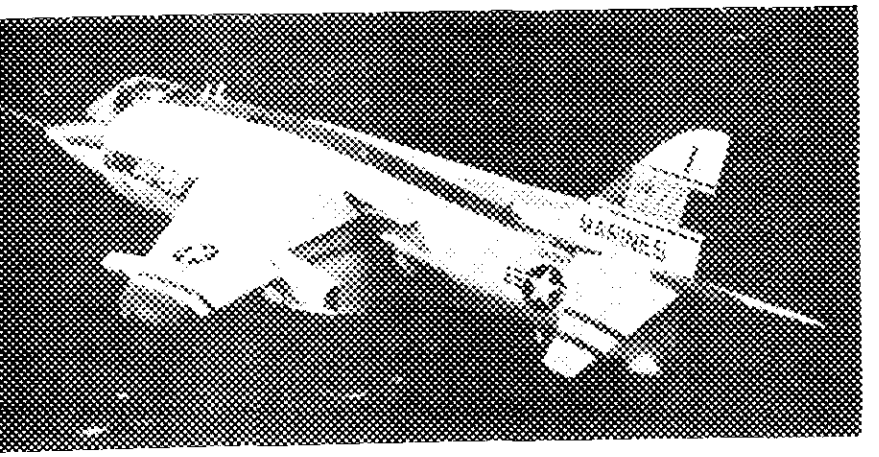
Weapon systems support

In 1963, DISC first accepted responsibility for providing support to the priority weapon systems of the military services. Initially, each service nominated one weapon system for a test program. The navy nominated the Polaris missile; the Army, the Hawk; and the Air Force, the Minuteman. Today, the services entrust a total of 100 major systems for DISC support.

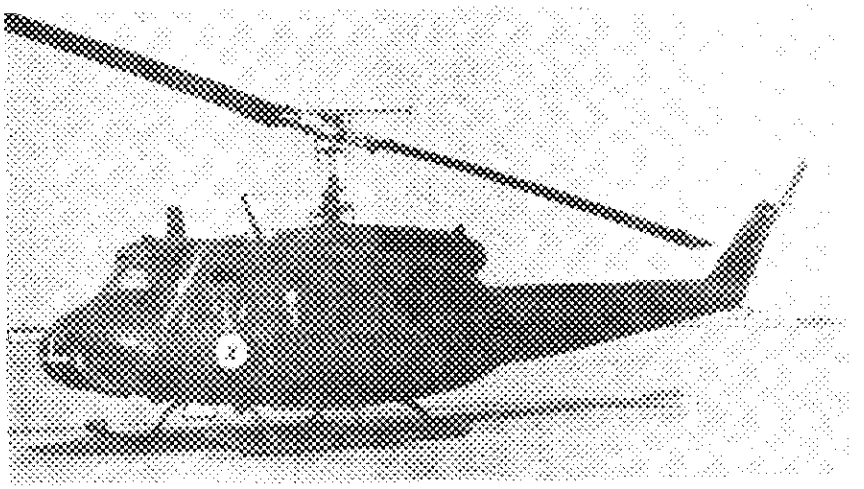
Among the systems now supported are Viking, Harrier, Intruder, Hawkeye, Vigilante and Tomcat aircraft, as well as the Trident submarine and Polaris missiles. Over 90,000 different national stock numbers are covered, with an average stock availability of 93 percent. The Polaris missile is

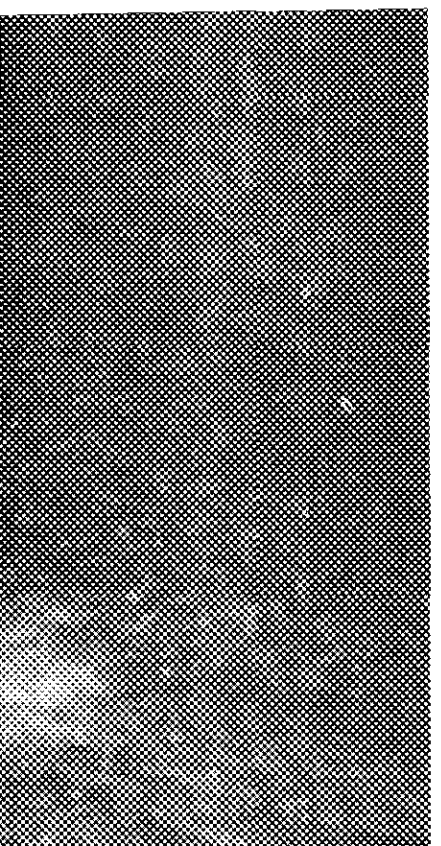


TOP: Minuteman III missile receives DISC supply support. BELOW: M60 tank is another of the center's customers. (USAF and USA photos)



TOP: DISC provides hardware for the AV-8B Harrier aircraft. BELOW: The Huey Cobra helicopter receives special management from the center. (Naval Photographic Center and USA photos)





one of the largest systems supported with over 36,000 individual items.

Other weapon systems include the Minuteman and Hawk missiles, the Chinook and Huey Cobra helicopters, the Stratofortress, F-15, F-16 and E-3A (AWACS) aircraft and the M60, M551 and XM-1 tanks. All in all, a total of over 90,000 different items have been identified as related to major systems of the U.S. Armed Forces. These items receive special management attention with a prime command objective of maintaining 100 percent supply availability on these critical parts.

Emergency supply operations

Round-the-clock service, seven days a week is provided by the DISC Emergency Supply Operations Center (ESOC) in response to urgent phone or message inquiries from customers regarding their high-priority and Joint Chiefs of Staff project requisitions. Specially-trained ESOC personnel accept new requisitions, help resolve hard-core supply problems and provide vital customer assistance services in emergencies. Their access to automated data banks assures a prompt reaction to requests for requisition expedites, modifications, cancellations and status on prior follow-ups.

Computer plays important role

In its supply operations, close to six million customer requisitions flow into DISC each year. This large volume and variety of transactions has required the installation of state-of-the-art high speed computer and communications equipment. DISC operates under the DLA Standard Automated Materiel Management System (SAMMS), where almost all requisitions from military units are received at DISC electronically. They are separated from other administrative traffic and processed by computers to determine availability of the material. When a source is registered, the computer flashes a material release order to the storage depot, sends a status notice to the consignee and adjusts on-hand records.

When material is not available, backorders are automatically noted by the computer and a notice is printed out for manual processing by inventory managers in order to rapidly determine an alternative action. DISC's logistics experts are assisted greatly by automated means in making their decisions as to what, when and how much to buy, as well as where to place incoming stock and how to release outgoing orders to the military customer.

This automation of requisition processing and procurement at DISC has achieved a significant reduction in administrative lead time. Inventory reviews and requirements determinations are

now accomplished under a mechanized supply and demand review system, and result in automatic computer recommendations for stock replenishment.

Selective management category codes

Some of the items DISC manages are more important than others in terms of need, demand value and frequency. Recognizing this, item managers at DISC have developed a system that applies stock fund dollars to items with the greatest critical need. An optimum balance of considerations has been refined into what center experts call a variable quarterly forecast of demand system. This system groups active items into 24 management categories, with each item coded for inclusion in one or another category. Thus, each item — based on its value, frequency and essentiality weapon systems and fleet issue load list related characteristics — earns its own level of support through membership in a particular category. These categories are determined through operations research techniques, and their individual support levels in combination yield maximum system stock availability within funding constraints.

Automated small purchases system

DISC was responsible for initial development of a new system which accelerates the contracting process of solicitation, evaluation and award to keep pace with today's demanding supply cycles. Known as the Automated Small Purchases System (ASPS I) it has been adopted by all other DLA centers under the SAMMS program. ASPS I handled orders of up to $250 by soliciting one vendor from a pre-established vendor file. The supplier who entered into a pre-arranged blanket purchase agreement had to respond within the time frame with a reasonable price and delivery schedule to receive a purchase order for the items. This type of small buy is generally noncompetitive and geared to provide a theoretical one-day lead time.

To keep items flowing to customers, DISC employs inventory managers, purchasing and equipment specialists, accountants and auditors.

Another successful system, ASPS II, has also been developed by DISC. It is an expansion of the ASPS I system, but extends its coverage to purchases up to $10,000. The principle in the ASPS II system is competition: up to seven vendors are contacted, including the last previous supplier of the item. The computer then evaluates the quotes received and prints a purchase order document. A manual review prior to signing is done by the contracting officer and the award is mailed to the successful bidder.

Distribution

Unlike other DLA centers, DISC does not have an on-site supply depot. Instead, it uses DLA depots, Navy installations and an Army depot in its distribution pattern. Most sales are made from depots located in Columbus, Ohio; Mechanicsburg, Pa.; Memphis, Tenn.; Ogden, Utah; and Tracy, Calif. Memphis and Ogden handle the largest volume. The depots at Mechanicsburg and Tracy specialize in bulk steel and shipboard cable. New Cumberland Army Depot, a specialized support point (SSP), is used for support of Army, Air Force and Marine Corps European demand for bin type items. Two of the six Navy-managed SSPs, NSC Norfolk and NSC Oakland, are used primarily for support of naval forces, both afloat and overseas.

About 3.3 percent of sales are made from four Navy-managed specialized support points located at high volume user sites, namely the Philadelphia Naval Shipyard and the Naval Supply Centers at Charleston, San Diego and Puget Sound. This concept provides efficient and economical distribution direct to the user by prepositioning heavy, bulk items, such as metals and shipboard cable, directly at the point of ultimate consumption. DISC and its depot system are linked together by a sophisticated data processing and communication network

that enables incoming and outgoing traffic to be processed without conversion to typed messages or a data card format. High speed data links are used to transmit information concerning requisition processing and to communicate instantly with military customers all over the world regarding their requisition processing and to communicate instantly with military customers all over the world regarding their requisition status.

Procurement from industry

DISC buys material from industry on the basis of formal advertising or negotiation. It deals both with major industrial giants as well as with small tool and die shops. Many of DISC's vendors are distributors and dealers who maintain middleman contact with industry sources. A central bidders' mailing list is maintained, consisting of more than 3,000 manufacturers and suppliers. The list is subdivided into about 500 commodity categories of materials obtainable from groupings of suppliers. The list changes daily with new firms being added and firms that show no interest or have proven unreliable being deleted.

Engineering and standardization

Engineering and standardization experts within DISC strive to achieve the highest practical degree of item standardization and to resolve significant supply, procurement and user problems related to the specifications and standards for DISC commodities.

Significant emphasis is placed within DISC to standardize items within the DoD supply system. This mission is essential to stem the proliferation of parts being added to the supply system, as well as to provide standard, reliable and procureable items as input during the design of new weapons systems.

DISC's engineers are also involved in projects such as the military parts control program. Parts control applies specific analysis and exerts stringent controls upon new items early during the design phase of a weapon system. Center experts currently provide parts control support to 290 weapon systems contracts under the terms of inter-agency agreements between DLA and the military services.

All items in DISC's inventory are continuously reviewed under the item reduction program. Engineers and technicians develop criteria whereby current items of supply can be eliminated and replaced by superior or equivalent items.

Looking to the future

With DISC's high speed communications and computer capabilities ensuring an almost instant flow of information to and from industry and its military customers, this center continues to meet the challenge of providing our armed forces with the critical industrial supplies necessary to keep their military equipment combat-ready.

DISC procurement experts seek out supply sources from American industry for vital industrial hardware items needed by U. S. Armed Forces worldwide.

Richmond to harvest AWARES in October

The Defense General Supply Center's new automated warehousing and retrieval system will pick, pack and ship, and do it fast.

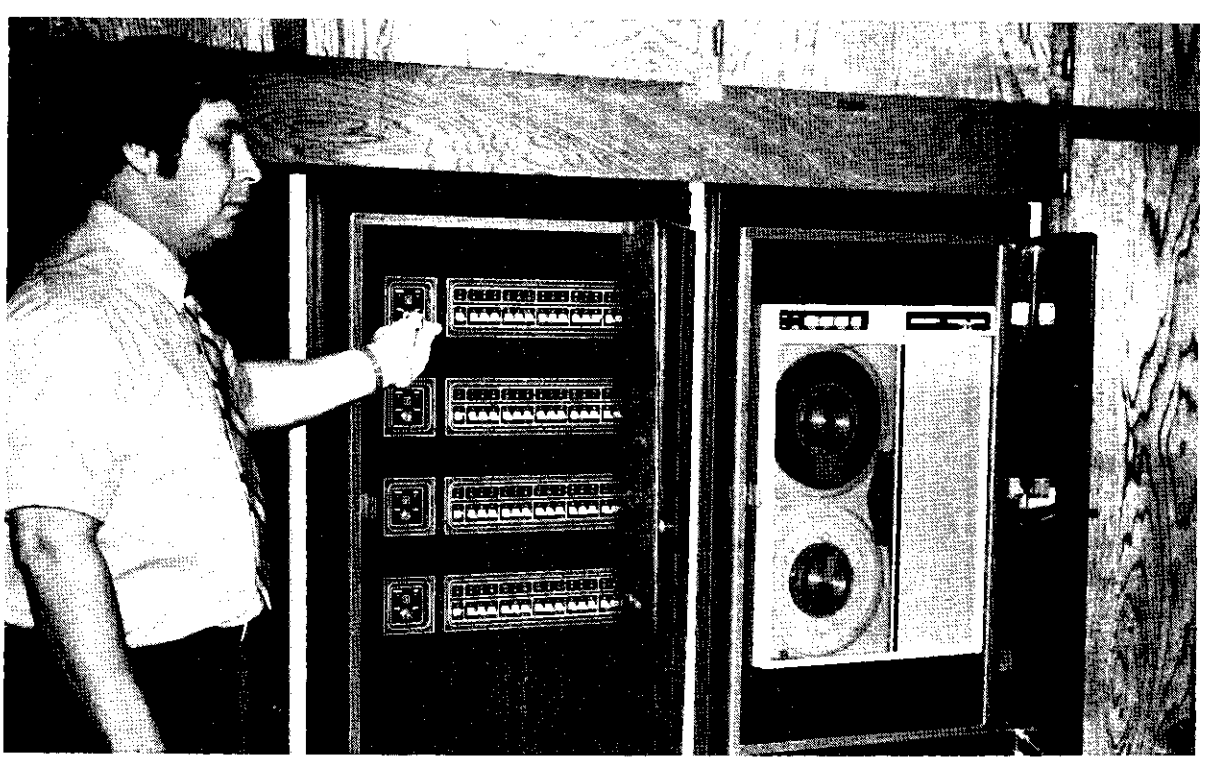
In the fast moving world of military logistics, the sole mission of a DLA depot is timely service to the customer. When the customer is an Air Force unit in the Philippine Islands, a Navy destroyer in the Indian Ocean, a Marine outfit in the Middle East, or an Army unit in Frankfurt, Germany, the old manual system of getting more than 200,000 general supply items to the customer when they need it, and where they need it, can no longer meet growing requirements of a combat ready force.

What is required, obviously, is an automated material handling and processing system that can pick, pack and ship, and do it fast. Simple? Not really. A depot operation is an intricate system that requires the meshing of all operations and at the same time maintain the one ingredient that makes depot operation successful and a customer happy — accurate control of material from receipt through shipment processing.

At the Defense General Supply Center (DGSC) in Richmond, one of the least automated depots in the DLA system, this need was recognized as long ago as 1974 as an essential ingredient in performing its growing supply support mission.

Thus was born what is called today the DGSC Automated Warehousing and Retrieval System (AWARES-Richmond), scheduled for implementation in October.

Four major goals were defined when the design of AWARES was in the planning stage. These goals were to design a system



A computer operator runs magnetic tape on central processing unit in AWARES at DGSC in Richmond, Va.

that provided accurate control, improved responsive customer service, increased productivity and reduced documentation. To achieve these objectives, however, the design had to function within the framework of the following constraints:

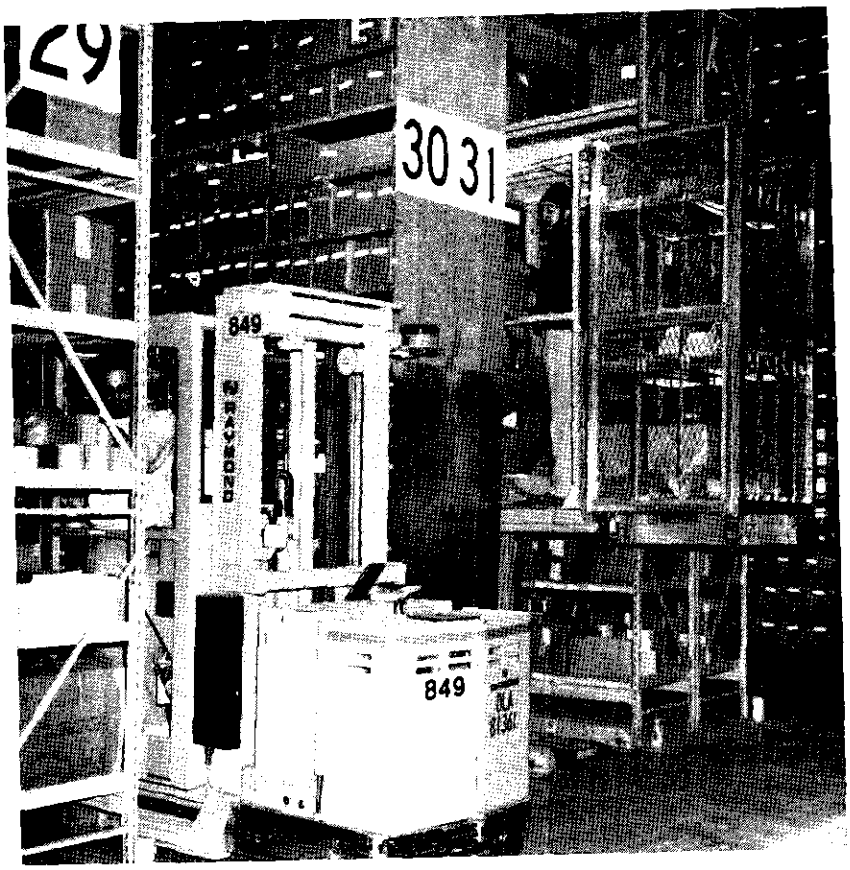
- Integrating AWARES into an existing warehouse operation with no degradation in customer service.
- Providing incremental system implementation, to capitalize steadily rising productivity until the entire system was in place.
- Employment of an existing Tandem computer installation.
- Designing a system consistent with the DLA MOWASP, MOFAST, DWASP and LOGMARS concepts.
- Using distributive processing approach in software design.

Due to these constraints, and to reduce the time of development associated with such a sophisticated system, it was decided to use proven, commercially-available components and equipment which would then be integrated as a system by the application software developed by DGSC data systems personnel.

Obviously, mis-stored items can raise havoc with productivity and inventory keeping. And just as obviously, any errors, such as the wrong item, the wrong quantity, or a lost item, could result in serious delays for DGSC's customers at installations throughout the world.

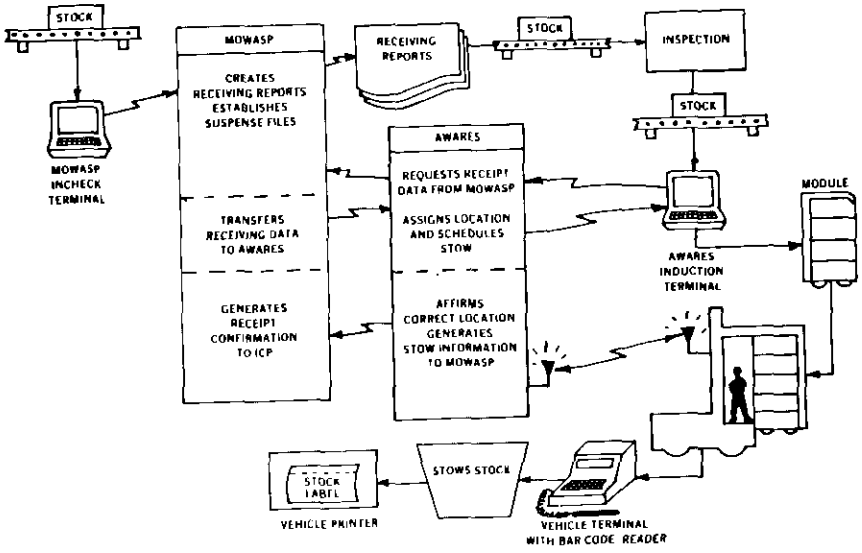
This is a large operation, consisting of some 4.2 million cubic feet of high-rise bin and rack storage area. There are 514,676 bin and rack openings, holding approximately 236,000 different items.

The hub of the new system is the AWARES "brain." This is located in a control room in the bin operations warehouse complex and consists of a Tandem Model 16 computer comprised of four T16/710X system cabinets. Each cabinet contains an autonomous processor module of 786,000 bytes (a byte is a storage requirement that contains one character



Two of the AWARES stock selector vehicles currently in use at DGSC operate in high-rise bin and rack storage areas.

AWARES receiving and stowing



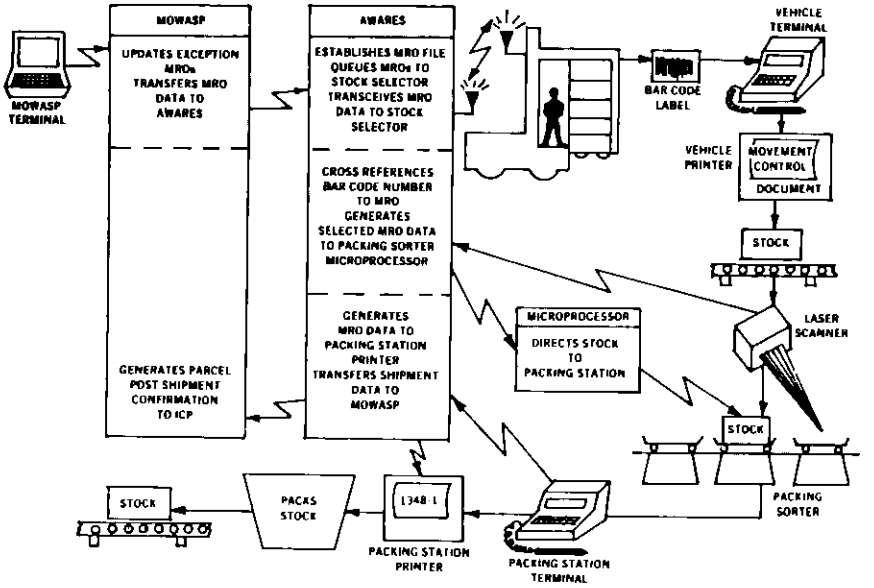
Materials flow starts at receiving where incoming stock is placed on conveyors to the AWARES induction area. Modules are loaded, picked up by AWARES vehicles, then moved to the warehouse for storage. The AWARES computer transmits stow instructions to the vehicle's terminal and location accuracy is verified by bar coded bin labels. The terminal prints an identification label for the stock.

of information) of dedicated memory. Each module has an input/output channel capable of addressing up to 256 unique devices. In addition to the automation and control of DGSC internal operations, AWARES will interact with the existing MOWASP (Mechanization of Warehousing and Shipment Procedures) computer system, in both real-time and batch modes.

The AWARES brain will communicate with 35 wire-guided stock selector vehicles using a two-way FM radio data/voice link. These vehicles are equipped with an on-board terminal with video display, keyboard, bar code reader and printer. Sixty storage modules are used in conjunction with these vehicles to transport receipts and issues. These modules feature four adjustable and one fixed shelf, and are capable of carrying a 2,000 pound payload.

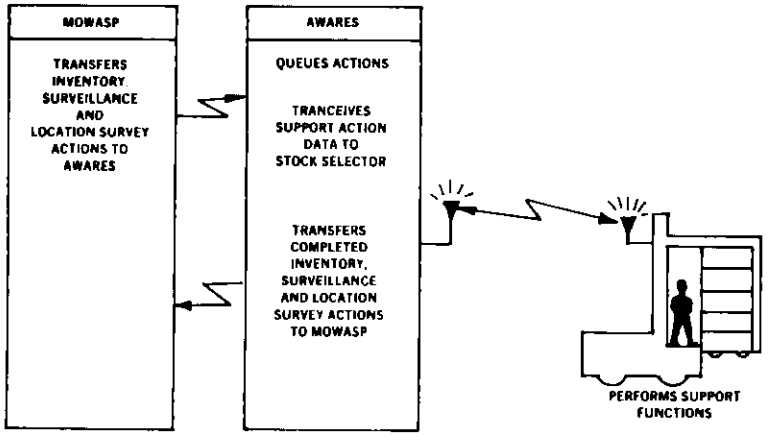
Twenty-five printers and 35 terminals (29 with bar code reading capability) will be positioned in the receipt induction and packing areas to extend the scope of AWARES control from receipt through shipment processing.

AWARES selecting and packing



The AWARES computer also transmits selection instructions to the vehicle. A pre-printed bar code label is placed on the stock and read into the computer. The vehicle terminal generates a movement control document and stock is placed on a conveyor for transport to the packing area where a laser scanner directs the stock to the packing station. There the bar code is read, triggering a shipment document for the item.

AWARES support functions



AWARES will also have the capability to perform inventory surveillance and location surveys.

AWARES benefits

First and foremost, the depot expects a large productivity increase in all facets of bin operations. Thus far the selection of material from bins has already increased from 14 line items per man per hour to an average of 28 per man per hour, simply by introducing the 35 new wire guided stock selectors. Second, due to the greater control and accuracy inherent to AWARES, there will be a substantial increase in receiving/shipping effectiveness and location accuracy, with a corresponding decrease in warehouse denials.

Another important feature of the AWARES system is the elimination of the sorting, annotation and handling of the six-part material release order documents now received in the bin operations division daily. Under AWARES there will be no papers involved until packing is completed. The Tandem computer will tell the stock selector equipment operator by CRT display what he needs to compute an action. This feature is expected to produce large savings in manhours as well as eliminate problems encountered with mutilated or missing documents.

In the final analysis, these and other benefits will translate into savings of approximately $1.3 million per year for DGSC with system procurement cost payback achievable within 2.2 years. In addition, AWARES is readily expandable to other DGSC storage operations, such as the freight terminal, loose issue clothing and to other bulk warehouses.

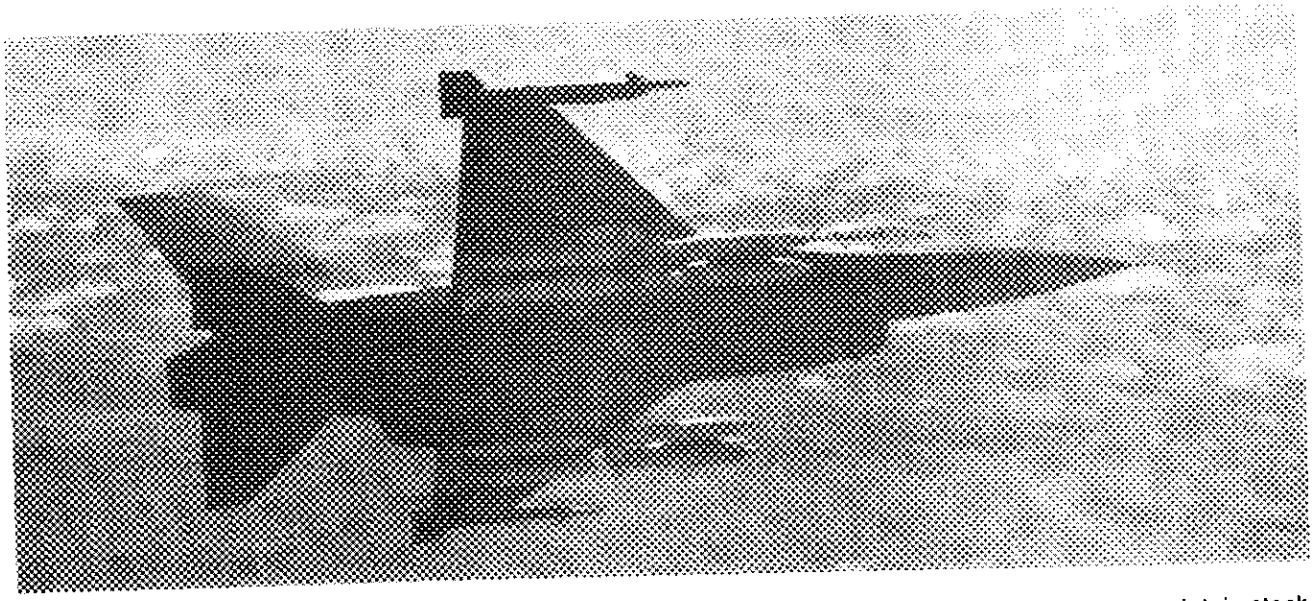
Aiming to reach command objectives

"If we achieve the DESC command objectives, we will have accomplished a very difficult task and set a high water mark for accomplishment of our primary mission at this center. It would represent a very high level of customer support."

That's how Air Force Col. John F. Andrews, director of contracting and production, views the command objectives the Defense Electronics Supply Center (DESC) has established in fisal year 1982. The top objective is to achieve weapon system stock availability of 95 percent. The second objective in order of priority is to achieve overall stock availability of 92 percent.

Andrews, Navy Capt. B. Wayne Cox, director of supply opera-

The TOW weapon is one of 101 weapon systems supported by the Defense Electronics Supply Center. (USMC photo)



TOP: DESC strives to maintain stock availability on systems such as F-16 aircraft. (USAF photo) BELOW: DESC supply operations employees Marj Sherriff and Annette Atwater view some of the weapon systems they support.

tions, and Lewis Terhune, director of technical operations, agreed that the objectives are challenging ones that will require both teamwork between the directorates and an all-out effort by every individual within each directorate to achieve.

Cox said that the supply operations directorate has taken a number of steps to achieve the high level of weapon system and overall stock availability desired.

"The Defense Logistics Agency is encouraging the services to code more and more items for weapon system management, so we are giving it more emphasis and more review," he said. "We will conduct a weapon system analysis on any system that drops below 95 percent on a monthly basis. We now have 34 systems with less than 95 percent — that's out of 101 weapon systems we support, which incidentally soon will increase to 127 systems.

"We also will convert 100 percent of weapon system items identified on the nonstock listing to stocked items within 39 days," he added.

Other actions taken to improve weapon system availability include:

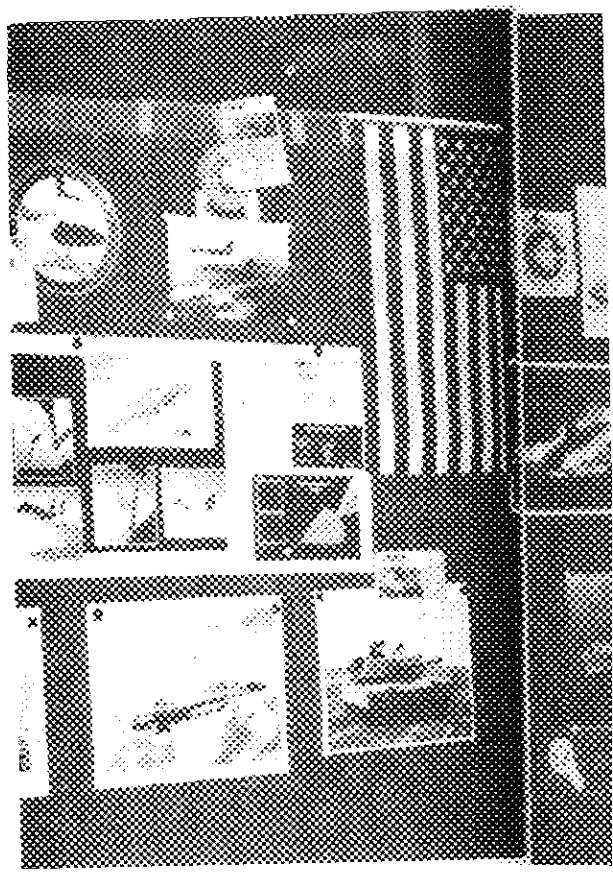
- Placing a minimum 60-day safety level on all weapon system replenishment items. Many such items have had little or no safety level.
- Procuring a minimum 12 month procurement cycle on all weapon system items that indicate an increase in demand.
- Assigning additional personnel to monitor weapon systems within the directorate. While one person has monitored weapon system items full time in the past, three people will do so in the future, and additional clerical support is being added as well.

An important factor in improving weapon system stock availability is the degree of cooperation provided by our military customers, said Cox. Advance notification of surges in demand and up-to-date and accurate listing of weapon system items by the services is needed, he explained.

The captain said a key to achieving increased stock availability will be to reduce the establishment of backorders resulting from location accuracy problems at depots.

"We now have 15,000 backorders attributable to misplaced inventory," he elaborated. "We're working closely with the depots to improve performance. When we experience a significant loss, we ask them to do an investigation.

"Sometimes we have to initiate action to buy the items. It can take more than a year to buy the item and get it back in stock. If it's a high demand item with a lot of requisitions, we can't fill them. This adversely impacts back-



orders as well as both overall and weapon system availability, when the item supports one or more weapon systems."

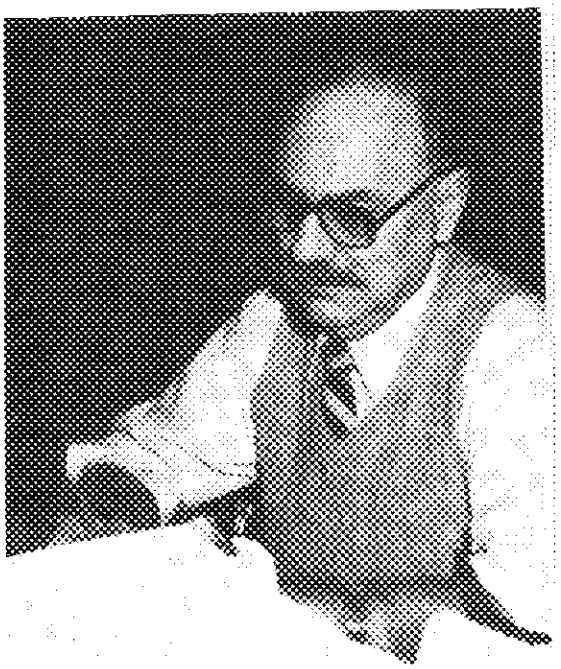
Another step supply operations is taking is to adjust procurement cycles — how much stock is procured when the reorder point is reached. Some 164,000 replenishment items have procurement cycles ranging from three to 36 months, depending on demand quantity and dollar value of the demands. A minimum of six-month procurement cycles are being used on the faster moving items. Supply operations also is considering the use of minimum 12-month procurement cycles on weapon system items where increasing demand warrants. Buying longer procurement cycles will improve supply availability.

Another significant step being taken is the reallocation of safety levels for stocked items, said Cox. Maintaining a safety level simply means having enough of an item on hand to compensate for contract delinquencies, variations in demand and lead time increases so that stocks will not become depleted.

"A number of safety level days are authorized in the stock fund budget," said the captain. "This is then converted to dollars based on demand activity projected. So far we have reallocated $3 million from the fund, taking it away from diminishing manufacturing source items and reinvesting it in active replenishment items. We plan other reallocations as well, which the operations research team in the office of planning and management has calculated could boost overall availability to 94.6 percent."

Whether or not the DESC objectives will be achieved depends greatly on the individuals working within the directorate, said the captain.

"The individual item manager (IM), especially the high frequency, high demand IM, can have a big impact on this program. They manage almost 40,000 items which constitute 72 percent of demand. We have more than three million requisitions a year against those 40,000 stock numbers. So their performance will determine how well we do," he said.



Lyle Jacobs, DESC inventory management specialist, monitors weapon systems full time.

"I think it's especially important that the IMs work closely with the buyers in contracting and production, because it's going to take a team effort to get this job done," he added.

Contracting and production is doing its part in that team effort, said Andrews.

"Even before the objectives were established, we put a lot of emphasis on customer support as our reason for being in business," said the colonel. "Now we've taken a new look at our priorities and made some changes in processing workload to give weapon system support priority. One of the more significant things we've done is to break out and track weapon system items separately and give them an appropriately high priority.

"We also implemented some organizational changes to streamline the operation and improve productivity. We realigned the organization to improve the span of control of supervisors and allow for more even distribution and handling of workload.

"In addition, we are trying to

use some innovative approaches to procure critical items. We are tied to statutes to a great degree, thus don't have the management flexibility just to make changes in how we make a buy. Some less customary options are available to us within the statutes however. We are investigating these and will implement them where appropriate to shorten lead time," said Andrews.

Another important step the directorate has taken is to let everyone within the organization know about the command objectives and the importance of each individual doing his or her job a little better in order to accomplish them.

"It's my firm belief that the key as to whether or not we meet the objectives lies with the buyers, contract specialists, procurement clerks and contracting officers. The key is to increase productivity by working smarter and working together cooperatively to accomplish the task," said the colonel.

"We've informed our people about the objectives and solicited their support and ideas to improve our production. They have a lot of expertise and ideas on how things might be done differently that are of potential benefit to the command as a whole."

Andrews stressed that cooperation with other directorates will be essential in achieving the command objectives. "We made a lot of progress in the last year in cultivating a very good relationship with key directorates and offices we interface with, primarily supply operations, technical operations, comptroller and planning and management.

"For example, my deputy and I sit down periodically with Captain Cox his deputy and discuss matters of mutual concern. We get a better understanding of the other directorate's problems, and work together to improve support. We have come up with the compromise solutions on several very difficult problems this way," he said.

The colonel said he also has regular dialogue with Lewis Terhune, director of technical operations, to work out any interface problems that may arise.

"Many, many of our buys require technical support for such things as alternate bids," said Andrews. "Technical operations' ability to turn around purchase requests (PRs) has a big impact on our operation. Also, we have a lot of sole-source items. We would like to get more sources to buy from. We rely heavily on Tech Ops to provide technical data which enables us to seek new sources for our items and to provide technical evaluations on products offered when necessary."

Terhune is well aware of the importance of supporting contracting and production, and as a step toward achieving the command objectives has given top priority to processing weapon system return PRs from contracting to reduce administrative lead time. Terhune said that no weapon system return PRs will stay in his directorate for more than 30 days. In the past weapon system PRs were not treated separately and normally took from 90 to 120 days to process.

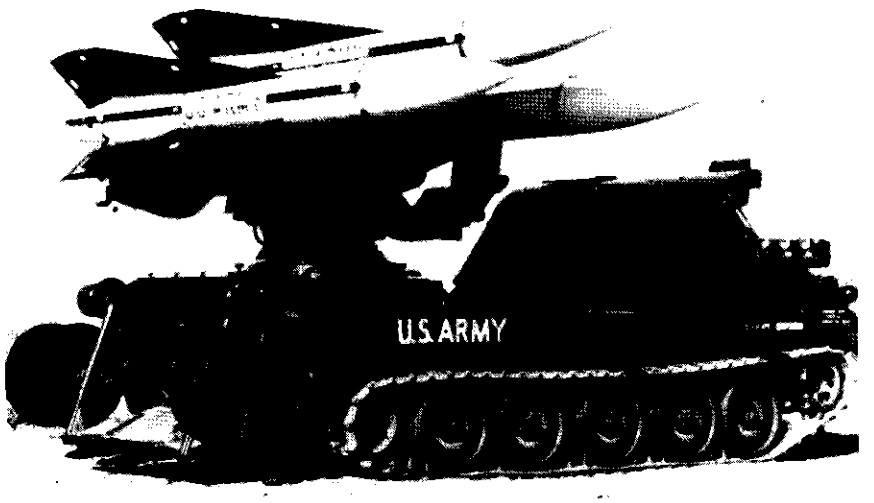
"We are working on this area heavily to insure these items do flow through the system," he said.

One of the ways technical operations is speeding the process of weapon system return PRs is by treating alternate bids differently.

"When an alternate bid comes in from a vendor or a manufacturer, if we already have a source to buy from we will return the PR to contracting immediately for purchase. Then after the fact we will work with the engineering service to try to get the item approved for the next buy," said Terhune, adding that the engineering service must approve changes in any supply item of supply.

"If we don't have a source for a weapon system item, we will go into intensified research to find a suitable substitute for the item. In addition to going through our files, we will contact the customer who needs the item, get more details, and see if we have anything to do the job. We also will go to our reclamation program immediately, to see if we have any of the items in the boneyard (the Military Aircraft Storage and Disposition Center at Davis-Monthan Air Force Base in Arizona, where serviceable electronic assets are reclaimed and returned to stock.)"

All other return PRs are being given number two processing priority right behind weapon system



DESC provides support items to the Army's HAWK missile like those mounted on a full-tracked vehicle. (USA photo)

PRs, said Terhune. None of these return PRs will remain in the directorate for more than 60 days. In the past, processing time was from 120 to 180 days.

Another important step technical operations is taking in support of the command objectives is to preposition in the computer more of the technical data which is necessary to make a buy for weapon system items. This way PRs can bypass technical operations completely, at a savings of seven or eight days of lead time. The goal is to have at least 70 percent of the weapon system PRs bypass the directorate; now that percentage is approximately 50 percent.

In addition, said Terhune, new contract receipts which are placed in non-issue status will be reviewed against the weapon system listing and the backorder listing. Identified items will be expedited to release these items to ready for issue status. "If it takes more than 30 days to clean up the situation, we will notify the item manager in supply operations to consider a buy-around.

RIGHT: The Stinger weapon system receives equipment from DESC. BELOW: The center also supports the Sidewinder missile. (USA and Naval Photographic Center photos)

Previously we did not identity the item manager, and the situation could take 120 days or longer to clean up," he said.

Another significant step technical operations has taken is to process on priority weapon system supply requests, notifying the customer of status within 30 days and cataloging the item with a national stock number within 60 days. This priority processing also will be given to selected part number items in addition to weapon system items.

Terhune stressed the importance of directorates working together to accomplish the objectives.

"No one directorate can make it happen; it has to be a team effort," he said. "If all functional directorates involved don't do their jobs to the maximum, none of these objectives will be achieved."

The director also indicated that the success of the program depends upon the individual worker. "That's the person who really will do the job," he said. "Each person in my organization is totally dedicated to the accomplishment of the objectives.

"I think the objectives will be extremely challenging to meet, and we'll go with an all-out effort. I know we can make significant progress, and any progress we make will result in a significant benefit to our customers.

"Improved support to our customer — that's the name of the game," he concluded.

Chicago's number one customer

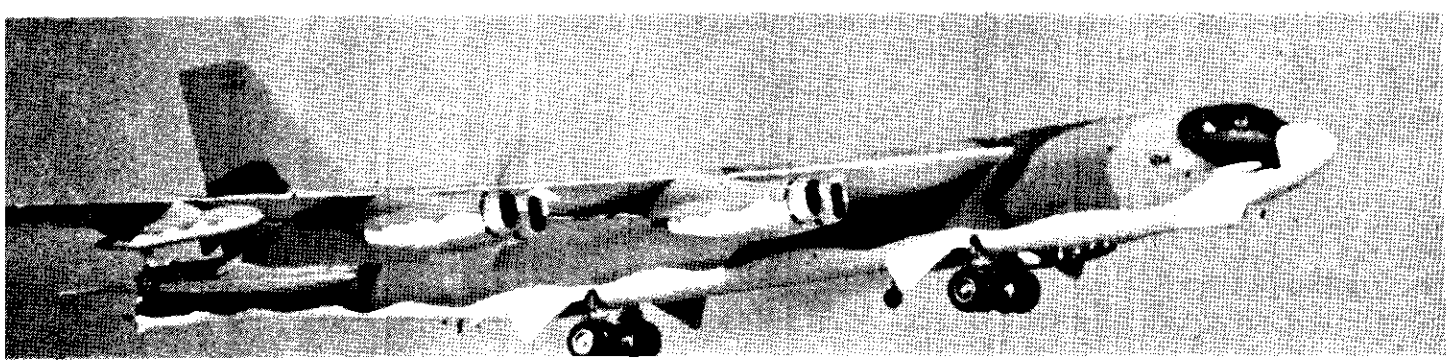
by Oleva White

The Air Force is Defense Contract Administration Services Region (DCASR) Chicago's top customer, accounting for about 35 percent of the contracts administered by the region, compared to 22.6 percent for the Navy, 15.1 percent for the Army, 25.9 percent for DLA and one percent for other services or agencies.

Products and services provided to the Air Force by contractors in the two-and-a-half state region account for 35.4 percent of the dollar value of all the prime and support contracts managed by DCASR Chicago.

The figures illustrate the importance of the support provided to the Air Force. A look at some of the aircraft involved lends historical perspective.

For instance, there is the old reliable C-130 Hercules, flown for well over a quarter of a century by the Air Force, commercial carriers and other military services as a long-range, multi-purpose transport. It is powered by four T-56 engines, produced since 1954 by the Detroit Diesel Allison Division of General Motors Corp., Indianapolis, and still under production there on Air Force contracts administered by Defense Contract Administration Services Plant Representative Office (DCASPRO) Allison.

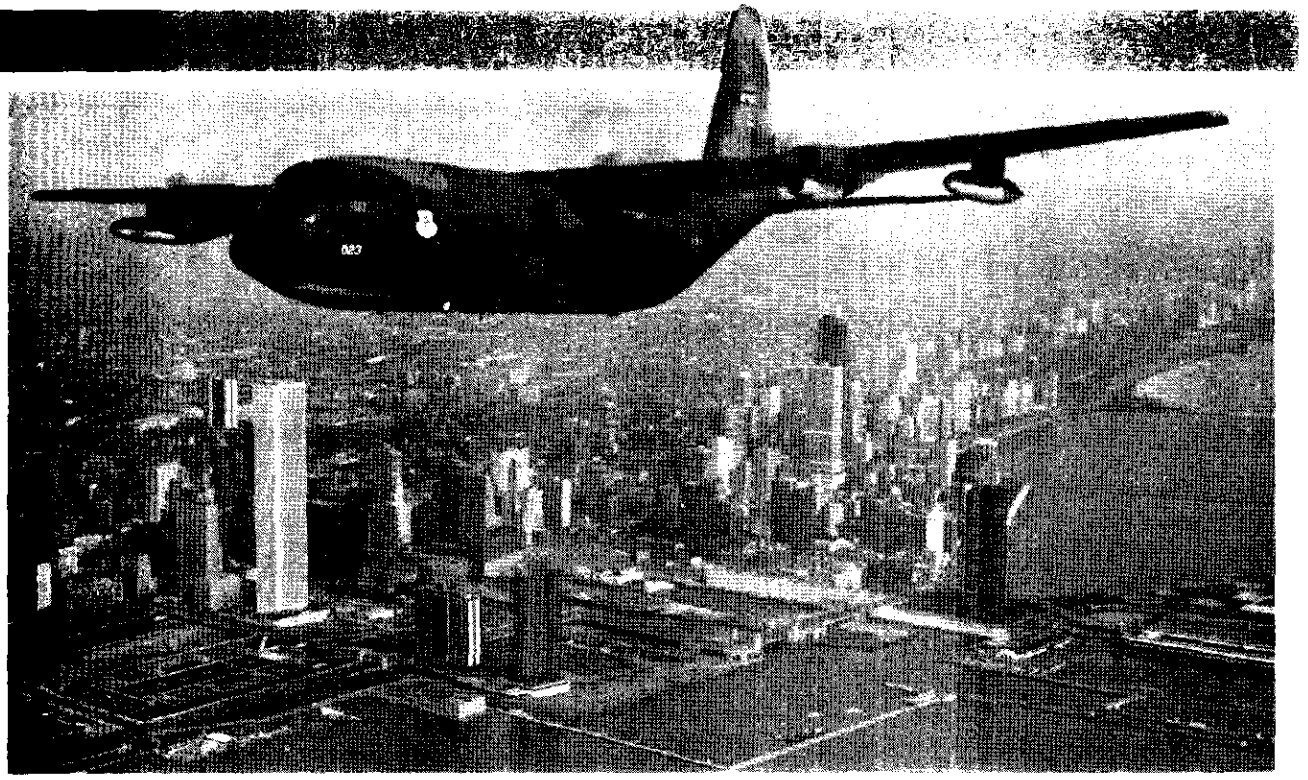


B-52 Stratofortress landing

From the oldest to the biggest aircraft and on through many advancements to the current state of aeronautical technology, there are probably few aircraft on Air Force flight lines today which first became airborne or continue to fly without benefit of products from DCASR Chicago area contractors.

The world's largest aircraft, the Air Force C-5A, is equipped with inertial navigational systems (INS) produced by Delco Electronics, Oak Creek, Wis., under contracts administered by DCASMA Milwaukee. The main landing gear, featuring the largest struts ever built, was provided by the Brake and Strut Division of the Bendix Corp., South Bend, Ind., under contracts administered by the DCAS organization there, where there is now a Bendix residency.

From the oldest to the biggest aircraft and on through many advancements to the current state of aeronautical technology, there are probably few air-



C-130 Hercules over the Windy City

craft on Air Force flight lines today which first become airborne or continue to fly without benefit of products from DCASR Chicago area contractors.

Some of the important products for the Air Force that come from a few of the contractors in the Chicago region (Wisconsin, Indiana and northern Illinois) serve to illustrate the importance of this Air Force-DCASR Chicago connection.

DCASPRO Allison

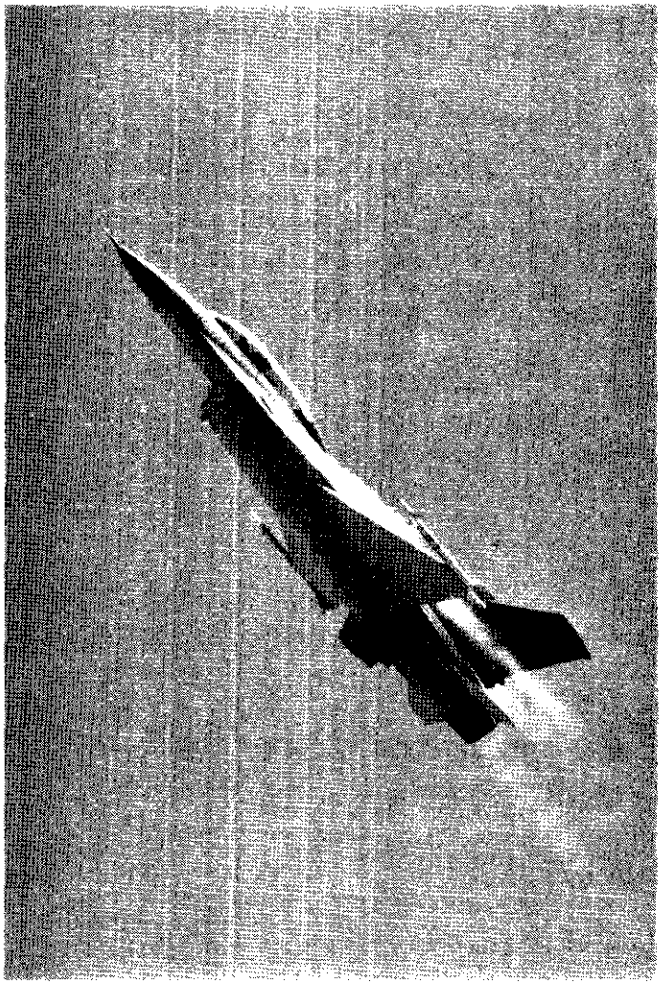
A total of 2,303 prime and support contracts valued at $1.6 billion, are now managed by DCASPRO GMC Detroit Diesel Allison, Indianapolis. In dollar value, approximately 53 percent of the total involves Air Force contracts.

In addition to T-56 engines for the C-130, other major Air Force contracts held by Allison cover TF-41 engines for the A-7 Air Force fighter, as well as spare parts for both. Work is also under way at Allison on component improvement programs on both of these engines. Allison also holds sizeable research and development contracts covering joint programs involving both the Air Force and the Navy on two developmental engines.

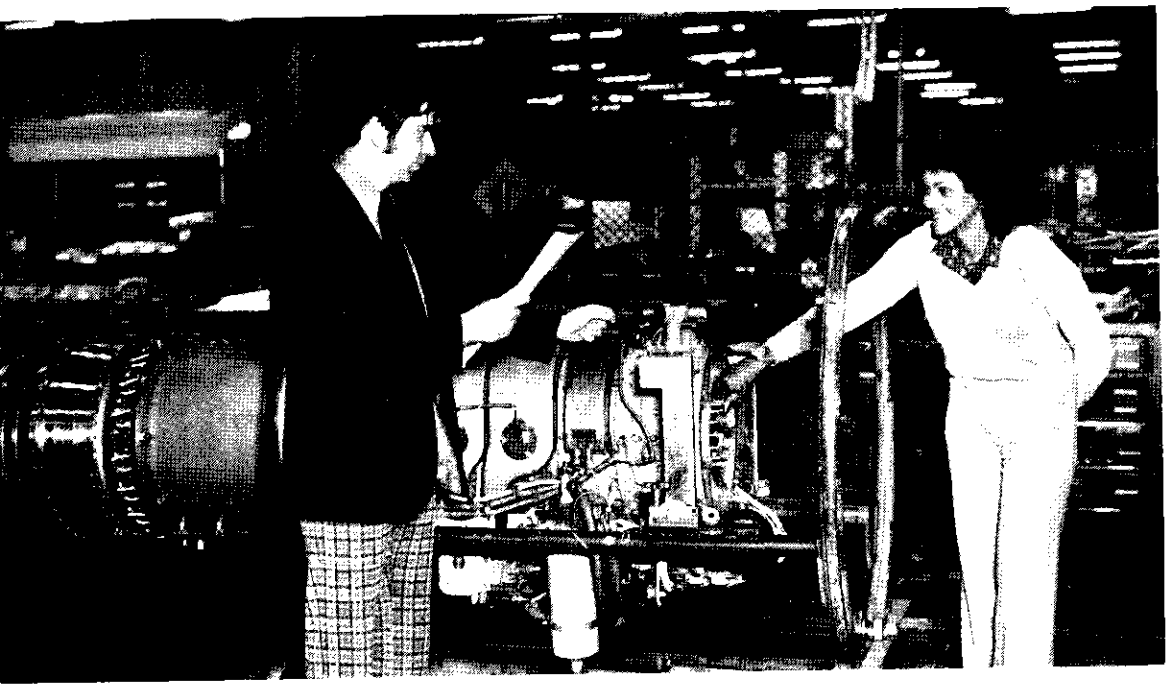
DCASPRO Sundstrand

Current government contracts with the Sundstrand Corp., Rockford, Ill., administered by DCASPRO Sundstrand, now amount to approximately $190 million. Air Force contracts account for about 77 percent of that total.

A major part of this Air Force business involves



F-16 Fighting Falcon



Phillip Woodward and Tanya Y. Davis, quality assurance specialists at DCASPRO GMC Detroit Diesel Allison, inspect a T-56 engine of the type used in Air Force C-130 aircraft.

electrical generating systems used on the A-10, F-15, and F-16 as well as some Navy aircraft. The engine start system for the F-16 also is from Sundstrand.

Other current contracts under administration by DCASPRO Sundstrand cover not only the main electrical generating system for the B-1B bomber but also involve development work on the B-1 wing sweep actuation, rudder control and engine bleed (EBAC) systems. Sundstrand contracts also cover fuel pumps and pneumatic valves for many kinds of aircraft.

DCASPRO Magnavox

The volume of government business with the Magnavox Government and Industrial Electronics Company (MAGIEC), Fort Wayne, Ind., resulted in the establishment of DCASPRO Magnavox, effective April 1, replacing the previous residency office at the contractor plant.

Air Force contracts under administration by the DCASPRO now total more than $209 million and account for approximately 81 percent of the dollar volume of contracts.

These contracts cover two major programs. One is the AN/ALQ-128 electronic countermeasures set (ECM) for the Air force F-15. The other involves the AN/ARC-164 UHF radio which is used in many aircraft flown by the Air Force, including the C-5A, C-141, C-130, F-4, F-15 and F-16.

Defense Systems Division, Northrop

The Defense Systems Division of Northrop Corp., Rolling Meadows, Ill., site of a new DCAS Resident-cy that started operations in January, holds contracts primarily with the Air Force valued at approximately $632 million, including multi-year contracts.

These contracts cover primarily electronic countermeasures (ECM) systems — often referred to by Northrop personnel as black boxes — designed to make aircraft virtually invisible by jamming enemy radar signals. Current contracts cover such elec-

The world's largest aircraft, the Air Force C-5A, an Armed Forces Day crowd pleaser, is equipped with inertial navigational systems provided by Delco Electronics under contracts managed by DCASMA Milwaukee and struts built by the Bendix Corp., another DCASR Chicago contractor.

tronic devices for the B-52 Stratofortress and the Air Force F-15 Eagle. A comparatively recent contract provides for the design and production of electronic equipment for the B-1 bomber.

Delco Electronics

Delco Electronics at Oak Creek, Wis., holds 25 prime and support Air Force contracts with a value of approximately $280 million, administered by DCASMA Milwaukee. Primary products involved are inertial navigation systems (INS) and doppler navigation computers (DNC), used as an additional aid in conjunction with the INS.

The INS is used as a dual system in the Air Force C-141 transport and as a single installation (one system, no backup) in the KC-135 refueling tanker and the C-135 cargo transport. This equipment is also used as a triple installation in the Air Force C-5A. The contractor has provided the Air Force with approximately 1,500 of these navigation systems since 1978.

A contract received recently by Delco is for a new fuel savings advisory system (FSAS) for use on the KC-135 that is expected to result in very significant flight fuel savings, possibly enough to cover the cost of the new equipment. The current production contract is for a quantity of 300 with second and third year options for additional systems.

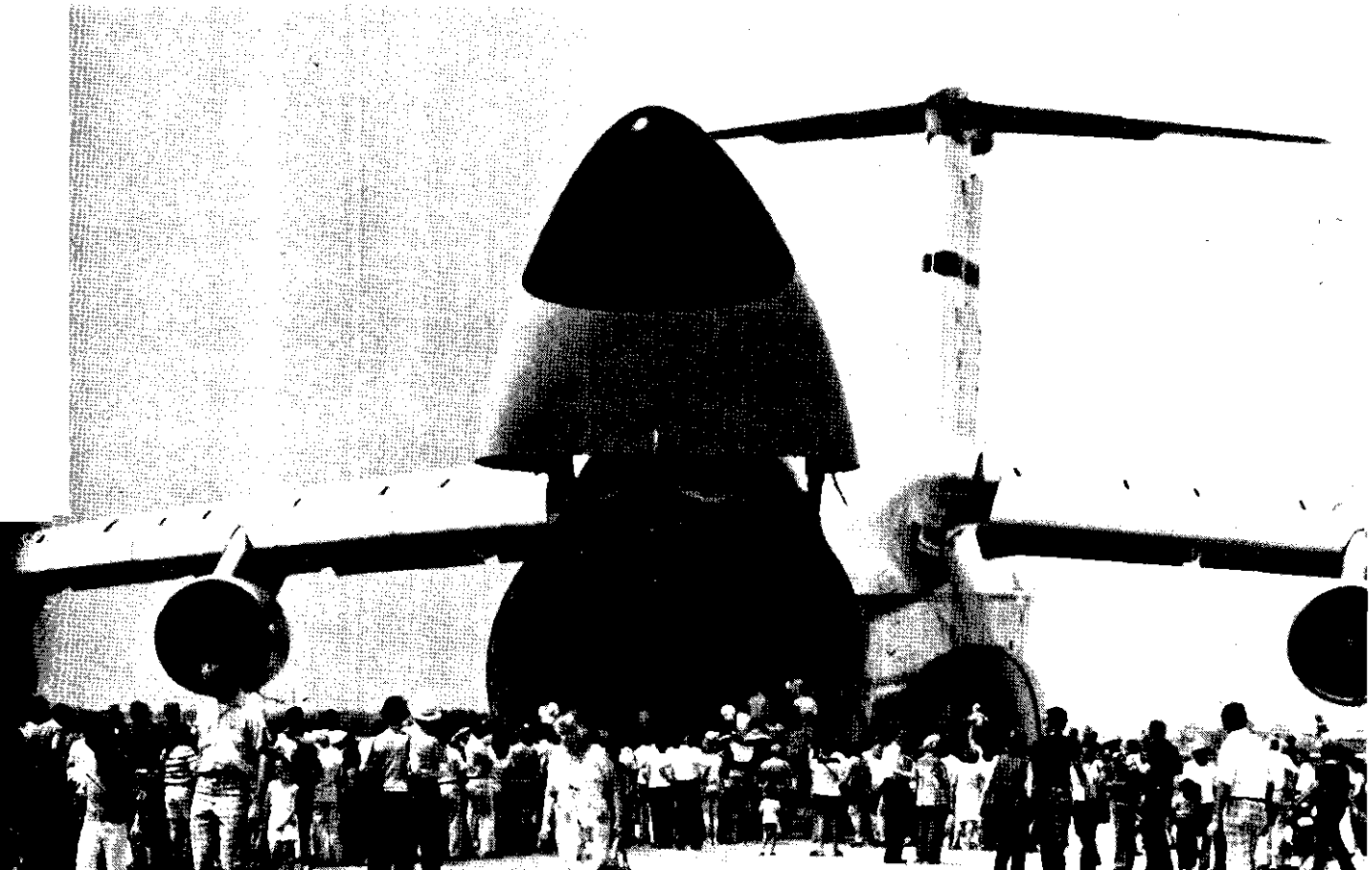
As a subcontractor, Delco also supplies General Dynamics with fire control computers for the F-16.

Bendix Corp.

Two divisions of the Bendix Corp., South Bend, Ind., hold approximately 1,800 government contracts, administered by a Bendix Residency office. Air Force contracts account for about 75 percent of that total.

Contracts held by the Energy Controls Division of Bendix cover fuel controls used in the F-14, F-15, and F-111 aircraft.

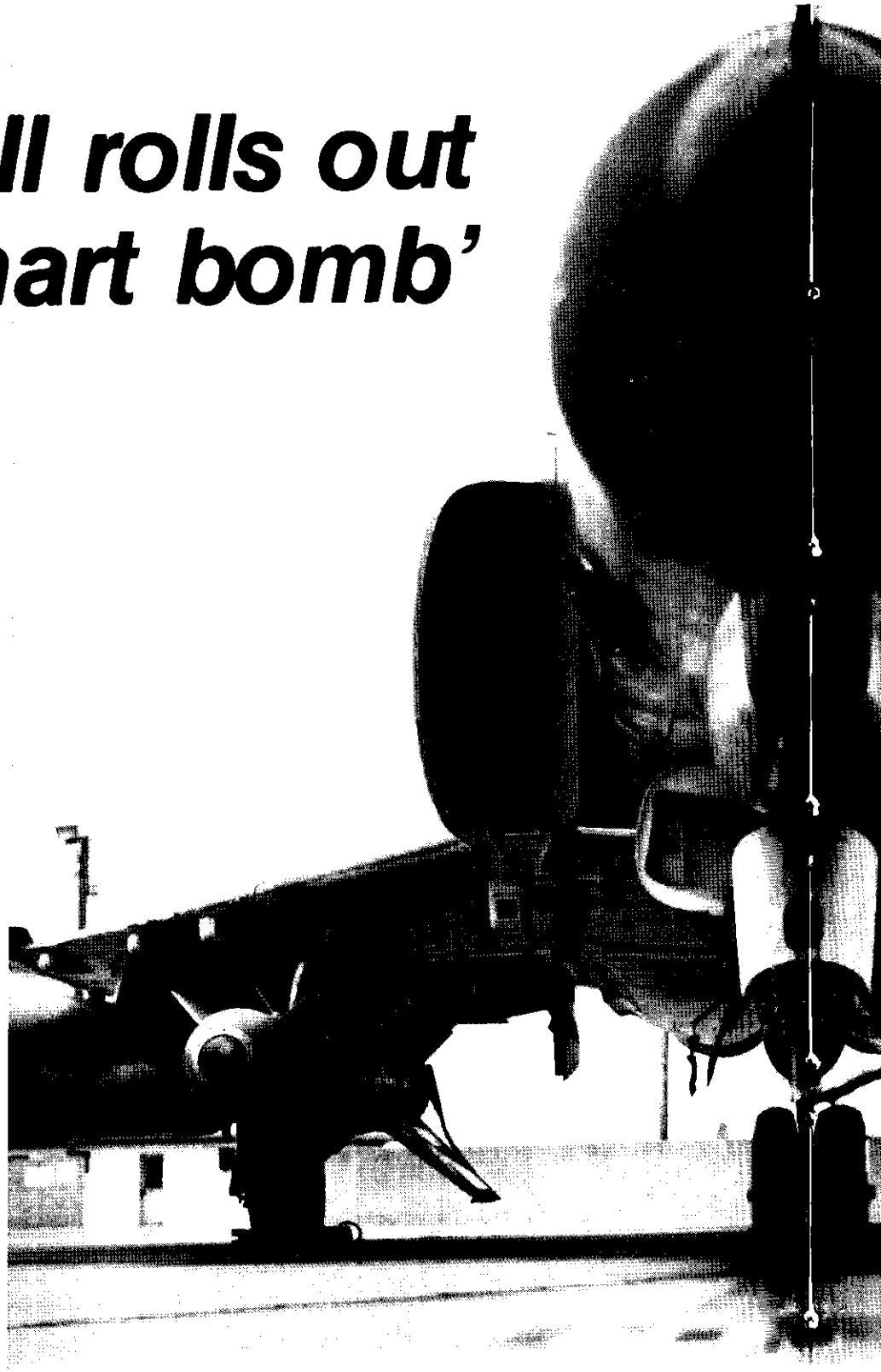
The Bendix Aircraft Brake and Strut Division provides struts for the F-14, E-2C, A-10 and C-2A aircraft. Wheels and brakes are also produced for the F-15, F-18, KC-135, B-52, A-300 and A-310 aircraft. This division also provides tie bars for about 90 percent of the helicopters used by all the military services.



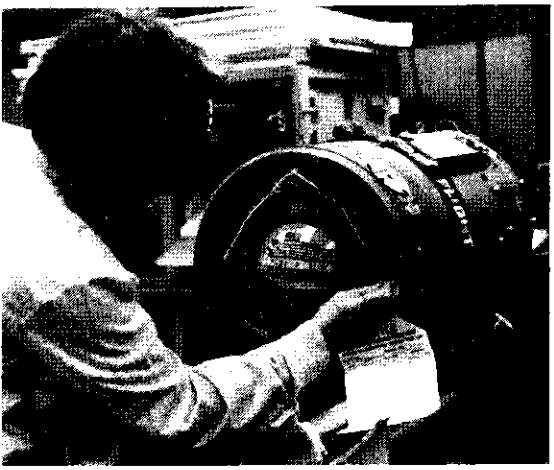
Rockwell rolls out new 'smart bomb'

The first production version of the Air Force's GBU-15 "smart bomb" precision guided munition was rolled out at Rockwell International's Atlanta plant Jan. 7. Contract administration is being provided by Defense Contract Administration Services Management Area (DCASMA) Atlanta.

The GBU-15 is one of the new generation precision guided munitions designed to give Air Force pilots a standoff capability in air-to-ground weapons delivery.



Bennie Yates, QA representative at Rockwell International in Atlanta, checks the guidance component of the GBU-15.



An F-4E Phantom equipped with GBU-15 smart bombs manufactured under contracts administered by DCASR Atlanta.

Basically a 2,000 pound bomb fitted with wing-like fins and a guidance and control component utilizing a television camera, the GBU-15 allows the pilot to direct the weapon to the strike point without exposing his aircraft to enemy defenses. The GBU-15 is not powered or propelled, but the fins give it a glide capability.

At the rollout ceremony at Rockwell's plant in Duluth, Ga., Deputy Assistant Secretary of the Air Force Martin Chen accepted the first production version and said the weapon will increase the capacity of the Air Force to do effective air-to-ground missions.

Rockwell manufactures the electronics, wings, guidance system, television seeker and autopilot for the weapon. The GBU-15's modular components are manufactured at Rockwell's plants in Duluth and Norcross, Ga., for later final assembly at Air Force installations.

Benny Yates, quality assurance (QA) specialist in electronics, is the lead QA representative on the project. He is assisted by Janet Surface, QA specialist in electronics; Jerry Boisvert, QA specialist in electronics; Ellwood Molock, QA specialist in mechanical/electrical areas, and Carl Fisher, QA specialist intern.

Rockwell is producing 20 GBU-15s a month, and the present contract calls for production of 250. The cost of the components at this production rate is $150,000 for each bomb, although the cost could be reduced to $100,000 with automation of some production functions, design improvements and a reduction in the amount of materials needed, according to Thomas V. Murphy, vice president and general manager of the missiles system division.

F-15 in flight over Germany

When an F–15 Eagle is down for a part, the Emergency Supply Operations Center at the Defense General Supply Center reacts quickly to—

Keep 'em flying

The sleek, silvery F-15 taxied out to the runway, then with a roar, sped down the concrete ribbon, raised its pointed nose skyward and cleaved the air in a breathtaking climb into the wild blue yonder.

To the mechanics watching it disappear into the blue sky above Bitburg Air Base, Germany, it was just another routine flight.

But 6,000 miles away in a well-lit room, surrounded with maps and boards listing the status of Emergency Supply Operation Center (ESOC) projects, a young man sitting at one of the desks did not view it as a routine flight. For just a few hours before, that F-15 was grounded awaiting a vital part. The plane was in the air within two hours after the Bitburg supply officer requested the part, because the young man, David Reynolds, handled the urgent request expeditiously. "Actually, it took an hour and fourteen minutes to fill the requirement," Reynolds said.

Unusual? Special? Not necessarily. Reynolds handles this type of emergency support about twice a week as part of the Defense General Supply Center (DGSC) F-15 support program. He knows that filling the gap between delivering an item supporting the U.S. Air Force in normal supply support and the emergency request that may have an F-15 grounded is critical to the Air Force. Working faster and smarter is crucial to the success of the DGSC program.

"The Air Force F-15 support program is designed to keep that aircraft at a combat readiness posture. This means that when an F-15 is grounded because of the unavailability of a part, then our combat capability is grounded. We realize that fact at DGSC. The program, monitored by the Air Force through Warner Robins AMC, gets special attention at the center. We have identified 494 national stock number items in the DGSC package," said Reynolds.

"At the center, we have put these items into a computer program which lists the item, part number and NSN in a numerical sequence. I can go to the printout, when a priority requirement comes in, and pinpoint the information I need to locate the item. Now on an F-15 urgent request, we have an eight-hour deadline. But this is a maximum — we certainly expect to supply the item long before the end of this time period," Reynolds explained.

"For example, the program works like this: We get a priority requirement for a gauge from Kadena AFB, Okinowa. I go to the printout and see what the status of this particular item is as far as the stock is concerned. If we don't have stock, then I roundrobin every source that I think might have an extra gauge. It could be

by Scott Church

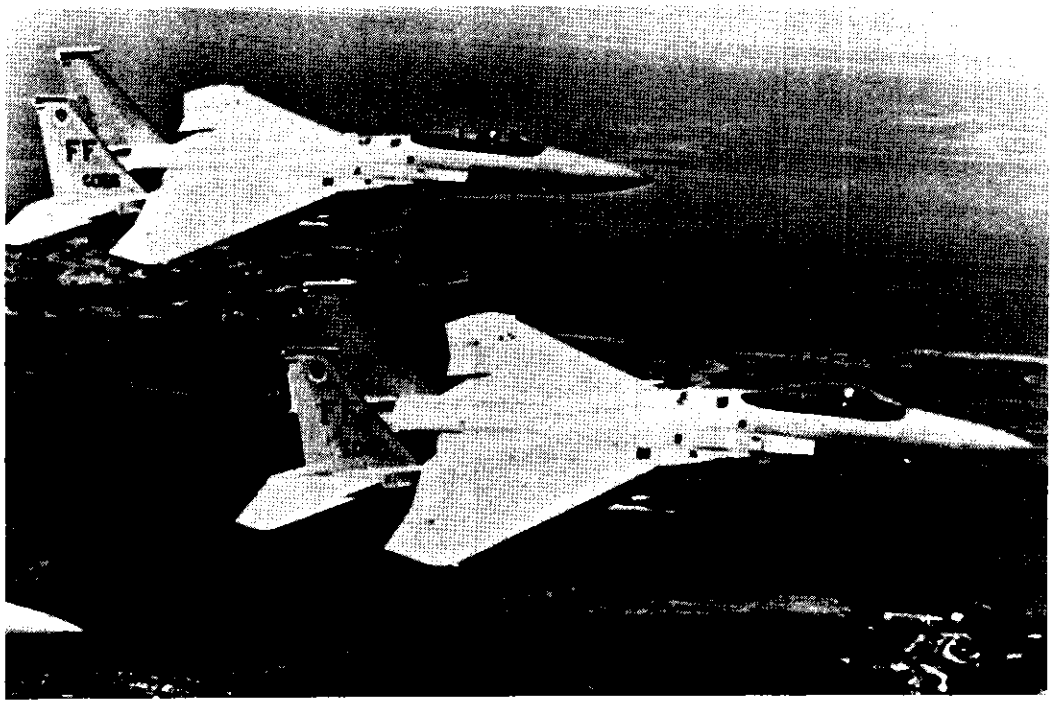
other Air Force bases with F-15 squadrons.

"If I can't locate it, then we may have to go to procurement. I then go to McDonnell Douglas, the F-15 manufacturer for the part. Margie Stevens, a buyer, works with me. We don't waste time. If necessary, we do the paper work later. Our requirement is to get the part to the customer.

"Incidently, when we receive a requirement, it is for a specific aircraft. They even identify the aircraft by the tail number at the specific base. The whole process is a matter of coordination and cooperation between the Air Force systems manager, the inventory manager, the buyer, and myself," he added.

The success of the F-15 program has induced a look-see at the F-16 for a similar program. A number of problems must be worked out for the establishment of a F-16 special support system. Currently, 138 items in the DGSC package have been identified to the F-16. While the F-16 program is in the development stages, ESOC provides the same support to the F-16 as the F-15 when required and feasible.

"We are really proud of our team," Reynolds said, "and our response time is tops in DLA. We get a real satisfaction from knowing that when the F-15's are flying, we are flying. We aim to keep them up there in the wild blue yonder."



Two F-15 aircraft fly over the Outer Banks along the North Carolina coast.

DISC uses direct buy concept to support F-15 requirements

For a number of years the F-15 aircraft system manager at Warner Robbins Air Logistics Center had been buying DLA-managed items directly from the prime contractor's (McDonnell Aircraft Company) production line to satisfy F-15 high priority requirements.

This action was taken by the system manager for requisitioned material not immediately available through normal supply channels from the defense supply center managing the required spare part.

After an intensive review of this situation, DLA headquarters decided that in order to fulfill its full range of responsibilities, DLA should establish the capability to participate in this direct buy concept.

In September 1980, DLA tasked the Defense Industrial Supply Center (DISC) in Philadelphia to establish a procedure that would enable defense supply centers to buy needed material to satisfy urgent F-15 requirements directly from production line stock at McDonnell.

After a period of negotiation and coordination with personnel from DISC, Warner Robbins Air Logistics Center and McDonnell Aircraft, appropriate policies and procedures were established. This procedure, as implemented at DISC, requires that the F-15 system manager at Warner Robbins determine that material or a suitable substitute is not available in either the DLA or Air Force supply system to satisfy a partial or not mission capable supply (PMCS/NMCS) deficiency. After this determination, the F-15 system manager simply phones the requisition data to the DISC special management and review team.

This team consists of representatives from the directorates of supply operations, technical operations and contracting and production. The team is located within DISC's Emergency Supply Operations Center (ESOC) and is dedicated to the support of critical priority requirements.

Col. Craig S. Smith, USMC, DISC's director of supply opera-

tions, said, "Our special management and review team reviews the status of the item to determine if the situation can be alleviated by substitution, lateral support or expediting existing dues.

"If these actions cannot resolve the problem, availability is requested from McDonnell Aircraft and an immediate order is placed under existing basic ordering agreements if the material is available from their production line stocks."

Upon receipt of the phone order, McDonnell pulls material from its production line stock and makes immediate air shipment directly to the requisitioning activity.

"During the first year of operation, DISC has received 683 requisitions. Of those requisitions processed through McDonnell, 85 percent were available," said Smith.

Placement of the order from the time of DISC notification by the F-15 system manager has averaged four hours and shipment of material from McDonnell to receipt by the requisitioning activity has averaged three days.

These emergency supply actions have been accomplished at an overall cost of less than standard unit price.

Based on the success of this initiative at DISC, the procedure was implemented at other DLA hardware centers in August 1981. Action is now proceeding toward applying this direct buy concept in support of other weapons systems that are still in the production stage.

Implementation of this concept is yet another illustration of the continued enhancement of the existing partnership between DLA, the military services and civilian contractors toward optimum support of current and future weapon systems.

William F. Payton
DISC

Weapon systems coded for better management

Since 1975, the Defense Industrial Supply Center (DISC) in Philadelphia has applied variable quarterly forecast support factors to national stock numbers (NSNs) grouped by selective management category codes.

This management technique provides a means of optimizing system stock availability and controlling stock fund expenditures, while emphasizing weapons systems support.

The operational variable quarterly forecast support policies have consistently favored selected management category codes for designated weapons NSNs, including Air Force systems for the F-15, F-16, E3A and C-130 aircraft. This approach has achieved good results as DISC stock availability for weapons items is typically three percent higher than non-weapons performance.

DISC is presently expanding the selective management category code system to include categorization of consumable transfer items. This revision will also provide additional operational controls as well as an enhanced informational package.

Various report options will be available, including information for designated individual weapons systems. For example, it will be possible to generate a separate report summarizing customer support and current assets for all DISC-managed items associated with the Air Force's F-15.

Setting standards for wrinkle-free sheets

Aircraft quality aluminum sheeting must be free of scratches, dents, gouges, creases, corrosion, discoloration and water stains. One of the more challenging packaging problems confronting packaging specialists at the Defense Industrial Supply Center (DISC) in Philadelphia involves aluminum sheeting.

The sheets may be 144 inches long. Providing adequate protection during shipment and storage becomes a difficult task.

To eliminate the problem, DLA headquarters personnel and packaging specialists in DISC's directorate of technical operations have been working with employees at Warner Robbins Air Logistics Center at Warner Robbins Air Force Base, Ga., in developing packaging standards for aluminum sheets and plates.

When the standards are compiled and formulated, the data will be forwarded to the Department of Defense for a presentation to the aluminum industry on minimum requirements for packaging of aluminum.

Magnetic bubbles

Adding sparkle to computer memories

Magnetism is a fundamental force of nature that has been used thousands of ways since early sailors used magnetized slivers of metal in crude compasses. Today it is being used to improve computer technology, obtain higher speed and greater storage capability through magnetic bubble memory.

Western Electric, at its plant in Burlington, N.C., is now applying this technology in producing magnetic bubble memory units for the U.S. Air Force to be used in test sets for electronic countermeasures equipment. Defense Contract Administration Services Plant Representative Office (DCASPRO) Western Electric has quality assurance responsibility for the contract.

Bubble memory derives its name from using magnetism in the form of microscopic bubbles. These bubbles look like tiny spheres of air floating on water when viewed through a powerful microscope. However, they are tiny mobile regions of magnetism that differ from the magnetism of the surrounding material and are incredibly small. One hundred of these bubbles equal the thickness of a human hair.

DCASPRO Western Electric QAR Linda Rhodes and industrial specialist Clarence Stout monitor magnetic bubble memory units at the Western Electric Burlington Shops.

Bubble memory is not a new technology in the sense that it was invented more than a decade ago. It has undergone multiple refinements since its invention which has resulted in a four-fold increase in memory density, improved reliability and easier maintenance in the field. Bubble memory systems are modular and easily maintained, providing a midrange system at a lower cost when compared with other solid state systems now on the market.

Bubble memory is in wide commercial use today. For example, bubble memory technology can be used to store digitally recorded messages such as the one that advises "We're sorry, but the number you have reached has been changed to. . . ."

The U.S. Air Force has on order 41 magnetic bubble memory systems. Each of these systems is capable of storing over 40 million bits of information. The systems are solid state and nonvolatile, which means that they are capable of retaining memory even when the power goes off. The systems provide for their own detection and fault diagnosis, and are capable of immediately erasing all memory should the situation arise.

DDOU technician Lee Stark demonstrates how an integrated computer chip is placed on a memory programmer (lower left).

Converting PROMS to ROMS

A one-of-a-kind DLA electronics test facility at Defense Depot Ogden, Utah (DDOU), has been programming integrated circuits (chips) for use in U.S. Air Force and other services weapons and communications systems since early 1981.

The electronic facility, which employs nine people, uses a memory programmer to convert PROMS (programmable read only memory) to ROMS (read only memory) as requested by the item manager at the Defense Electronics Supply Center in Dayton, Ohio. The smallest chip programmed at the facility is capable of holding 32 bytes or characters; the largest is capable of holding 8,192 bytes.

Since static or magnetic influences can destroy these sensitive circuits, the blank chips are stored in a protected environment in a vault until they are programmed. The technicians work at tables covered with a static free sheet. After the chips are programmed they are packaged in an electrostatic/electromagnetic covering for protection and returned to the vault for storage until needed by one of the military services — the Air Force being the largest user.

The DDOU electronics facility is presently programming circuits for single or multi-service shipments; however, some of the services obtain circuits from sources other than DLA. According to Kim Groll, chief of the electronics test facility, "I feel that the depot could mass produce the chips and we could accomplish it at about one-sixth the cost. In my opinion, the government is not even tapping one-fourth of its capability here at the depot at the present time," he added.

Louise Boren
Defense Depot Ogden

Buttons and blows

Making prototype protective clothing is one of the Defense General Supply Center's strong suits

by Scott Church

The whir of sewing machines is not unusual in the stock maintenance division at the Defense General Supply Center (DGSC) in Richmond, Va. Canvas tents, parachutes, you name it, they sew it. But suits? Tailoring suits? That's right.

You won't find them on a rack in exclusive retail shops. There are only 12 and like Henry Ford's Model T, they only come in one color — olive drab. They come with a vest, but not the three button model nor the kind that would delight a DLA clothes horse.

However, there are hundreds of customers out there who would love to have one when they are available.

Capt. Roy Broussard, USA, in Defense Operations Research Office (DORO), is one of them. "It's a suit any one of us in my business would love to have once it is finished." Don't be misled by Broussard's assignment to DORO. His business is in the field and it is one he will be returning to when he leaves DGSC. Broussard is an ordnance officer and his primary job is an EOD (explosive ordnance disposal) specialist. In plain language, he is the person you call when you have a grenade, artillery shell, homemade bomb or whatever that needs disarming or destroying.

His interest in the suits is obvious: the suits are non-explosive ordnance disposal suits manufac-

Ralph Martone, project officer at the Army's Research and Development Command, adjusts new non-explosive ordnance disposal suit worn by Albert Gregory, DGSC employee.

tured for the Army Research and Development Command, Natick, Mass. Currently, the R&D Command is developing a suit for men or women like Broussard when they are on a mission. After completion at DGSC, the suits will be sent to Huntsville, Ala., where they will be tested. So issue of these prototypes is still in the distant future.

The prototypes manufactured at DGSC come in four parts. The basic material is a DuPont fiber called Kevlar. According to Jim Miller, a market specialist for DuPont, Kevlar is a fiber that lets you rethink strength and weight. Miller claims pound for pound Kevlar is five times as strong as steel. It has been in use by police officers and military personnel for sometime as a bullet resistant material. Essentially, the material is used in layers. Due to its unique molecular structure, the fiber spreads the impact of a bullet or fragment across the entire fabric, thus dispersing the impact broadly and making penetration difficult.

The suit at first glance would appear more appropriate for travel on the space shuttle than on a demolition job. It comes with trousers, vest, snap-on collar and a helmet with visor. All are produced at DGSC except the helmet. The vest is basically a flak jacket or chest plate with 16 inserts and is estimated by Ralph Martone, Army R&D project officer, to be capable of stopping fragments moving at 5,000 feet per second. Miller and Martone agree that the protection offered depends upon the size of the fragment. DuPont has tested it with fragments weighing two grams. It takes about 7,000 of these fragments to equal a pound. Both agree that the material is effective to a large extent.

"Fragmentation is very important," Broussard said, "and any protection is welcomed. New developments in ammunition create more problems. A grenade now, as opposed to 10 years ago, is a far more effective weapon. In the past it would cause casualties within a 30-foot area. Today, they generally will be 100 percent effective within 30 feet because of improvement in design.

"Other items have also been improved. Disarming ammunition is a fragile job. They are very sensitive. The slightest movement or touch can detonate one. Some devices are so sensitive, just passing your hand over them and blocking out the light can set them off. We even ask for 10,000 feet of air clearance when we have an ammo destruct.

"I'm really happy that this type of research is being done," Broussard continued, "but there are many factors involved in developing a suit. For example, the suit has to allow for free movement. You can't wear a bulky protective garment if it will hinder your movement.

"One of the most dangerous factors is blast. When you are over a piece of ammo, blast is your big worry. You have to consider blast even in fragmentation. Should the suit provide protection from fragmentation, the material it is made of can become lethal. For instance, the helmet could become fragmented during a blast and a piece of the material would then become frag by the conditions set up by blast. You don't grow old in EOD by being careless.

"Certainly, any type of equipment that provides some measure of protection is a step in the right direction," Broussard said.

So, if in the future you see someone approaching in a space age suit, don't think of it as an encounter of the third kind, it may only be an EOD specialist on the way to work.

Capt. Roy A. Broussard, USA, an EOD officer presently assigned to DORO at DGSC, cautiously glances at a piece of live ordnance prior to disarming it.

Air conditioning mechanic Dave Cardoza adjusts office thermostat at DDTC as part of the depot's energy conservation program.

Tracy earns energy award

Defense Depot Tracy, Calif., (DDTC) was presented with an energy conservation and achievement award for making significant reductions in energy usage. The award, developed by the Pacific Gas and Electric Company, was presented to Marine Col. M.A. Miller, depot commander, by Dale Collins, manager of the Tracy branch of the company.

The award recognizes the depot for reducing energy consumption during the period from 1976–1981. According to PG and E officials, electrical demand during the period was reduced by 6.5 percent and electrical consumption was reduced by 7.6 percent for the five year period. In addition the depot reduced gas consumption by 48 percent during the same period.

The energy savings were achieved by methods that include the installation of timeclocks to shut down heating and cooling systems during non-working hours. Thermostats were positioned at 65 degrees for heating and 78 degrees for cooling and 35 percent of the standard flourescent lamps from the lighting systems were removed.

In addition, the depot installed electric spark ignition pilots on gas-fired heaters. Approximately 50 percent of the standard fluorescent lamps were replaced with energy saving fluorescent lamps. The depot was also credited with developing an active employee awareness program.

"Every depot employee can be proud of this award because it is their effort that accounts for the reduction in energy usage. They are the ones who turned off the lights and equipment when it was not in use and adapted to new comfort levels while getting their work done using less fuel," Miller said.

MAGIEC DCASPRO established

A change in organizational structure was approved recently providing for the establishment of a Defense Contract Administration Services Plant Representative Office (DCASPRO) at the Magnavox Government and Industrial Electronics Company (MAGIEC), Fort Wayne, Ind.

The current DCAS Residency office at this contractor's plant is scheduled to convert to the DCASPRO structure effective April 1.

The change is designed to provide the most responsive support to the effected customers, the military services whose contracts with Magnavox are administered by the resident DCAS organization.

The conversion was proposed following an intensive study to determine the most effective administrative structure for these contract management responsibilities.

The criteria for the establishment of a DCASPRO

DCASMA Milwaukee, contractor presented DCASR Chicago awards

On the same day that Defense Contract Administration Services Management Area (DCASMA) Milwaukee received Defense Contract Administration Services Region (DCASR) Chicago's first annual award for value engineering excellence, recognition was also given to Oshkosh Truck Corp., Oshkosh, Wis., a major DCASMA Milwaukee contractor, for participation in the Value Engineering Change Proposal (VECP) Program.

In a special ceremony at the contractor's plant, a plaque was presented to Robert J. Sill, president of Oshkosh Truck, by Col. Bruce S. Packard, USA, commander, DCASR Chicago.

Some the contractor's contributions which served as the basis for the special recognition include providing such products as:

- The P-15, a complete Oshkosh Truck Corporation-designed fire, crash and rescue vehicle — the largest item of ground support equipment in the Air Force inventory.
- The current remanufacture/modernization snowplow contract, also for the Air Force — a program which has literally saved the government millions since its inception over 20 years ago.
- The M-911 HET (heavy equipment transporter) truck contract in which 747 trucks, using standard, commercial, off-the-shelf components, were produced for the U.S. Army.
- The present HEMTT (Heavy Expanded Mobility Tactical Truck) contract — a multi-year procurement, also for the U.S. Army at TACOM (Tank and Automotive Command).

In accepting the plaque, Sill said, "Oshkosh Truck Corporation looks upon the United States government as its largest and most important single customer. We do not submit value engineering change proposals because we are good guys or just to help DCASMA Milwaukee meet its quota. We regard the VECP program as a prudent way to conduct business. The VE program is a good program and one that we plan to continue to participate in, both for your benefit and also ours.

"Oshkosh Truck Corporation's reputation has been earned by building the world's best wheeled vehicles and when we see an opportunity to improve a vehicle by design or increase cost effectiveness, it simply is good business to present a change via VECP."

on which the proposed change was based cover various measurements and considerations involving workload, number of personnel and other factors relating to the importance of specific procurements. The DCAS contract operations at Magnavox far exceed the minimum criteria.

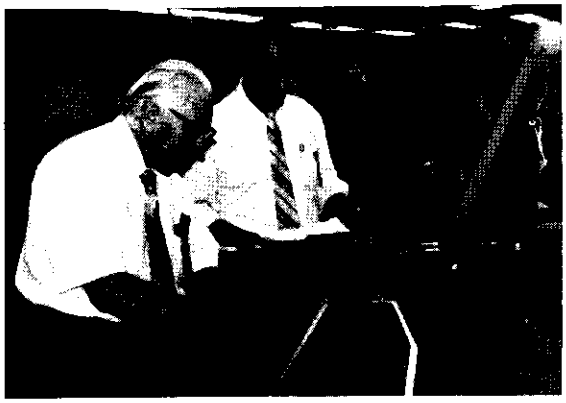
Actual net sales to the Government by MAGIEC totaled $133 million in 1979 and climbed to $160 million in 1980. Based on a five-year projection, those figures are expected to rise as high as $300 million in 1982, and reach an estimated $350 million in 1985.

Lt. Cdr. Robert A. Brown, SC, USN, who is now officer-in-charge of the current multi-functional residency at Magnavox, will serve as commander of the new DCASPRO.

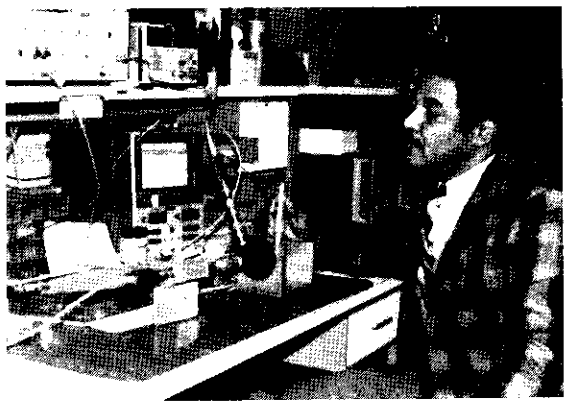
The organizational changeover is expected to have minimal impact on DCAS civilian personnel in Fort Wayne. Four additional positions are now planned for the new DCASPRO.

The current Magnavox Residency was established Sept. 30, 1980, following the closure of the former Defense Contract Administration Services Management Area (DCASMA) Office at Fort Wayne. That DCASMA had been in operation since the Chicago region organization was formed in October 1965. The current residency is a part of the DCASMA Indianapolis administrative structure.

Major contracts held by MAGIEC are for telecommunications, electronic warfare, submarine detection and signal processing equipment, ordnance and display systems for all the military services. The company, which employs 4,790 people in the greater Fort Wayne area, has been in business 70 years.



James L. Hammack (right), resident QAR of the year, discusses engineering change on ITV missile launcher with Earl Hancock, Emerson Electric engineer.



Arthur L. Jackson, non-resident QAR of the year, checks out probe coupler used in electronic countermeasures systems at one of several contractor plants he regularly visits.

DLA names top QA reps

James L. Hammack, a Defense Contract Administration Services Region (DCASR) St. Louis employee, and Arthur L. Jackson, a DCASR New York employee, were honored for their outstanding quality assurance support to military equipment used by the Army and Navy.

Hammack was chosen as the 1981 resident quality assurance representative of the year and Jackson was selected as the nonresident quality assurance representative for 1981.

Hammack has quality assurance responsibility for the M901 Improved TOW vehicle made by Emerson Electric Co. The M901 vehicle consists of a turret containing a ground-to-ground guided missile system made in the plant which is then attached to an armored personnel carrier.

Jackson visits several contractors producing a variety of highly complex items with critical applications. These include a Navy underwater sonar system used by the Fleet Ballistic Missile Submarine Service, solenoid valves used to evaluate submarine reactor plants and circuits for the B-1 bomber. Jackson was recognized for his in-depth knowledge of the sophisticated manufacturing processes involved in making these items and his application of the system approach to quality assurance.

Speaking briefly. . .

Joanne Estante, a supervisory shipment clerk at **Defense Depot Tracy, Calif.** (DDTC), was recently named suggester of the month at the depot. She suggested that a system be created to maintain a complete history of material release orders including such data as cancellations, denials and reshipments. The information will be recorded on microfiche and Estante will receive a $75 suggestion award for her idea.

* * * * *

Bill Reed, chief of the printing and reproduction branch at **DDTC**, was recently selected as safety supervisor of the quarter. According to safety officials, employees in Reed's branch have not had a disabling work injury

since Reed became chief in 1974. He will receive a safety jacket and a $25 check.

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Navy Capt. Edward A. Roethe, director of storage and transportation at **DDTC,** was the featured speaker at the Four Chaplains Commoration Day service held in Tracy. The service commemorates four World War II chaplains who sacrificed their life jackets aboard the troop transport vessel "Dorchester" when the ship was torpedoed off the coast of Greenland. The chaplains went down with the ship after giving their life jackets to four young soldiers.

* * * * *

Defense Depot Ogden, Utah (DDOU), general equipment inspector **Johnnie R. Jones,** who works in the quality and inventory control office, received $430 for suggesting a method for improving and maintaining accuracy of shelf life items by using a daily listing report for inspectors.

* * * * *

Bennie E. Wood, a warehouseworker foreman in clothing and textiles in the warehousing division at ***DDOU,*** was selected as the supervisor with the most outstanding safety record for the first quarter of fiscal year 1982. **Doris H. Morris,** management assistant in the equipment and maintenance division, was selected as the representative with the most outstanding safety record for the same quarter.

* * * * *

DDOU warehouse worker **Valerie Burbidge** received a $590 suggestion award for her idea to use three-digit chute numbers on material being sent to the packing line. The warehousing division employee's suggestion resulted in a first year tangible savings of $11,488.

Silvio Pontarelli, a quality assurance specialist in the management support office, program branch, at **DCASR Chicago,** received a $62 suggestion award for his proposal which involved standardizing training plans for all types of interns and trainees.

* * * * *

A special act/service award, totaling $1,000, has been given to 11 **DCASR Chicago** employees for their participation in a DD 250 seminar conducted last October. Employees received individual awards ranging from $50 to $150. They are: **Bruce Anderson, Georgann Johannesen, Arlene Marks, Alma Smith, Chuck Carlson, Diane Meore, Carol Smalley, Floyd Berg, Paul Hergenreder, Mary Haga** and **Lisa Schillinger.**

* * * * *

Pamela M. Pecoraro, accounting technician in the contract reconciliation branch of the accounting and finance division at ***DCASR Chicago,*** has received a $63 suggestion award for her idea to use a form letter to replace individually written letters of certification previously prepared for contracts that have to be transferred to a different buying office. These letters, which certify that payments are in order and that the dollar amounts being transferred are all in agreement with the documentation in the contract folder, were previously handwritten by six technicians, then typed. The form letter allows minimal information to be entered and typed and saves time.

Lynn Knight (right), electronics engineer at DCASR Los Angeles and Gordon Swamp, DCASR LA supervisory industrial property clearance specialist, congratulate each other for reaching a milestone of 40 years government service.

Heavy artillery

DCASMA San Diego employees Doug Hoff and John Gierhart hit the bullseye with their hobby of building and firing cannon of the Civil War era.

Doug Hoff (left), DCASMA San Diego QA specialist, and his gun crew with Civil War era artillery.

by Hank Covington

If things seem to be booming in San Diego, it just may be because Defense Contract Administration Services Management Area (DCASMA) San Diego quality assurance (QA) specialists Doug Hoff and John Gierhart are shooting Civil War vintage cannons.

Hoff and Gierhart have a common hobby, building and shooting artillery pieces — full and reduced scale. Civil War period (1860– 1965) black powder cannon.

Hoff's interest in the Civil War goes back many years. However, he began to concentrate on cannon artillery seven years ago. He is a member of several clubs specializing in black powder shooting, one of which is the Civil War Skirmish Association (CWSA) of the West. It corresponds to the North-South Skirmish Association in the East.

CWSA members meet for com-

Civil War buffs Hoff (left) and John Gierhart, DCASMA San Diego QA specialists, show off a Whitworth cannon, a type used during the War Between the States.

petition eight times a year. Once a year, however, they hold a national competition with entries from many states. The teams wear Union or Confederate uniforms, fly regimental flags and assume the dual role of competitors and fun loving conventioneers. The competition at this event includes rifled muskets, carbines, cap and ball pistols and cannon and mortars (using black powder), all of the Civil War period.

"We have great fun and camaraderie," said Hoff. "At the last five national events our artillery battery took first place in each of the shoot-offs. At the last two affairs we had a perfect score of 10 consecutive bullseyes. These 12-inch bullseyes look like black dots at 100 and 200 yards," he added.

Hoff started the Civil War hobby first then interested friend John Gierhart in joining. Along with a dozen or so other serious Civil War buffs they comprise Battery "B" 4th U.S. Artillery, the Civil War unit they emulate.

"We're pretty good in logistics," said Hoff, "we've been able to move cannon, men and supporting equipment all over the West competing with other CWSA units. Battery "B" has won the national competitions twice at Grant's Pass, Ore.; and Carson City, Nev.; and once at Ft. Lewis, Wash."

In addition to winning the CWSA nationals, Battery "B" has been Southern California regional champion for several years. Recently Rielly's Battery, a rival Confederate Army unit, as a gesture of good sportsmanship awarded Battery "B" a flag inscribed "It's so hard to be humble." Also listed were the dates of Battery "B's" national competition wins.

Hoff and Gierhart participate in Civil War battle reenactments and periodic encampments where they use only the equipment that was available in 1865. "Imagine," said Hoff, "camping out in the back country with no aluminum or plastic items of any kind, no bottled gas or gasoline stoves, no frozen foods and no nylon tents or sleeping bags. It's a way to get the real impact of the Civil War era."

Hoff, Gierhart and company also join the San Diego symphony orchestra during their summer outdoor concerts. They fire the cannon during Tchaikovsky's "1812 Overture" (the music originally required 16 cannon shots). Hoff said, "I would like the orchestra to play 'Wellington's Victory,' it requires a lot more cannon shots."

Shortly after the Civil War a pair of fine Napoleon cannons arrived in San Diego. For many years the Army fired the cannons as part of sunrise and sunset ceremonies. As late as the 1890s the old guns were in service guarding a Navy mine field near Point Loma.

However, the wood in the cannon's carriage gradually disintegrated and reduced the weapons to an unserviceable condition. For many years the barrels graced the entrance of several Army and Navy buildings as decorative memorabilia.

The current custodians, the U.S. Navy, recognized their historical value and interest to San Diegoans. The problem was to restore the ancient weapons to serviceable condition. Hoff was asked to head up a group of volunteers to reconstruct a new carriage for one of the old guns.

Working during the evenings and on weekends, they chipped away. Finally, some six months later the beautiful bronze Napoleon gun roared back to life.

Another project tackled by Hoff and his friends involved the building of a large scale, firing replica of a Whitworth cannon. It was a breechloading rifled cannon, imported from England and used by both Union and Confederate forces during the conflict. In 1863 it was noted for its accuracy, long range and its distinctive rifling and breechloading characteristics at a time when most cannon muzzle loading had a smooth bore.

Hoff said, "The building of a genuine antique can be a real challenge. The procurement of raw materials, machining, welding, grinding, woodworking and blacksmithing are all part of the job. We developed skills we never knew we had."

They raced to complete the project before the CWSA nationals. They succeeded and their newly built Whitworth gun fired a perfect score to bring Battery "B" another gold medal.

Assignment:

Egypt

MoDrak

Guy MoDrak has viewed Egypt from a vantage point few tourists experience — flat on his back in the bed of a 4-wheel drive wagon. Stricken with intestinal parasites and at times delirious, the Defense Construction Supply Center (DCSC) employee spent one-and-a-half days jouncing alongside the Nile River and dodging Egyptian soldiers heading to put down a threatened revolt following the assassination of President Anwar Sadat on Oct. 6.

The 27-year-old quality assurance specialist was in Egypt 42 days last fall, helping to resolve a dispute about lumber that an American mill provided to an Egyptian contractor for making doors, windows, scaffolds and concrete forms.

Earlier, DCSC's representative to the American Lumber Standards Committee had volunteered to write specifications for other contracts involving the Agency for International Development (AID). When problems arose, AID suggested MoDrak as an impartial investigator. Both parties to the dispute agreed.

"My job was to inspect and certify the amount, size and grades of the lumber delivered. The report is now being used to arbitrate the dispute," explained MoDrak after returning to Columbus, where he works in the quality assurance branch of technical operations.

"I was told about the assignment on Sept. 21 and went to Washington on Sept. 24. You know those official red passports that usually take months to get? I got mine in two hours," MoDrak said. In the nation's capital, State Department officials briefed him on implications of the problem. "They stressed I was serving as an official representative of the government and that I should dress and act accordingly. 'Just think of yourself as a GS–13' they said," the GS–9 employee added. "That meant wearing double-knits and the whole bit."

After a 24-hour flight and armed with a telegram declaring him the DoD expert on the scene, MoDrak arrived in Cairo for more briefings at the American Embassy. Two days later, with a driver, interpreter and an assistant, he reached the southern Egyptian city of Assuit.

"Then I found out what the briefings hadn't prepared me for," he said. "Things like the heat, flies, bad food, even unavailability of food because of the religious holidays, mosquitoes and parasites."

Facing average desert temperatures in the high 90's, an unremitting diet of canned meat and bottled water, and a series of 10–12 hour workdays, MoDrak rapidly changed some preplanned strategies.

When a promised forklift failed to appear, he donned cutoffs and T-shirts to climb over, wriggle between and crawl under bundles of lumber stacked precariously 35 feet high. Eventually he would inventory 514 bundles amounting to 1.1 million board feet of lumber.

MoDrak and his companions found themselves sealed off from both the town to the south and the highway leading north to Cairo.

Two days after Sadat's assassination, political temperatures peaked as religious fundamentalists at Assuit seized three police stations to gain arms and ammunition. Egyptian soldiers moved in to quash the revolt. MoDrak and his companions found themselves sealed off from both the

town to the south and the highway leading north to Cairo.

"At first, I didn't realize how serious the situation was," MoDrak admitted. "We'd come to soldiers and I'd joke around saying, 'Hey, what's happening?' Then we pulled up to one checkpoint and the soldiers rush out with the bolts pulled back on their automatic weapons. I could tell my driver was really scared."

Soon MoDrak also found himself in the grips of another serious problem. Stranded on the highway for 25 hours between checkpoints, he battled the vomiting and diarrhea caused by parasites picked up from contaminated food and drink.

Alarmed as MoDrak lay nearly unconscious, the Egyptian driver finally pleaded his way through the northern checkpoint to begin the 9-hour trip to Cairo.

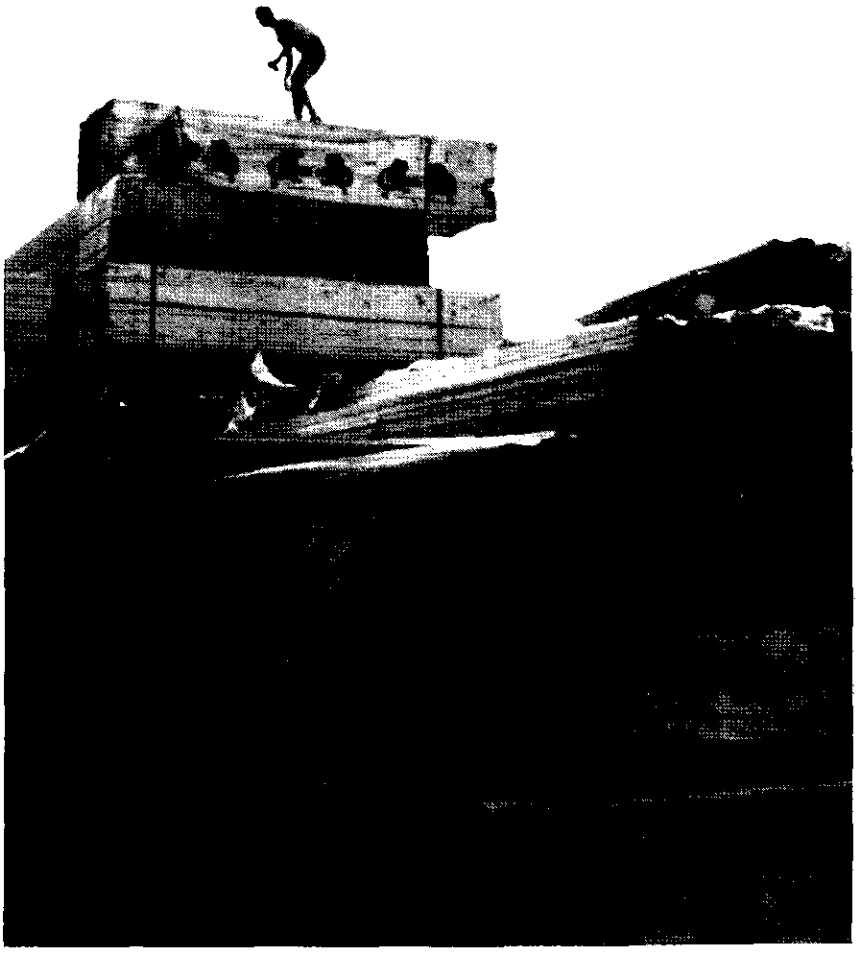
Several days later, after telephone calls by the American Embassy to strategic military and police officials, the same driver returned to Assuit to retrieve MoDrak's passport, money and other possessions.

MoDrak returned to the United States via Athens. Less than a week after reaching Columbus, he received a phone call reporting "the coast was clear" for a return trip to Egypt.

Four days later MoDrak was back in Cairo. "I got in late at night, and the American escort promised to me by the embassy wasn't there. But when I cleared Customs, I found my old driver waiting for me," he said.

The DCSC employee returned to Assuit, where he spent another week, this time with the aid of a forklift and operator, and finished the inventory.

MoDrak's trials and achievements did not go unnoticed by appreciative AID officials. In a letter to the DCSC commander, a spokesman for the Near East Bureau noted MoDrak's top quality, professional work. He added that, in an extremely difficult situation, MoDrak displayed both excellent judgment and considerable aplomb.



Scaling towers of lumber up to 35 feet high was part of DCSC employee Guy MoDrak's daily routine in the Egyptian desert.

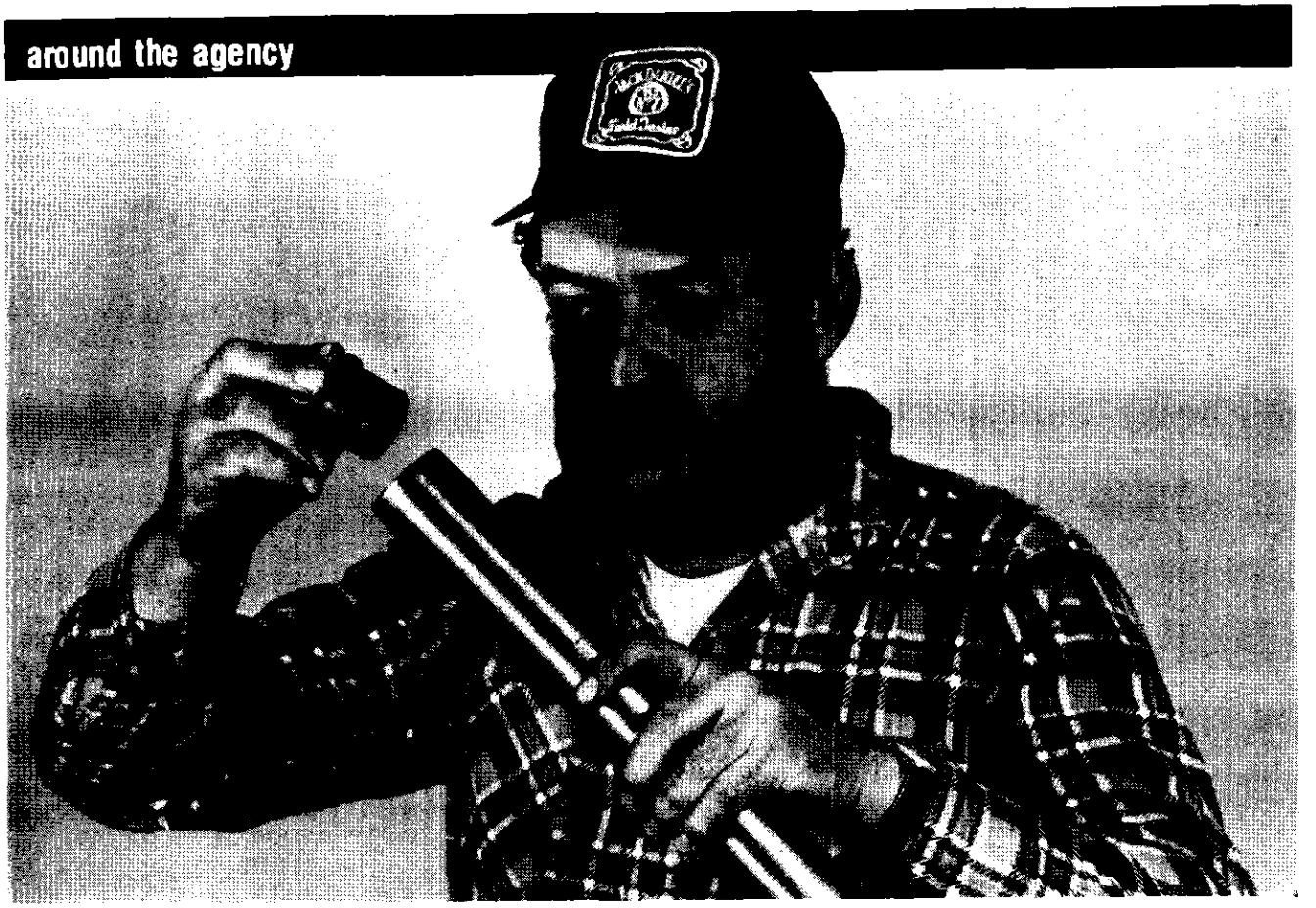
The chief of AID's surveillance and evaluation division reacted even more enthusiastically: "As far as we're concerned, Guy did just a crackerjack job, just great!"

Looking back on his experiences, MoDrak recalled several unexpected highlights of the trip.

"First, the friendliness of the people," he declared. "They seemed to genuinely like Americans. The children, especially, would walk right up to shake hands. I think they respected the fact that we worked hard, but that we could also laugh and have fun with them. The Russians who had been there building the Aswan Dam seemed to have been rather grim.

"I also was struck by the number of adults who were disfigured by war," he added, "and by the many women wearing black to indicate relatives had died."

Finally, the DCSC employee recalled, "the three great pyramids of Giza were just mind-boggling. So was the oldest pyramid at Miduhm which many tourists never see. The collossal size and intricate workmanship were amazing, as well as the idea that they could even have been built 5,000 years ago."



Cecil Sims, DDTC industrial equipment mechanic, inserts a wooden bearing into a metal roller conveyor. (Photo by Dick Coffey)

Wooden bearings rolling quietly along

Walking from one section of the Defense Depot Tracy, Calif., (DDTC) mechanized warehouse into the other section a distinct difference is noticed. The churning, clanking and high pitched vibrations of metal rubbing against metal are absent. Wooden bearings are the reason.

When $2.5 million worth of mechanized equipment was installed recently the contract called for wooden bearings on over 3,000 feet of metal roller conveyors. The employees working on the shipping floor are hearing the difference.

"The wooden bearings are a little more expensive but we make up the difference because they require no maintenance and reduce the decibel level, protecting employees hearing," said Carol Nowak, depot industrial engineer.

The bearings are made from pieces of dense maple hardwood. The wood is impregnated with a special lubricant of greases and waxes. The lubricant remains solid at normal temperatures and flows when heated by friction and retains its lubricating properties indefinitely.

According to safety specialist Kathy Howard, the reduced noise level is probably the greatest benefit. "Often by the time a hearing loss is discovered it is already too late to reverse the damage. This is why it is so important to consider the noise hazard when initial engineering plans are designed," she said.

Wooden bearings have been in use for two years on another conveyor system at Tracy without requiring any maintenance. "So far we're satisfied with the wooden bearings performance, but the ultimate test will be how long they last before they must be replaced," said Nowak.

Doug Imberi
Defense Depot Tracy

COPADS: Two years old and counting. . .

by Ben Strickland

The contractor operated parts depot (COPAD) at Defense Depot Mechanicsburg, Pa., (DDMP) completed two years of furnishing automotive repair parts to Army, Navy and Air Force units overseas in January. This one of a kind DLA organization is headed by Air Force Capt. Don G. Arnold.

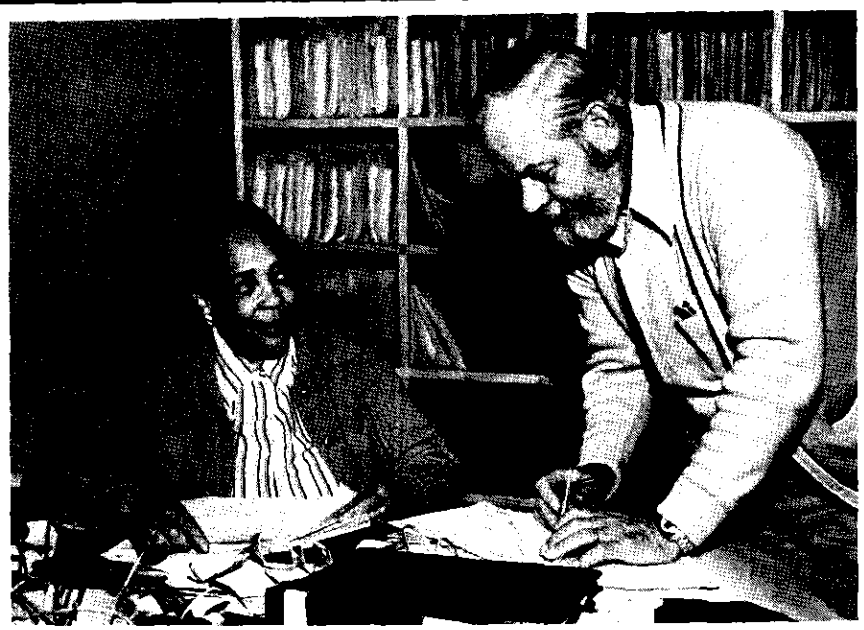
COPAD is a computerized supply system designed to speed up motor vehicle parts delivery to military units in the field. It is an operation which utilizes a commercial parts distributor, under contract to the government, which is housed at a federally owned facility such as DDMP.

This direct supply concept has proven to be very successful as delivery time has been drastically reduced during the past two years. For example, in 1980 it took several months for parts to be delivered to military activities in Europe, and currently that time has been reduced to an average of 37 days for all modes of transportation.

For the most part, the contractor, McCotter Motors of Titusville, Fla., stocks fast-moving items which are requested by customers three or more times in a 90-day period or less. These fast-moving commodities are shipped to the user no later than the close of business on the day after they are received at the Mechanicsburg based facility. Other less requested items are also stored on the premises when available. However, because of the contractor's large volume of business and his contacts with leading parts manufacturers throughout the country, he is able to procure almost any part, large or small, within a short period of time.

The contractor employs 39 people, eight of whom are buyers who are constantly in contact with parts manufacturers attempting to secure parts to fill their cus-

LEFT: John M. Smith, DDMP warehouse worker, seals fragile motor vehicle parts in carton with urethane foam preparing them for shipment to Korea. RIGHT: Randy Morgart, an employee of McCotter Motors, the commercial contractor operating the parts depot, checks an incoming shipment of auto parts and accessories being delivered by United Parcel Service. (Photos by Al Horn)



Barbra C. Patterson and James E. Rendler, both contract specialists assigned to the COPAD contract administration branch, discuss recent contract changes. (Photo by Al Horn)

tomers' orders. Other employees work as clerks and warehouse personnel in carrying out the parts distributors portion of the operation.

The Defense Construction Supply Center (DCSC) in Columbus, Ohio, manages the COPAD operation, and employs 14 people at the Mechanicsburg site in a contract administration office. This activity is made up of a contract management section and a technical supply section.

Ernest W. Eubanks heads the contract management function which is responsible for seeing that the resident contractor meets all terms of the contract. The contract covering the operation is a bit unusual as far as government contracts go in that it contains incentives which encourage the contractor to supply parts on time, providing bonuses for early delivery and penalties for missing deadlines.

The technical supply section serves as a liaison between the customer and contractor for any problems that may arise. These include such things as wrong part numbers and insufficient information on the parts requisitions coming from the field. The equipment specialists working in the unit have computer terminal link up with technical personnel at DCSC in order to receive assistance in resolving major problems and reducing the order backlog.

The COPAD unit receives the requisitions for parts from its parent organization, DCSC, by computer. On the average, 300 requisitions are received daily from the using military activities.

Recently, seven Air Force activities in the Pacific area have been added to COPAD's customer list. These include units in Panama, Korea and Hawaii. An additional workload is expected in the near future which may double the activity's parts supply responsibility.

DDMP's involvement in the COPAD operation consists of packing and shipping the orders to the overseas customers.

DDMP's participation in the parts supply mission begins in Building 211, where the parts depot is located. Packers match the shipping documents with the orders and fragile items such as headlight lamps, mirrors and window glass are foamed in place in shipping boxes with the use of a urethane foaming machine. After this work is completed the orders are moved to the mechanized warehouse packing area where they are prepared for shipping.

Mailable shipments for the United Kingdom, Europe and the Mediterranean area use priority transportation such as air express. Some shipments are forwarded to the New Cumberland Army Depot for container consolidation as part of an Army Direct Supply System.

Approximately 17 percent of COPAD material is classified as freight shipments and processed through DDMP's freight terminal. Parts orders for the Air Force which have a low priority classification are shipped in SEAVANS by DDMP's consolidation and containerization branch.

DIPEC conducts PCB study

Identifying industrial plant equipment contaminated with polychlorinated biphenyls (PCBs) and establishing cost estimates for dealing with the problem were the subjects of a recent study at Defense Industrial Plant Equipment Center (DIPEC), Memphis, Tenn.

PCBs are industrial chemicals widely used throughout industry for over 40 years as a fire-resistant insulating coolant for power distribution transformers as well as in capacitors and hydraulic fluid.

Except for small quantities for research purposes, PCBs are no longer manufactured because of their potential hazardous buildup in the environment and because they can be harmful if absorbed through the skin, eaten or inhaled. PCBs are very stable chemical compounds which do not decompose readily.

As a result of federal regulations under the Toxic Substance Control Act, labeling of equipment in service which contain PCBs prior to Nov. 1, 1979, is required. Active labeled systems may remain in service until July 1, 1984, if a proper corrective program is in effect. Equipment in storage may be retained indefinitely but must be certified prior to distribution.

PCB-contaminated hydraulic systems are of primary concern at DLA industrial plant equipment storage and maintenance facilities as some 6,000 items of the DoD general reserve in storage have hydraulic systems. Testing fluid samples for these will identify any items now in storage that are contaminated.

DIPEC issued a quality assurance notice to the military services in September 1981 to ensure that using activities are aware of the requirements for proper determination of PCB levels prior to release.

The next step will be to recommend a plan for testing each suspected item in storage and upon determination of contamination, clean it up, thereby minimizing the risk to personnel and the environment.

David Meier
DIPEC-TFS

Civilians to be surveyed on drug, alcohol usage

A mail survey will be conducted by the OSD Office of Drug and Alcohol Abuse Prevention during March, April and May, according to a letter from the assistant secretary of defense (health affairs). The survey is designed to determine the prevalence of alcohol and drug use within the civilian workforce in terms of physical, social and work consequences and physical and psychological dependence.

The survey will involve approximately 5,000 questionnaires to be mailed to a representative number of civilian employees at approximately 250 installations. DLA employees will be included in the survey, but officials at headquarters note that they don't know which activities will be covered. Survey results will not be broken out below the department or agency level and information will not be provided on individual activities, officials said.

According to the letter from ASD (health affairs), multiple mailings will be used to ensure an adequate rate of return of completed questionnaires. The survey requires about one hour to complete, so the impact on individual workloads should be minimal. Additionally, the anonymity and confidentiality of individual responses will be assured.

Completed questionnaires will be mailed directly to the contractor conducting the survey, Professional Management Associates, Inc., of Silver Spring, Md.

Contractor Assessment Program (CAP) flags like the one flying here at the Optics Division of Bell and Howell Corp., Chicago, fly at many contractors' plants in the DCASR Chicago region. A total of 70 firms have received CAP awards in recognition of excellent achievement in the quality of products and services provided to defense agencies. (Courtesy photo: Bell and Howell)