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# **Nonstandard Item Parts and Repair Support (NIPARS) Program**

**By**

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## **INTRODUCTION**

The United States Air Force (USAF) has agreements with eighty-three foreign countries and international organizations to provide continuing logistics support for equipment furnished under the security assistance (SA) program which includes Foreign Military Sales (FMS) and Military Assistance Programs (MAP). As a consequence of those agreements, the Air Force Logistics Command (AFLC) provides support not only for items in active use by the USAF, but also for items transferred to foreign countries which have been retired from USAF inventory or which have customer unique configurations. In addition, by special arrangement, AFLC supports some aircraft of non-US origin, such as the Super Mystere aircraft built by France, modified by Israel, flown by Honduras, and supported by the San Antonio Air Logistics Center (ALC).

Logistics support of all these weapon systems and the attendant equipment is obviously a massive and complex undertaking. Support for nonstandard items (NSI) is provided as part of a general commitment to support systems sold or transferred to foreign countries through the security assistance programs. AFLC is prohibited by law from using appropriated funds to establish inventory stocks of nonstandard items, which means that unless old stock is available, customer requirements must be obtained through the procurement process. Procurement of nonstandard items has historically been a difficult task, frequently overshadowed by the requirement to support active USAF system requirements.

Because of problems associated with procuring nonstandard parts, and the desire to improve support to their foreign customers, the Air Force International Logistics Center (ILC) has initiated a program to streamline AFLC procedures for the procurement of nonstandard items. To this end, in 1990 the ILC awarded a contract to provide purchasing services, locate vendors, and actually procure materiel. The contract also covers repair and technical services. The program is the "Nonstandard Item Parts and Repair Support (NIPARS) Program."

## **BACKGROUND**

Standard items are those parts that are identified by a National Stock Number (NSN), currently assigned to a DOD inventory manager, which support end items that are used in the current USAF weapon system inventory. Other parts fall into a nonstandard class because they fit into one of the following three categories:

- A customer's unique configuration of a USAF system which requires a specialized piece of equipment;
- An item previously used by DOD, but which is no longer part of the active inventory; or
- A commercial part number item.

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The ILC receives approximately 25,000 nonstandard item requisitions annually. Of these requisitions, 40 percent are identified by part numbers alone. Since the inventory control systems within the DOD are based primarily on the use of an NSN, the absence of an NSN complicates the identification process. Manual intervention is necessary to research a part number to see if it cross references to an NSN and to determine the availability of the item. When the part number does not convert to an NSN, further research must be taken to locate a supply source or manufacturer's source for the part. This is normally an expensive, time consuming, labor intensive, and error-prone process.

While the five Air Logistics Centers are designed to procure very large quantities of items, foreign customer requirements are often for small quantities of inexpensive, low technology, non-standard items. Additionally, vendor sources for nonstandard items are often difficult to locate; and, once located, the desired item may have been out of production for several years. New production requires expensive set-up time, retooling, and occasionally the development of new processes and drawings. Often small contractors do not want to deal with the U.S. government and its associated paperwork and pricing policies. As a result, AFLC does business with only about 6,500 vendors while a typical aircraft manufacturer has ongoing relationships with over 16,000 firms.

Success in filling NSI requisitions for unstocked items is normally measured in terms of fill rate and procurement administrative lead time (PALT). Between 1983 and 1988, the AFLC fill rate for nonstandard items was less than 55 percent, and average PALT figures exceeded 280 days.

A review of the performance figures for Calendar Year 1988 (see Figure 1) points out the need for improvement. Over 25,000 requisitions were analyzed for both part number and NSN items. Of these requisitions, 3 percent of the part numbered items were identified to have NSNs and delivered from stock, and 97 percent were placed on backorder. 51 percent of the backordered part number requisitions were subsequently cancelled, and another 27 percent showed no procurement action had been taken within the nine-month period preceding the analysis. The NSN items fared somewhat better with 28 percent of the items delivered from stock, and 72 percent placed on backorder. 29 percent of the backordered NSN requisitions were cancelled and another 29 percent showed no procurement action had been taken during the same nine month period.

## **NIPARS PROGRAM OBJECTIVES**

The objective of the NIPARS contracting effort was to "fix" the inherent inefficiencies associated with processing FMS customer requisitions for nonstandard items. ILC managers wanted to significantly increase the percentage of requisitions filled and to shorten the PALT, while reducing the associated labor intensive, nonproductive workload at the ALCs. An additional major requirement was to create a system that was financially self-sustaining and not constrained by budget limitations, with no need for up-front administrative or appropriated funds. Finally, it was essential that the program have very little financial impact on the FMS countries.

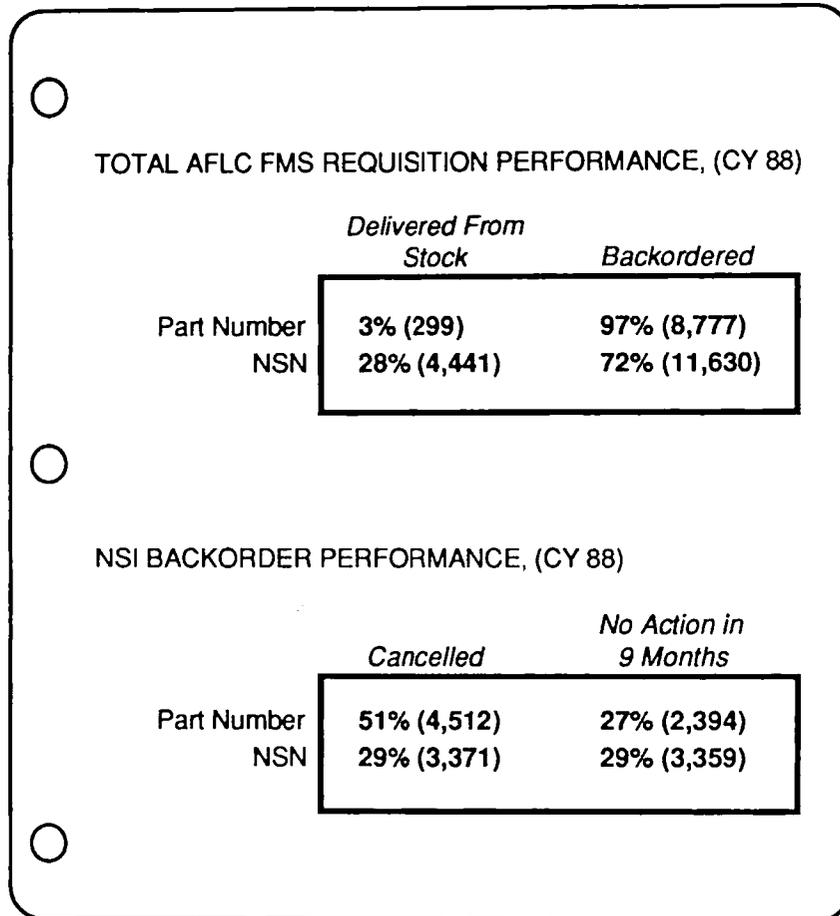
These requirements drove us to design a USAF-contractor arrangement employing commercial purchasing practices; providing substantial financial incentives to achieve high fill rates and short PALT; and making maximum use of computer-to-computer communications to place the orders, obtain instantaneous status, and process billing.

## **NIPARS CONTRACT**

On September 14, 1990, Systems Control Technology (SCT) Inc, of Palo Alto, California, was selected as the prime contractor for the NIPARS Program. In early October 1990, SCT established a new support services division and opened a facility in Fairborn, Ohio, as the main

operating location for the NIPARS Program. SCT's offices are within one mile of Wright-Patterson Air Force Base, the location of AFLC's Headquarters and the ILC.

**FIGURE 1**  
**Historical FMS Requisition Performance**



As the prime contractor on one of the largest contracts administered by the Wright-Patterson Contracting Center, SCT leads a team of five subcontractors who provide the services required under the contract. Peterson Builders Inc. (PBI), of Sturgeon Bay Wisconsin, and Charles V. Clark (CVC) Inc. of Dayton, Ohio, are responsible to SCT for providing nonstandard item purchasing services. These firms have extensive experience providing requisition services (research, purchasing, inspection, packaging, and shipping) for both the U.S. government and foreign countries. KRUG International Corporation of Dayton, Ohio, is responsible for providing NIPARS task order reengineering services, including reverse engineering, drafting, and documentation support. Bahan Dennis Inc., also of Dayton, Ohio, provides policy and quality oversight and assistance in responding to technical service task orders. Liaison with ALC personnel and additional study/analysis task support are provided by United International Group (UIG) of Salt Lake City, Utah. Figure 2 depicts the team makeup and shows the functional relationships between the NIPARS team members.

FIGURE 2

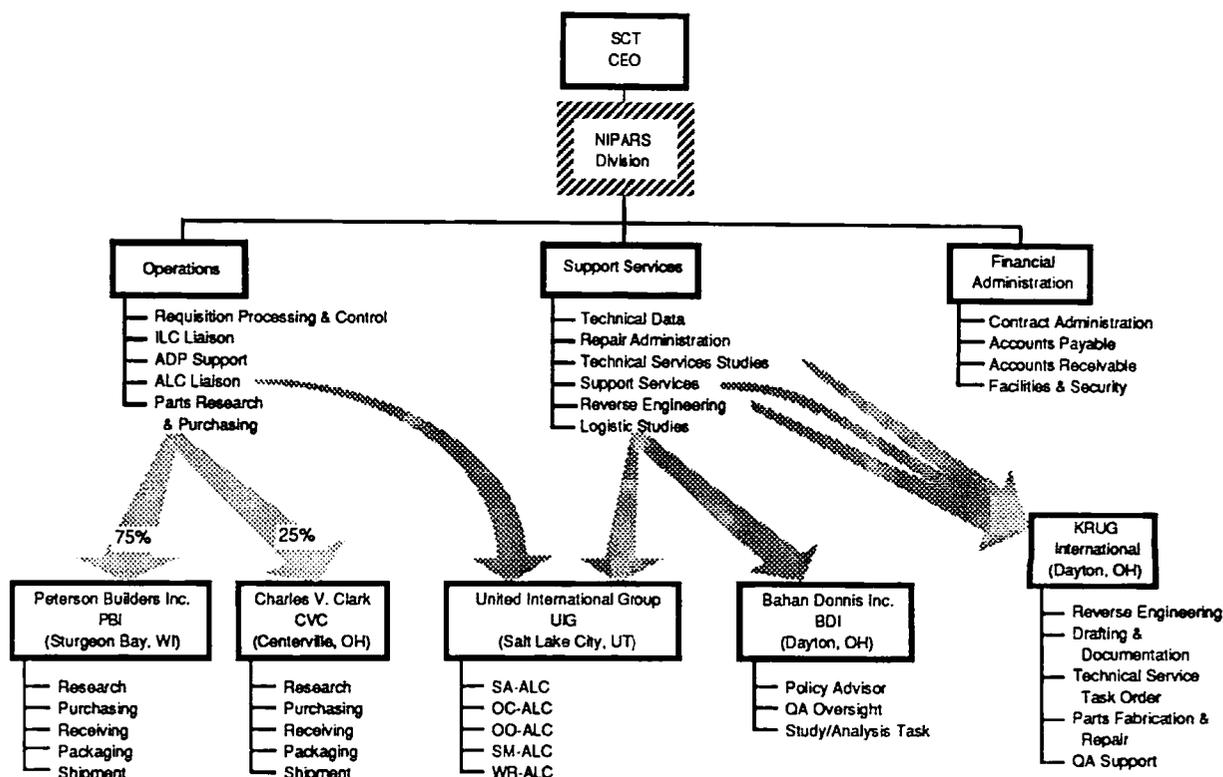


Figure 3 shows a summary of the functional tasks associated with the NIPARS contract. Simply stated, the contractor receives the electronically transmitted requisitions from the ILC, researches and identifies the required item, locates a source of supply, receives/inspects/packages the part, and delivers it to a freight forwarder designated by the country. The contractor is required to pay the vendor and then send an invoice to the U.S. government. Figure 4 graphically depicts the flow of requisitions, parts, status reports, and funding as required by the NIPARS contract.

FIGURE 3

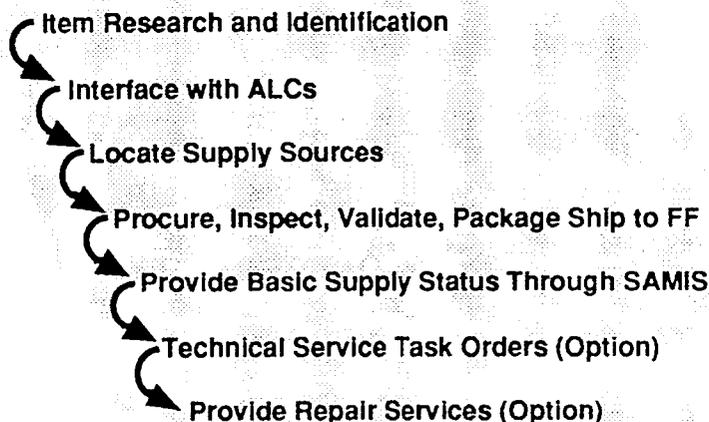
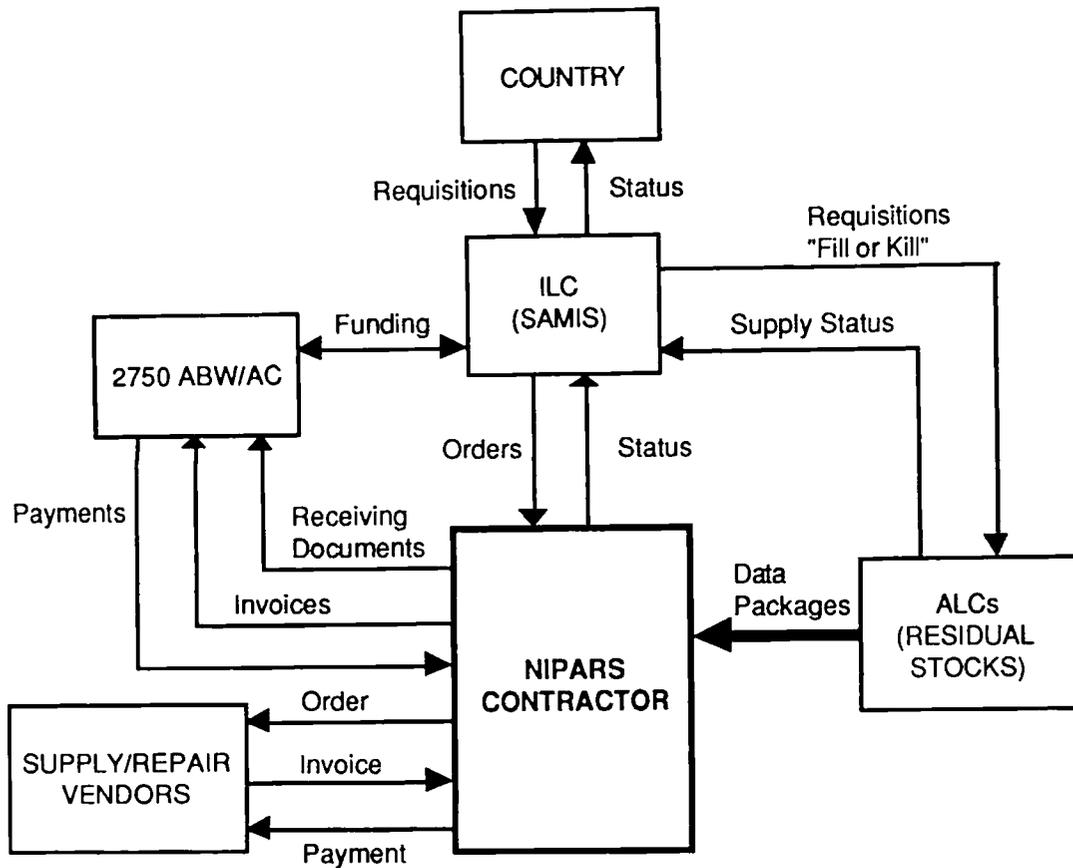


FIGURE 4

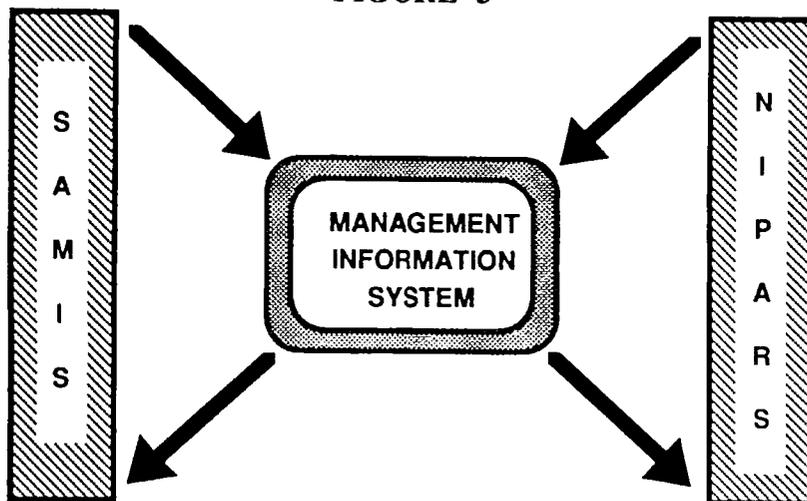


After a four-month phase-in schedule, the NIPARS organization at SCT is now fully operational, receiving and processing, with only a few specific exceptions, all requisitions for nonstandard items which support AFLC's FMS customers. In addition to providing parts support, the contract contains the capability for the contractor to provide task order support to customers requesting engineering support. The contract also contains an option for processing repair orders for components on a repair and return basis. This option has been exercised and repair operations are scheduled to begin in April, 1991.

## CONTRACTOR MANAGEMENT INFORMATION SYSTEM

At the heart of the contractor's operation is the automated management information system (MIS) that was designed by SCT from the ground up to support NIPARS requirements. The basic goal of SCT's MIS is to provide an automated interface between the ILC's Security Assistance Management Information System (SAMIS) and all NIPARS team members. See Figure 5.

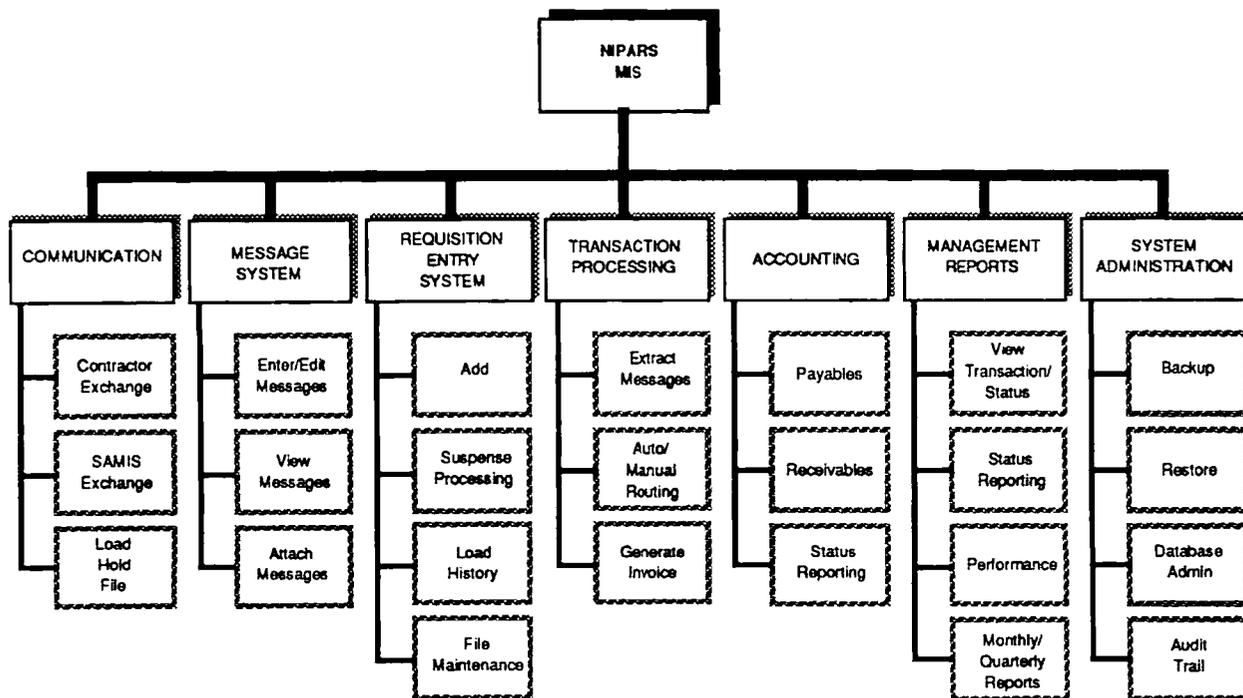
FIGURE 5



A major portion of the MIS is devoted to transaction processing and status reporting. As a totally comprehensive MIS, it also provides office automation and integration of the functions shown in Figure 6 and listed below:

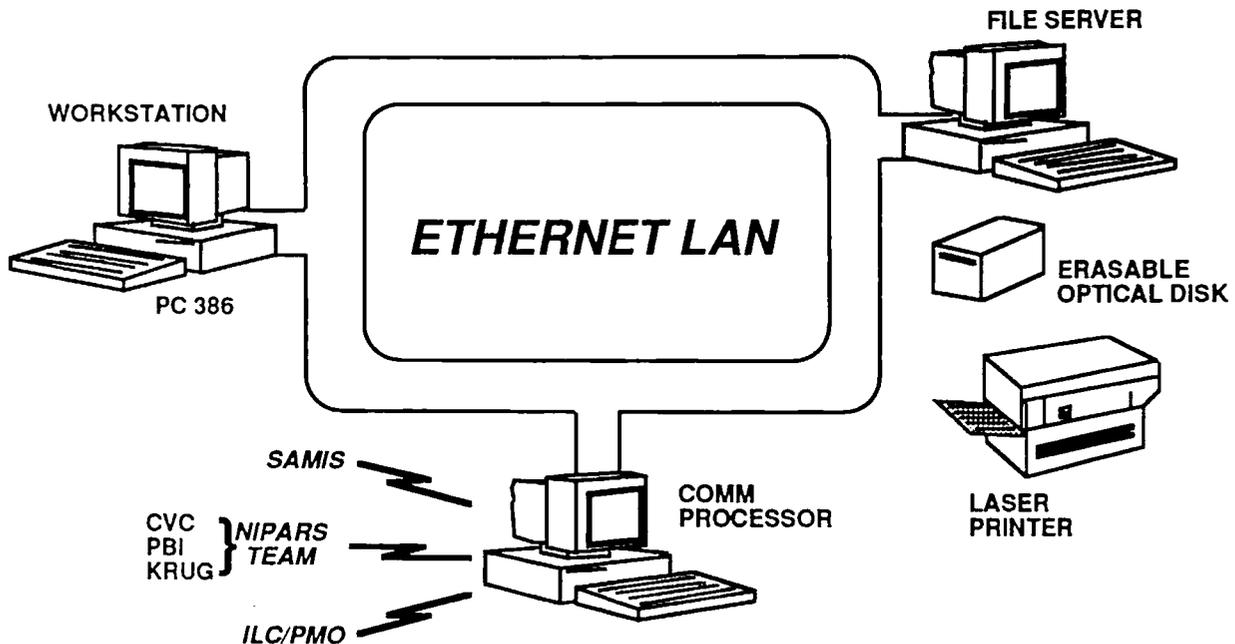
- Communications
- Requisition Entry System
- Accounting
- Message System
- Transaction Processing
- Management Reports
- System Administration.

FIGURE 6



SCT's MIS workstations provide connectivity within its Fairborn, Ohio office facility, and between SAMIS and NIPARS team members, built around a series of personal computers. The file server and communications processor are dedicated PCs that are sized significantly larger than the workstations. Peripheral devices include multiple laser printers to support office automation and report generation, as well as impact printers to support document preparation. Figure 7 contains a simplified diagram of the entire system.

FIGURE 7



The MIS software was developed by SCT programmers and was based upon a highly successful system that was already in operation by PBI (one of the prime contractor team members) to support the U.S. Navy's Simplified Parts Acquisition Program (SIMPAC). Some of the numerous software improvements that were made to support NIPARS requirements included:

- Edit routines to ensure that all fields in a requisition are valid, adequate, and complete;
- Tables to identify valid country codes, status, acquisition codes, and funding codes;
- Processing routines to calculate prices for processing specified requisition categories; and
- Report generation routines to keep managers advised of program status.

A prototype hardware and software system was completed and demonstrated prior to award of the contract. Immediately after contract award, the production system was tested using actual requisitions. The demonstrated ability of the MIS to support instantaneous status retrieval provides both contractor and ILC personnel with the information necessary to quickly react to problems and focus the necessary resources on problem requisitions.

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## CONTRACTOR PERFORMANCE STANDARDS

Keeping in mind that the goal of the NIPARS effort is to improve service to security assistance customer countries, the ILC managers have selected two primary measures of success—fill rate and PALT.

Fill rate is defined as 100 percent minus the cancellation rate and is, ideally, the percentage of total requisitions that are satisfied by delivery of the item. Items that are cancelled by the customer after the contractor provides a price quote are counted as filled. The ILC has established an initial minimum fill rate of 70 percent for the NIPARS Program.

PALT is the elapsed time from receipt of requisition until the item is on contract with a vendor supply source. The ILC has established an initial PALT standard which requires that 50 percent of the requisitions be on contract with a vendor within 60 days.

We anticipate that, through the use of multiple database search services, an efficient purchasing system, and support from SCT's MIS, the ILC minimum goals will be exceeded. The SCT team proposed to fill 70 percent of all requisitions during initial operation and step up to a fill rate of almost 90 percent by the end of the second year of operation. SCT also proposed a PALT standard of 50 percent of the requisitions on order within 60 days during initial operation, increasing to 90 percent by the end of the third year of operation. These proposed standards were incorporated into the NIPARS contract and are now contractual requirements which the contractor must meet.

The contract requires SCT to process (i.e., place on- contract, ship, or cancel) all requisitions within 180 days of receipt from SAMIS.

## IMPACT ON SECURITY ASSISTANCE CUSTOMERS

From an SA customer's vantage point, the actions required to acquire nonstandard support are now somewhat simpler. The five percent administrative surcharge prescribed for FMS cases for nonstandard articles is not applicable if a contractor is designated as the source of supply (DOD 7290.3-M *FMS Financial Management Manual*, Section 705). This means that the three percent administrative charge will apply, and the establishment of separate nonstandard spares cases is no longer required; nonstandard items can be requisitioned against standard spares cases.

The overall cost to security assistance customers of requisitioning items through the NIPARS program is quite a bargain. The price of the contractor's services is less than what had been anticipated when the program was designed. Rather than paying a percentage of materiel value for materiel handling (which can typically range anywhere from thirty to over one hundred percent per order), the customer will pay a fixed price per requisition for the contractor's services. Figure 8 provides a matrix of these fixed prices. Based upon the total anticipated dollar value for materiel provided under the contract, fixed price payments made to SCT for services will be equivalent to about six percent of the material value.

Included in this price are the following contractor-provided services:

1. Item research;
2. Collection/preparation of technical data;
3. Communication with USAF and foreign customers;
4. Vendor source location;

5. Obtaining vendor price quotes;
6. Subcontract award/management;
7. Quality assurance oversight/enforcement with vendors;
8. Item receipt, inspection, validation, packaging, and shipping to country freight forwarder; and
9. Requisition status reporting.

**FIGURE 8**

**NIPARS Contractor Fixed Prices for Services  
(Two-Year Basic Contract Period)**

<u>Requisition Number*</u>	<u>Requisition Value</u>	
	<u>\$0—\$2,500.00</u>	<u>\$2,500.01—\$100,000.00</u>
1 - 10,000	\$108.80	\$332.40
10,001 - 20,000	102.86	314.38
20,001 - 30,000	99.40	303.54
30,000 - 40,000	98.27	299.12
40,001 - 50,000	81.50	171.16
50,001 - Completion	76.68	129.04

**NIPARS Contractor Fixed Prices for Services  
(One Year Option Periods)**

<u>Option Year</u>	<u>Requisition Value</u>	
	<u>\$0—\$2,500.00</u>	<u>\$2,500.01—\$100,000.00</u>
1	\$89.36	\$222.07
2	92.12	229.98
3	95.00	238.21

\* Requisition number applies to the chronological order by initiation into the Security Assistance Management Information System (SAMIS).

In addition to the fixed price for services performed, the contractor may, on a quarterly basis, earn an award fee. The objective of the award fee is to motivate the contractor to provide superior performance, and to emphasize to the contractor key areas of concern. The contractor will be entitled to an award fee based upon the ILC's subjective evaluation of overall performance in the following areas, as established in the contract:

1. Increased requisition fill rate ( i.e. , higher than the minimum contract requirement for that quarter).
2. Reduced PALT (i.e. , shorter than the minimum contract requirement for that quarter).
3. Effectiveness of the contractor's quality assurance activities (e.g., reduction in validated Reports of Discrepancy, results of random inspections of contractor/vendor facilities, individual orders, etc. ).

4. Administrative efficiency (e.g., reduced materiel prices, timely status updates, timely update of DOD catalog price data).

5. Overall responsiveness to U.S. government or country representatives.

In addition to the above, the contractor may be rewarded for superior performance relative to any special interest items identified at the outset of any evaluation period.

Funding for the award fee will come from a special award fee account that has been established in the Accounting and Finance Office at Wright-Patterson AFB, which will make all payments to the contractor. When the contractor submits final billing for a requisition, a predetermined amount of money, based upon the value of the requisition, will be added to the amount billed to the FMS case. This money will be held in the award fee account until such time that it is paid to the contractor. Figure 9 shows the maximum award fees billed to an FMS customer for a requisition.

**FIGURE 9**  
**NIPARS Award Fee Schedule.**

<u>Requisition Value</u>	<u>Award Fee Amount</u>
0.00 - 100.00	0.00
100.01 - 500.00	10.00
500.01 - 2,500.00	50.00
2,500.01 - 10,000.00	200.00
10,000.01 - 25,000.00	500.00
25,000.01 - 50,000.00	1,000.00
50,000.01 - 100,000.00	2,000.00
100,000.01 and GREATER	4,000.00

The total award fee available in any given quarter is determined by the number of requisitions billed to FMS customers during the previous quarter. Therefore, the amount available is not guaranteed, and the contractor's performance will be rated to determine what portion of the total available award fee has been earned. If a contractor earns only a portion, or none of the amount available in a quarter, and there are funds remaining in the account, the amount billed to the customer will be downward adjusted or suspended, so that only the amount needed to replenish the account is collected.

## ITEM RESEARCH

Perhaps the single area that will most influence the success or failure of the NIPARS program is an efficient procedure for quickly locating sources for supply and repair of nonstandard items. The NIPARS team concept enhances the probability of funding sources by functionally combining the expertise of two team members who have had considerable experience locating the "hard-to-find" sources. By using more than a single research team, the number of different search methods and services are increased.

The NIPARS team also furnishes the ILC with the combined capabilities of such commercial supply and logistics database cross reference systems as Ryder's Inventory Locator Service (ILS, Inc.) and NSA's PartsMaster. Each of these systems has its own features and particular advantages such as ease of use, comprehensive procurement history, part number and NSN search

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capability, comprehensive search, on-line vs. off-line capability, frequency of update, etc. The primary advantage is that the entire spectrum of supply sources is covered.

## **REQUISITION/ORDER PROCESSING**

When a requisition for a nonstandard item is initially received in SAMIS, SAMIS requests funds approval from the Accounting and Finance Office (AFO) at Wright-Patterson AFB. The amount requested is the amount that the SA customer would have to pay SCT if the customer were to cancel the requisition after SCT had provided a price quote. The AFO in turn requests case/line obligation authority from the Security Assistance Accounting Center (SAAC). Upon receipt of obligation authority from SAAC, the AFO reports funds approval to SAMIS. SAMIS then passes the requisition to SCT, and sends Military Standard Requisitioning and Issue Procedures (MILSTRIP) status codes "BU" or "BW" to the customer, indicating that the requisition is being processed through NIPARS.

Upon receipt of the requisition, SCT researches the item, locates vendors, and obtains price quotes. SCT then provides a formal price quote to the ILC for inputting special NIPARS status code "PQ" into SAMIS. This price quote includes the vendor price for materiel and SCT's fee for filling the requisition. SAMIS checks internal records for sufficient case funds. If sufficient case funds are not available, SAMIS notifies the ILC case manager and provides options to either cancel the requisition or resubmit the funding request after obtaining additional case/line funds. Otherwise, SAMIS updates the requisition value to the total cost of filling the requisition and requests additional obligation authority through the AFO from SAAC. Upon receipt of updated funds approval from the AFO, SAMIS responds to the "PQ" with special NIPARS advice code "OK," which constitutes legal acceptance of the price quote and authorizes SCT to award a subcontract.

After SAMIS responds to the "PQ" with "OK," SAMIS transmits MILSTRIP status code "B7" (unit price update) to the SA customer. This transaction includes the vendor price of the item, SCT's fee, and an award fee amount, reflected as a unit price for the item (i. e., the total price the SA customer is obligated to pay divided by quantity).

When SCT has awarded a subcontract for the item, SCT inputs MILSTRIP status code "BV" into SAMIS, indicating that the item is on subcontract.

## **SA CUSTOMER AWARENESS OF SIGNIFICANT PRICE INCREASES**

When a SA customer submits a requisition to the ILC, it has agreed to accept the associated costs of filling that requirement. The customer may have a reasonable estimate of costs to be incurred, based upon recent procurements or catalog prices. By their very nature, however, nonstandard items may experience disproportionately large cost increases associated with production (e. g., start-up costs, costs associated with reverse engineering, etc.).

To preclude unexpected costs or price increases to the SA customer, SCT is required to obtain customer concurrence, prior to formally quoting a price in SAMIS, if the price quote meets one of the following criteria:

- The current quote value for the requisition is between \$2,500 and \$10,000, and unit price exceeds by twenty-five percent or more the last procurement unit price adjusted to reflect current year dollars.

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- The current quote value for the requisition is greater than \$10,000, and unit price exceeds by ten percent or more the last procurement unit price adjusted to reflect current year dollars; or
  - The current quote for the requisition is greater than \$1,000, and fifty percent or more of the requisition's cost is comprised of one-time start-up charges.

If the SA customer does not concur with the price and chooses to cancel the requisition the customer must pay SCT a cancellation fee. This fee compensates SCT for the effort involved in researching the requisition, determining vendor sources, and obtaining price quotes. If the customer concurs with the price, SCT proceeds to input the price quote into SAMIS using status code "PQ," as outlined above.

## THE PATH TO SUCCESS

The NIPARS Program has the potential to function as an ALC. Successful performance will determine the growth and future potential of the NIPARS Program. Success will be measured by how well the goals of fill rate and PALT are met or exceeded with no adverse impact upon the quality of delivered materiel. Adequate vendor sources of supply, manufacturing, repair and engineering will be a key factor in the growth formula.

The ILC and SCT management believe that, as a commercial concern operating under a government contract, SCT can more easily attract and maintain the interest of those vendors and streamline the entire acquisition process. In particular, we believe that the following attributes will enable SCT to do so:

1. SCT can more quickly negotiate licensing and royalty arrangements with original equipment manufacturers for the use of drawings and subcontracts with job shops for production;
2. SCT can generally use commercial practices for pricing vendor contracts which will be important and attractive to small vendors;
3. SCT can pay for materiel within 30 days after delivery without waiting for an often delayed U.S. government inspection; and rapid payment may be critically important to small vendors;
4. SCT can more easily procure offshore, which is important because many foreign vendors are licensed to produce items long after CONUS production has ceased; and
5. SCT can electronically notify all know foreign users of an item that an opportunity exists to consolidate world-wide requirements.

## SUMMARY

The AFLC Air Logistics Centers were originally established primarily to support the active USAF weapon systems inventory and, when fully funded, they are able to do so. That support includes the use of the standard supply system, which is designed to process National Stock Numbers. As a result, it is no surprise that the AFLC procurement system is geared towards buying current weapon system NSN items, in large quantities, for stockage and distribution from wholesale warehouses. Conversely, the SA customer countries require support of older weapon systems which are no longer in the AFLC system, and in many cases, order items that were never provided by AFLC. Often these items have only part number identification, and more often than not, are for

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small quantities. The NIPARS program provides an opportunity to apply innovative and modern procurement practices to satisfy what had become a growing logistics problem.

The performance figures cited earlier in this article needed improvement. The ILC's desire was to set up another system to meet the SA customers' requirements on a self-supporting basis—thus the NIPARS Program.

To summarize, the NIPARS Program offers a new opportunity, a new avenue, to obtain nonstandard items, particularly out-of-production and almost out-of-production parts for the USAF's SA customers. The ILC is enthusiastic about the program and is committed at all levels to making it work.

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