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# NAVAL POSTGRADUATE SCHOOL Monterey, California



## THESIS

**AN ANALYSIS OF FOREIGN MILITARY SALES  
LOGISTICAL SUPPORT**

by

Christopher Wirth

June 2002

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**AN ANALYSIS OF FOREIGN MILITARY SALES LOGISTICAL SUPPORT**

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Submitted in partial fulfillment of the  
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**MASTER OF SCIENCE IN MANAGEMENT**

from the

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## **ABSTRACT**

This research describes how Foreign Military Sales aviation logistical support will be provided for in the future based on changes currently taking place in the Department of Defense, Department of the Navy, Department of the Air Force, and private industry. Information on the current system was gathered through a thorough review of literature. Outsourcing and privatization efforts by the Department of Defense, especially in depot privatization, will affect the way that aviation logistical support is provided in the future. With a decade long reduction in American defense spending, private industry is increasing the emphasis on providing aviation logistical support through contractual agreements as another method of creating revenue and maintaining production lines. Third party companies have emerged as an important entity in the logistical support field, providing specialized support to the Department of the Navy, Department of the Air Force, private industry, and foreign customers. The Department of the Navy, Department of the Air Force and private industry each has their own advantages and disadvantages in providing aviation logistical support. The findings conclude that aviation logistical support will be increasingly provided through Department of Defense outsourcing programs, and that private industry is seeking to increase its participation in this area of logistical support.



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# I. INTRODUCTION

## A. BACKGROUND

With pressures to downsize the workforce (military and government civilians) and consistent reductions in the defense budget, the intensity supporting the movement to reform Department of Defense (DoD) the acquisition process has been unwavering. Outsourcing, privatization, and acquisition reform initiatives occurring today in the United States Government and the DoD, and the subsequent influence on private industry, will have a direct effect on the way that Foreign Military Sales logistical support is provided. Additionally, the development of third party logistics suppliers and a diminishing defense industry base currently disposed towards providing contractual support for their own systems will affect the future of Foreign Military Sales logistical support.

### 1. Security Assistance

Security Assistance began as a foreign policy tool of the United States Government during the Truman administration. A definition of the term “security assistance” includes transfer of defense related materiel, services, training, and economic assistance to friendly countries in a calculated effort to strengthen their national security; thus, our own. In an address to Congress in 1947, President Truman spoke on the importance of security assistance in foreign policy.

I believe that it must be the foreign policy of the United States to support free people who are resisting attempted subjugation by armed minorities or by outside pressures. The free peoples of the world look to us for support in maintaining their freedom. If we falter in our leadership, we may endanger the peace of the world, and we shall surely endanger the welfare of our nation. [Hovey, 1965]

This pronouncement of policy, in what was to be designated the “Truman Doctrine,” essentially stated that wherever armed aggression threatened peace was a threat to the United States. As a result, President Truman initiated a number of programs that have come to be known collectively as security assistance. The Military Assistance Program (MAP), aid in the form of a grant, was the first of these programs designed to support the often complicated foreign policy of the United States. The Truman

administration's of security assistance, which would eventually progress from aid in the form of grants to the sale of armaments, was the result of the expansionistic strategies of the Soviet Union following the end of the Second World War; an expansionistic strategy that would be in direct conflict with the Truman Doctrine and result in the Cold War.

Originally, the United States supplied military materials and services in the form of grants to our allies since their post-Second World War economic condition prevented them from manufacturing or purchasing the required materials to maintain a realistic defense against possible Soviet onslaught. A myriad of legal and legislative regulations and appropriations administered the programs. In 1949, the North Atlantic Treaty Organization (NATO) was formed; Congress then passed the Mutual Defense Assistance Act of 1949. This act was the foundation of the Mutual Security Acts of 1951 and 1954, and by 1960, a multitude of military aid programs averaged over \$2 billion a year in exports [Thayer, 1969]. This hurried response to communist aggression led the Eisenhower administration to form a committee to study the entire MAP effort. This committee proposed a number of recommendations regarding the organization and administration of the program, which the President forwarded to Congress. As the Kennedy administration moved into the White House, Congress began to restructure MAP.

The Kennedy administration was quickly tested by a number of crucial foreign policy quandaries with Cold War nuclear policy, turmoil in Latin American, and increasing instability in Southeast Asia, were to have a direct bearing on the future of security assistance. Foreign policy initiatives by the administration, and changes in the MAP by Congress, greatly altered the programs concerning any foreign assistance plans. These national policy changes during this period gradually displaced grants of military aid for more profitable military sales.

## **2. Foreign Military Sales**

The Foreign Military Sales (FMS) program manages government-to-government purchases of defense systems, services and training. An eligible country buying weapons through the FMS program does not deal directly with the contractor or manufacturer. The foreign country pays a surcharge related to the sale to the United States Government, which is used to subsidize costs associated with the transaction. The DoD serves as a

liaison, typically handling procurement, delivery, and frequently providing system support and training. A significant feature of the FMS program is the responsibility of ensuring access to adequate logistics support for systems sold to FMS customers.

### **3. Foreign Military Sales Logistics Support**

After a foreign country has concluded the purchase of a system, it is essential that arrangements be initiated to ensure continual logistical support. A coherent organization for logistical support is required to sustain a defense system at a specified level of readiness, or incorporate required modifications to a system after it has been purchased.

The DoD Defense Security Cooperation Agency (DSCA) was created to direct, manage, and supervise DoD security assistance programs with guidance from the State Department. Under the FMS program, an approved foreign country may purchase materials from DoD stockpiles or through DoD procurement programs for defense items, services or training. DSCA can furnish FMS grants and loans to allow qualified foreign countries to procure U.S. defense systems, components, services or training. DSCA directs and oversees FMS program specifics to the implementing commands within the chosen armed services.

Within the U.S. Navy, FMS logistical support is managed by a designated integrated country program manager in the Naval Inventory Control Point, International Programs Directorate (NAVICP-OF) with guidance from the Naval International Programs Office (Navy IPO).

The Air Force Security Assistance Command (AFSAC) administers FMS logistical support in the U.S. Air Force under supervision of a selected country director from the office of the Deputy Under Secretary of the Air Force/International Affairs (SAF/IA) division. AFSAC is responsible for the management of logistical support that is provided by the Air Force Materiel Command (AFMC).

The FMS program was developed to allow the FMS customer to coordinate logistical support in arrangements with only one U.S. Government activity. The FMS customer has other options for acquiring logistical support outside the FMS program. In addition to the FMS program, the most common forms of logistical support are direct commercial sales (DCS) and third party support.

#### **4. Direct Commercial Sales**

A direct commercial sale refers to contractor support, commercial support, and direct support. DCS support exists when the FMS customer decides to obtain logistical support directly from the weapons systems manufacturer, or other commercial supplier instead of through the FMS system. Logistical support items sold under commercial contracts must be licensed under the Arms Export Control Act. This restriction prevents some items from being included in logistical support. DCS can be chosen for any number of reasons. Generally the commercial support option will yield more flexible and responsive support than the FMS program.

#### **5. Third Party Logistics**

A third party logistics provider is essentially a company that provides one or more of the logistics functions for a company. Third party companies often specialize in a few key logistics functions. Services important to logistical support include transportation, freight forwarding, and inventory management. In the case of FMS logistical support, the third party provider can work under contract for the U.S. Government, the manufacturer, or the FMS customer. In each case, the third party provider performs specific logistics functions such as requisition administration or inventory management.

#### **6. Outsourcing and Privatization**

The entire U.S. Government is under increasing pressure to downsize. Over the last decade, the DoD has substantially reduced the size of its force structure. However, defense operations and support costs have not decreased proportionately to the size of the new force (General, 1999). As a result, the DoD is under pressure to reduce spending in operations and support to utilize the funds for new weapons and equipment modernization.

The DoD is considering outsourcing and privatization alternatives, where possible, to reduce size and save money. Privatization efforts in the DoD extend across all functions. Examples within the DoD include privatization of military construction, utilities, and morale and welfare services. Current discussion of privatization extends into the DoD aviation depot-level maintenance system, where a large amount of the FMS logistical support is provided. The debate involves the greater use of private contractors to accomplish work traditionally done in depots. A brief review of depot tasks conclude



that numerous tasks done by the depots are similar to the ones handled competitively in the private sector. Both cost savings and performance improvement are cited as potential benefits of depot privatization. Outsourcing and privatization efforts within the DoD, combined with future changes in how industry supports its weapon systems, will be the primary factors that affect how FMS logistical support is provided in the future.

#### **B. RESEARCH OBJECTIVE**

The research objective is to describe how logistical support could be provided by private industry in the future based on changes taking place in the DoD and private industry today. Specifically, the research focuses on past outsourcing and privatization efforts affecting logistical support and current outsourcing and privatization initiatives, and the impact on FMS logistical support. The research questions provide the necessary historical perspective and current information on industry trends to offer credible conclusions.

#### **C. RESEARCH QUESTIONS**

The research questions are designed to provide the necessary information on FMS logistical support and its related subjects. The answers lead to a comprehensive understanding of FMS logistical support and an answer to the research objective.

- Question 1. What essential functions of FMS logistical support does the DoD provide its FMS customers?
- Question 2. What FMS logistical support functions have previous outsourcing and privatization efforts undertaken within the DoD?
- Question 3. What FMS logistical support functions does private industry currently provide?
- Question 4. What are the trends in FMS logistical support in private industry?

#### **D. SCOPE AND LIMITATIONS**

The focus of the research is primary limited to the study of logistical support provided to DoD FMS customers, outsourcing and privatization efforts within the DoD, and industry trends in providing FMS logistical support. Logistical support efforts by the other services and industry efforts targeted at the other services are not of primary importance.

## **E. SUMMARY**

This chapter establishes the focus of this research effort. Security Assistance is an important part of our National Security Strategy. The FMS program is an important component of Security Assistance. It follows that providing logistical support is an important component of the FMS program. Increased outsourcing and privatization initiatives in combination with the current efforts from industry will change the way FMS logistical support is provided in the future. This thesis attempts to look at changes in how FMS logistical support is provided.

## **F. THESIS ORGANIZATION**

The remaining chapters support the importance of the FMS program, and outsourcing and privatization efforts, specifically outsourcing and privatization efforts in the area of providing logistical support to FMS customers. Chapter II, Literature Review, explains in detail the current state of outsourcing and privatization and the recent history of outsourcing and privatization programs in DoD FMS logistical support. Chapter III, Methodology, presents the methodology used to gather information required to answer the research questions. Chapter IV, Findings, presents the results of the research on industry trends in FMS support. Finally, Chapter V, Conclusions, provides the conclusions and summary of the research.

## **II. LITERATURE REVIEW**

### **A. INTRODUCTION**

This chapter provides the background on the important issues surrounding FMS logistical support. The logistical support concept is subsequently described. This description is essential to facilitate the evaluation of FMS program logistical support and the equivalent commercial methods of furnishing logistical support. A brief explanation of nonstandard item logistical support is presented to illustrate the progression of privatization within the DoD FMS program. The chapter will convey the required information to answer research question one and two.

### **B. OUTSOURCING AND PRIVATIZATION**

The DoD is facing four major problems: No well-defined threat, increasing fiscal/budgetary pressures, a diminishing labor pool and increasing commitments around the world. As the U.S. military has reduced in size over the last decade, it has deployed forces into more areas of the world since the Second World War. Since the breakup of the Soviet Union, the DoD has reduced manpower by over 700,000 active duty military members and 300,000 civilians, yet military forces have been deployed five times more often (Castillo, 2000).

With the quandary of increasing operational commitments and rising fiscal/budgetary pressures, the military has been charged to find ways to lower costs while simultaneously improving the services it provides. One approach to this dilemma that has found favor with many in Government is the outsourcing and privatization of various support functions.

The terms outsourcing and privatization refer to dissimilar levels of governmental participation. Outsourcing is the transfer of a support function traditionally performed by a government organization to an outside service provider, with the government continuing to provide appropriate oversight. Privatization is changing the production of a good or service from the government to the private sector, including the transfer of government owned assets. Privatization is a part of outsourcing, with the loss of assets and control over the good or service, but not all outsourcing is privatization.

The objective of outsourcing and privatization are to replace DoD personnel, achieve improved performance and lower costs. By employing civilians where military service members were previously employed, those service members can be transferred to sections that are currently undermanned. The Government expects economic improvements in performance to come about as a company in the private sector is under continual challenge by competitors, whereas the government is not. A company that continues to exist in a competitive environment is generally very efficient. It is expected that by either hiring the most efficient organization or by becoming the most efficient organization. With either result, government costs are lowered and services are improved.

However, before the DoD undertakes an outsourcing and privatization initiative, the DoD must first understand its own core competencies and ensure the initiative is being carried out with the best probability of success. When discussing logistics support the primary emphasis is to outsource or privatize those functions that are not core to the DoD. The DoD can realize the full benefits of outsourcing and privatizing those logistics functions that do not negatively affect readiness, for once outsourced or privatized those logistics functions will no doubt be extremely difficult to reestablish. In the event of a situation requiring increased logistical support, there may not be enough time to allow DoD personnel to be trained to provide assistance as the urgent situation demands. Accurate identification of DoD core competencies is critical in respect to the consequences of relying on commercial firms. The DoD should select outsourcing and privatization initiatives that bring cost savings, customer service, and mission readiness into equilibrium.

Potential outsourcing and privatization candidates in the area of logistical support include intermediate and depot level maintenance, material management and supply. Privatization of DoD logistics responsibilities is important to FMS customers because the logistics infrastructure also provides FMS logistical support. All outsourcing and privatization initiatives in logistics will most certainly lead to FMS customers receiving more logistical support from government outsourced programs such as the Parts and Repair Ordering System II (PROS II).

In the FMS program, various amounts of non-standard item logistical support have been outsourced since the 1970s. Outsourcing and privatization initiatives have been strongly encouraged in this area. Since a large segment of aviation FMS support is supplied by Navy Depots and Air Force Air Logistics Centers (ALC), outsourcing and privatization programs will affect FMS logistical support. The effect on FMS logistical support will be determined by the amount of support that can be provided by the DoD and what will be supported through outsourcing and privatization programs like PROS II. Recently, outsourcing and privatization initiatives concurrent with DoD depot consolidation and privatization have encouraged commercial companies to enter the logistical support field.

### **C. SECURITY ASSISTANCE**

The FMS program falls under a larger program known as Security Assistance. Security Assistance is a comprehensive program that includes both military and non-military support to other nations. The United States offers security assistance to strengthen friendly nations, promote regional stability, and support developing democracies. The DoD, in the Joint Publication 1-02, defines Security Assistance as:

Group of programs authorized by the Foreign Assistance Act of 1961, as amended, and the Arms Export Control Act of 1976, as amended, or other related statutes by which the United States provides defense articles, military training, and other defense-related services by grant, loan, credit, or cash sales in furtherance of national policies and objectives (JP 1-02, 2001).

This research focuses on the process of providing logistical support to FMS customers.

### **D. FOREIGN MILITARY SALES**

The FMS program provides designated foreign countries with assistance in the purchase and support of weapons systems, services, and training from the United States Government. The Arms Export Control Act of 1976 lists what items can be sold under FMS:

- a. Defense Articles
- b. Excess Defense Articles
- c. Major Defense Equipment

- d. Significant Military Equipment
- e. Defense Service
- f. Design and Construction Services
- g. Training

The Arms Export Control Act of 1976 defines the details within each major category.

To initiate a FMS contract, a foreign country and the U.S. Government sign an agreement, which is documented in a Letter of Offer and Acceptance (LOA). The signed LOA is referred to as a *case* and is assigned an individual code for administrative purposes. It is not the responsibility of the DoD to sell weapons systems. Though, once a foreign country has procured a weapons system, arrangements for the logistical support is required. The DoD becomes involved in the managing the required logistical support through the Defense Security Cooperation Agency (DSCA) and the selected branch of the U.S. Armed Services.

#### **E. FMS LOGISTICAL SUPPORT**

As stated, the FMS customer can procure logistical support separately from the DoD logistics system, mainly through DCS or a third-party provider. Chapter IV explains that process. The remainder of this chapter focuses on DoD logistical support functions, focusing on aviation logistical support through the U.S. Navy and U.S. Air Force.

Established as a separate agency of the DoD, the Defense Security Cooperation Agency (DSCA), under the direction and control of the Under Secretary of Defense for Policy and receiving policy direction and staff supervision from Assistant Secretary of Defense (International Security Assistance), was created to administer and supervise security assistance planning and programs, coordinate the formulation and execution of security assistance programs with other governmental agencies, conduct international logistics and sales negotiations with foreign countries, serve as the DoD liaison with private industry with regard to security assistance activities, develop and promulgate security assistance procedures.

The Defense Logistics Agency (DLA) is a DoD agency under the control of Under Secretary of Defense - AT&L. The mission of DLA is to provide support to the military services, other DoD components, federal civil agencies, and foreign governments. Such support includes the providing of assigned materiel commodities and items of supply, logistics services, contract administration services, and other support services.

The principal Navy organization for handling security assistance matters is the Navy International Programs Office (Navy IPO). Under the direction of the Deputy Assistant Secretary of the Navy for Research, Development, and Acquisition (DASNRD&A), Navy IPO formulates and implements Navy security assistance policy, and interfaces with other government agencies. Detailed management of the Department of the Navy (DoN) security assistance programs occurs at the five systems commands (SYSCOM) and at the Naval Education and Training Security Assistance Field Activity (NETSAFA). Within each systems command and in NETSAFA, a security assistance coordination office oversees and monitors the command's security assistance program. All logistical support is obtained through the Navy Inventory Control Point, International Programs Directorate (NAVICP-OF) under the direction of Navy Supply Systems Command (NAVSUP).

The Office of the Secretary of the Air Force, Deputy Under Secretary for International Affairs (SAF/IA) develops, implements, and supervises security assistance programs assigned to the U.S. Air Force by Office of the Secretary of Defense. It is the office of primary responsibility for the central management and supervision of the Air Force section of security assistance programs for foreign countries. For logistical support provided from Air Force Materiel Command (AFMC) assets, the Air Force Security Assistance Center (AFSAC) processes and supervises the performance of the applicable FMS cases. The Air Force Security Assistance Training Squadron (AFSAT), a component of the Air Education and Training Command (AETC), conducts detailed management of USAF security assistance training cases.

Follow-on is more extensive than supply support. Supply support involves maintaining a stockpile of spares and repair parts. Spares and repair parts will be of no

use to a foreign air force if they cannot be identified or installed correctly to sustain operational readiness. Logistical support includes supply support in addition to the following:

- Publications
- Maintenance
- Training
- Support equipment
- Munitions
- Modifications
- Technical assistance
- Petroleum, oil, and lubricants (POL)

The following is a description of primary logistical support functions within the DoD. These functions form the basic requirements for a comprehensive aviation-based logistical support program.

#### **F. FMS LOGISTICAL SUPPORT FUNCTIONS**

As soon as a weapons system has been delivered, the task of logistical support commences. The DoD does not maintain a separate logistics system to support FMS logistical support. FMS cases supported by the DoD use the existing DoD logistics infrastructure. International Logistics Control Offices (ILCOs) are the military services' organizations responsible for the overall management of the FMS program.

##### **1. International Logistics Control Offices**

The ILCO is the FMS customer's single point of contact for the management of FMS logistical support. NAVICP-OF is the Navy's ILCO, AFSAC is the Air Force's ILCO. Although the ILCOs do not possess any of the FMS logistical support functions, it is responsible for managing them. Foreign Liaison Officers (FLOs) often work directly with the ILCO. The FLO is an FMS customer's official representative, whose job is to manage or monitor their country's FMS programs.

FMS logistical support is separated into cases, which specify the details of how logistical support will be provided. The FMS customer has several options in the types of FMS cases available for logistical support. In the Navy, direct requisitioning procedures (DRP) and Cooperative Logistics Supply Support Arrangements (CLSSAs) are all used



in providing follow-on support. The Air Force, who has the largest FMS aviation logistical support mission, uses defined order cases, blanket order cases, and Cooperative Logistics Supply Support Arrangements (CLSSAs) are all used in providing follow-on support.

## **2. Direct Requisitioning Procedures**

Direct Requisitioning Procedures (DRP) is used in the Navy as ‘general-purpose’ supply cases for repair parts, consumable items, and publications. Requisitioned items are drawn directly from Navy supply stocks. Requisitions are submitted to the NAVICP and may draw items up to a specific funding line established in the FMS case (Follow-On Support, 2002).

## **3. Defined Order Case**

The defined order case is an LOA that specifies what logistical support are required and provides an estimation of the expected cost. Only items listed on the defined order case is provided. Defined order cases are often used to procure all types of logistical support. Defined order cases are often used to purchase the initial logistical support items in combination with a weapon system purchase. They are also used to request logistical support requirements that do not fall into the other categories, such as additional training that was not covered under an initial purchase.

## **4. Blanket Order Case**

The blanket order case is an agreement between the FMS customer and the U.S. Government for a specific category of logistical support items or services. The case specifies a dollar limit against which orders may be placed without specifying which items are required.

## **5. Cooperative Logistics Supply Support Arrangement (CLSSA)**

Both the Navy and the Air Force utilize CLSSA. The CLSSA is a FMS agreement for the supplying of secondary logistical support items from the U.S. logistics systems to a FMS customer in support of a specific weapons system. The CLSSA program can provide more timely logistical support because the CLSSA participant becomes an affiliate in the DoD supply system. CLSSA support is further divided into two Foreign Military Sales Order (FMSO) cases.

FMSO I, or stock level case, defines the FMS customer's investment for augmenting DoD stocks and initiates the arrangement. No materiel is transferred to the customer as a direct result of the FMSO I. The FMSO I will remain for the duration of the CLSSA. It can be renegotiated as necessary when a change is required in the investment level necessary to support the country's actual withdrawals.

FMSO II, or requisition case, is a program that allows the FMS customer to order spares and repair parts as they are consumed for the replenishment of in-country stockpiles. The customer's payments under the FMSO II program assist to replenish materials withdrawn from DoD stockpiles and to maintain the FMS customer's level of investment in the U.S. DoD inventory.

#### **6. Life of Type Buys**

When a U.S. service terminates support for a particular weapons system, it is standard practice to offer remaining inventories to FMS customers that also own the system. If this option is offered to a customer, the customer must identify the remaining spares and repair parts they want to purchase. After the final offer, no further logistical support is provided for that system.

The cases described above provide the basic means for arranging logistical support. The type of support needed will determine the most appropriate case. If an FMS customer knows exactly what it wants, a defined order case is appropriate. However, if the customer wants full support, but is restricted by funding, a blanket order might be the best strategy. CLSSA is effective for ongoing support of standard reparable and consumable components.

#### **G. NON-STANDARD ITEM SUPPORT EVOLUTION**

Non-standard items are defined as items that are not handled by typical DoD supply channels, such as NAVSUP or AFMC. Non-standard items come about for a number of reasons. Sometimes a FMS customer desires a non-standard configuration intended specifically to suit their unusual requirements. Or an item becomes non-standard after the service branch discontinues using the item, as when an aircraft type is retired from the inventory. There are other situations that lead to non-standard items, but all lead to the problem of how to provide logistical support for the non-standard item.

Before 1971, there was no standardized program for handling non-standard item requisitions. Non-standard item support was conducted on an individual basis. Because the number of non-standard item requests was low, the lack of standardized non-standard item support procedures was not perceived as a problem. However, as the number of weapons systems sold multiplied, the number of non-standard items increased, making it all too evident that an improved method of supplying non-standard item support was necessary. Non-standard item support involves the same functions as standard item support. However, because there were no formal procedures to simplify the process of setting up a non-standard support case, this led to different FMS customers receiving dissimilar levels of support by various means. Since the Air Force supports the largest percentage of FMS aviation logistical non-standard item support, they assumed the lead in developing set procedures. Since 1971, the evolution of non-standard item support has progressed from Contractor Operated Depot (CONDEPOT) to PROS II.

### **1. Contractor Operated Depot**

The CONDEPOT was a direct result of the Peace Hawk program, which provided Northrop F-5 aircraft and the required logistical support to the Royal Saudi Air Force (RSAF). Since the F-5 was never in widespread use by the Air Force, the DoD realized that the sheer numbers of non-standard items to support this program would overwhelm the traditional process of non-standard support. Under the Peace Hawk program, DoD contracted with Northrop Air Division (NAD) to provide contractor operated supply and repair facilities for non-standard items. NAD would essentially run a customized depot to support the RSAF. NAD provided supply support, configuration management, technical publications, and warehousing. The CONDEPOT system was in use from 1971 to 1976. As the number of non-standard items continued to grow, the system was again modified. No other FMS customers used the CODEPOT program, so the problem of standardized procedures continued.

### **2. Nonstandard Item System Support**

The Nonstandard Item System Support (NISS) program was the DoD's second attempt at non-standard item support. Under NISS, a series of non-standard item system support procedures was developed to support all non-standard items; though, it was utilized by the RSAF only. The NISS process covered:

- Requisition and Distribution of Items Based on RSAF Demands
- Non-Standard Item Procurement and Manufacturing Capability
- Cataloging of Non-Standard Items
- Overhaul, Repair and Modification Capability at NAD Depot
- Engineering and Maintenance Analysis
- Maintain Technical Orders and Northrop Technical Manuals for the F-5
- Configuration Control

Under the NISS process, NAD no longer furnished warehousing for F-5 non-standard items. The entire stock of F-5 logistical support items for the RSAF that NAD maintained was transferred to Saudi Arabia. DoD employed the NISS program from 1977 to 1979.

### **3. Nonstandard Item Support**

The Nonstandard Support (NSIS) program was the next step in the non-standard item support process evolution. NSIS was adopted for all FMS customers in search of non-standard item support. NSIS improved upon the earlier NISS effort by providing for prearranged contracts for non-standard systems by negotiating contracts with subsystem manufacturers and writing contracts for spare parts procurement, depot level maintenance, and technical services.

The concept of providing non-standard item support had moved from managing requests individually to a uniform DoD program. This presented all FMS customers with a standard level of service.

### **4. Non-standard Item Parts And Repair System**

Non-standard Item Parts Repair System (**NIPARS**) was adopted in 1990 by the Air Force to replace NSIS. NIPARS was DoD's next attempt to improve and standardize the FMS aviation logistical support for non-standard items. NIPARS succeeded in eliminating all non-standard FMS cases, all FMS customers requiring non-standard item support would be served through NIPARS. NIPARS further simplified procurement for the FMS customer by establishing a permanent contractor-operated organization, with standardized procedures for providing non-standard item support. NIPARS provided improved logistical support for non-standard items with reduced lead and order turnaround times (Brown 1993). The NIPARS contractor provided purchasing functions

for FMS customers while the DoD managed accounting and provided contract supervision responsibilities.

## **5. Parts and Repair Ordering System**

With the success of the NIPARS, the Air Force (under AFSAC) extended and increased the scope of the NIPARS program under the new title of Parts and Repair Ordering System (PROS). Principally from FMS customer involvement and the U.S. Government drive for privatization, the PROS program was extended to provide support for all spares, not only non-standard items. The program was designed to provide a wide range of support options, while minimizing costs.

The objective of the PROS program is to provide a service that will be the ideal choice for the FMS customer when selecting a logistical support preference. Providing a wide selection controls costs through increased use by FMS customers. By utilizing a private contractor under a fixed fee plus incentive contract, AFSAC expects the contractor to increased quality assurance and competitive bids from vendors, ensure timely contract award and delivery, and reduce cancellation rate to below four percent. The PROS contract was awarded to Science Applications International Inc. (SAIC), San Diego, CA. The contract ran from February 1996 to February 2001.

The Parts and Repair Ordering System II (PROS II) is the improved PROS program under a new contractor. A major procurement system managed by AFSAC to satisfy logistics requirements for Foreign Military Sales (FMS) customers, PROS II provides a capability to purchase a wide range of standard and nonstandard supply parts and repair services. PROS II also provides a vehicle for contracting for specialized engineering and technical services through task orders.

The PROS II Program functions much the same as an Air Force Air Logistics Center. The PROS II contractor is responsible for the purchase of ordered items and components and maintenance services. The PROS II program office at AFSAC supervises the contractor's performance and oversees the FMS customers' orders and requirements received by the contractor.

As with PROS, the goals of PROS II are to provide quality service, competitive pricing, and timely support to the FMS customer. These goals will be surpassed while

providing delivery of materials and services within the FMS customer's required time limit. The PROS II program overall goal is to provide 'one stop shopping' for the FMS customer.

Lear Siegler Services, Inc. (LSI) is a prime contractor for the Parts and Repair Ordering System II (PROS II) contract awarded by the Air Force AFSAC. As the subsidiary Lear Siegler Logistics International (LSLI), LSLI is responsible to AFSAC for cradle-to-grave logistics support to 83 Security Assistance countries that own and operate over 11,000 legacy and established aircraft of various configurations. In addition to Air Force FMS cases, Army and Navy FMS cases can be supported through the PROS II contract (Lear, 2002).

#### **6. FAST-Line Program**

The Navy system for handling non-standard item support is the FAST-Line program (Foreign Military Sales (FMS) Acquisition Services Team). Designed to support non-standard and non-stocked supply requisitions, the FAST-Line program, contracted to the ProcureNet Incorporated, supports spare parts equipment for aircraft and naval vessels that the DoD has sold or leased through the FMS system. If a requested item is no longer in the DoD supply system, ProcureNet is responsible for contracting with the original manufacturer or discovering an acceptable equivalent. Since taking over the program, ProcureNet has delivered items and materials from more than 2,500 manufacturers and vendors. ProcureNet has provided shipments to over 50 foreign customers (ProcureNet, 2002).

The Navy outsourcing effort with the FAST-Line program is a third party logistics supplier program designed to improve the procurement processes and lower the costs involved. The Navy has processed thousands of requisitions through ProcureNet, covering non-stocked items. With ProcureNet, the Navy has reduced by 50% the time to process orders, and increased the accuracy rate of foreign customer requisition to over 99% (ProcureNet, 2002).

#### **H. FMS LOGISTICAL SUPPORT CONSIDERATIONS**

After a foreign country has evaluated all the options offered on the world market and has decided to purchase a weapons system from the United States, the customer must decide whether to obtain logistical support commercially, or through the FMS system.

The following presents possible considerations that the customer should contemplate before making a decision on a method of logistical support.

**1. Contract Negotiations**

When a foreign country chooses the FMS system, the contracting process is greatly simplified versus contracting for commercial logistical support. Because the DoD does the contracting work for the FMS customer, they do not have to retain a contracting staff required for commercial contracting. However, since the DoD by law is required to adhere to the Federal Acquisition Regulations (FAR), the FMS system cannot be as compliant as a commercial logistical system.

**2. One-Stop Shopping**

The FMS system is the only system that can present ‘one-stop shopping’ for all logistical support requirements for a FMS customer’s legacy weapons system. For Navy sponsored customers, NAVICP-OF is the single command responsible for FMS logistical support; for the Air Force sponsored customers, AFSAC is the responsible command. The number of diverse U.S. manufacturer’s systems that a FMS customer owns amplifies the advantage of having a single point of contact for FMS logistical support.

**3. Speed**

The FMS system does not normally make available logistical support as timely as can the original commercial manufacturer. FMS customers receive logistical support from the same military depot organizations that sustains Navy and Air Force squadrons. FMS customers are not awarded the same priority for repair that U.S. squadrons receive.

**4. Cost**

The cost of FMS logistical support has much to do with the initial sales package. However, with the FMS system because the U.S. Government is purchasing for the FMS customer, in combination with many other purchases, the U.S. Government often receives a lower price than offered by commercial manufacturers. For non-standard items, the PROS II program searches for the lowest possible price.

Generally, it is impossible to determine if FMS system prices are cheaper or commercial manufacturers’ prices are cheaper. Many factors are included in the final price. However, under the FMS system, the FMS customer can be assured of a fair price and a relatively simple procurement process.

## **I. SUMMARY**

FMS logistical support is an important part of our nation's Security Assistance program. The DoD FMS program offers a complete range of services that provides single-point 'one stop shopping' for FMS customers. Early outsourcing and privatization initiatives in FMS logistical support developed out of a requirement to provide a standard method of supplying non-standard items. Government monitored contractor programs are currently used to provide some functions of FMS logistical support, and now supply standard and non-standard items. Continuing outsourcing and privatization initiatives, especially depot privatization and consolidation, will affect how FMS logistical support is provided for in the future, and which DoD organizations will be relevant.



### **III. METHODOLOGY**

#### **A. INTRODUCTION**

This chapter introduces the research design used in this study. The methodology establishes the approach used to answer the four research questions originally presented in Chapter I:

- Question 1. What essential functions of FMS logistical support does the DoD provide its FMS customers?
- Question 2. What FMS logistical support functions have previous outsourcing and privatization efforts undertaken within the DoD?
- Question 3. What FMS logistical support functions does private industry currently provide?
- Question 4. What are the trends in FMS logistical support in private industry?

The information acquired in answering the research questions will lead to the required information to answer the research objective.

#### **B. DATA**

For this thesis second source data was collected and utilized. Second source data is the most common data source and constitutes the primary source of information on the history and current state of the U.S. Security Assistance program, outsourcing and privatization initiatives, the FMS program, and logistical support. To ensure adequate coverage of the research topic, many information research channels were employed.

When searching for second source data sources it is important to use suitable and thorough search procedures. Literature for this research was acquired from numerous sources including Northern Light and Lexis-Nexis websites search of key words and subjects. The NPS Library was used as the primary source of information. Further information was gathered from the SDSU Library and my own personal collection of material on military affairs.

Information attained from this in-depth literature review assisted in documenting the current trend of the DoD for using outsourcing and privatization initiatives to provide logistical support, past and current FMS logistical support processes, the current industry interest in the role of providing logistical support to FMS customers.

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## **IV. FINDINGS**

### **A. INTRODUCTION**

Chapter II discussed the DoD FMS system, including outsourcing and privatization efforts such as PROS II. The DoD FMS system represents just one alternative for a foreign country to acquire logistical support for its weapons systems. The original weapons systems manufacturers and third party providers represent the other alternative. Manufacturers and third party companies can provide support under a DoD A-79 policy program, not unlike they have under past DoD FMS support programs, or through commercial means, like DCS support. This chapter discusses the role that manufacturers and third party companies participate in providing logistical support to FMS customers.

Government and defense downsizing, and increased use of outsourcing and privatization initiatives are presenting further opportunities for private industry to offer competitive logistical support. Defense contractors are promoting more DCS contracts as a method of generating added revenues to offset decreasing defense spending. All players in the logistical support arena use third party logistics providers. The following companies are a sample of manufacturers and third party companies involved in providing logistical support to FMS customers.

### **B. INDUSTRY AND FMS LOGISTICAL SUPPORT**

#### **1. Honeywell**

Honeywell is a worldwide technology and manufacturing company involved in aerospace, transportation and power systems, Automation and Control Solutions, and specialty materials. Honeywell employs over 115,000 employees in nearly 100 countries (Honeywell, 2002).

Honeywell currently supports numerous FMS systems, including Auxiliary Power Units (APUs), military power plants, landing gear systems, and various avionic systems. These systems are produced under the Honeywell Aerospace division, further divided into four business units (Honeywell, 2002). Honeywell systems and components are often utilized in aircraft built by Lockheed Martin, Northrop Grumman and Boeing.

Honeywell has assumed the role of subcontractor, providing support to the prime contractor, and the prime contractor acting as the FMS customer's single point of contact for current logistical support. In the case of aircraft modifications and upgrades, Honeywell encourages the FMS customer to deal with Honeywell directly to complete aircraft upgrades and provide logistical support for the new systems. To coordinate the various logistical support requirements, Honeywell created the Defense & Space organization in the Aerospace Services unit.

The Defense & Space organization provides all of Honeywell customers, FMS and commercial, with a single point of contact for support of Honeywell equipment (Honeywell, 2002). From the customer standpoint, Honeywell offers 'one stop shopping' for FMS logistical support. Honeywell offers supply support, publications, maintenance, training, technical assistance, modifications, and support equipment for all of its FMS sales. Honeywell can provide these services through a prime contractor or directly to the FMS customer.

One area of logistical support that Honeywell is expanding is in maintenance, repair and overhaul. In the past, third party repair companies often did such work. Honeywell has created the Aviation Aftermarket Services (AAS) Unit with 54 sites worldwide (Honeywell, 2002). The Aviation Aftermarket Services Unit was designed to provide maintenance, repair and overhaul support for Honeywell aviation products. The unit comprises of facilities that combine the repair and overhaul functions for aircraft engines and associated systems, electronic systems and landing systems. Additionally, AAS offers an array of value-added services including the Aerospace Academy, Customer Support Center & Commercial Spares, Ground Support Equipment, Inventory Services, Logistics Alliance and Technical Publications and Data Distribution (Honeywell, 2002). AAS incorporates a Customer Operations Group (COG) that imparts customers with 24-hour, 365-day contact to customer service and technical support; COG also provides a hotline that provides after-hours urgent parts support.

## **2. Lockheed Martin**

Lockheed Martin is one of the world's largest defense contractors, presently employing over 125,000 personnel worldwide. The company is growing internationally

and emphasizing its foreign markets. Lockheed Martin has more than 250 government and industry partnerships in 30 countries (Lockheed, 2002).

Lockheed Martin supports numerous weapons systems; FMS customers can receive logistical support both through the FMS system and by DCS. Foremost FMS cases include the popular F-16 Fighting Falcon and C-130 Hercules series of aircraft. New opportunities for logistical support include potential Eastern European and Middle Eastern procurement of the F-16, upgrading existing F-16 aircraft in Western Europe and Asia, and sales of the new C-130J worldwide. Lockheed Martin provides complete logistical support for FMS customers. Services include technical publications, maintenance services, aircrew and maintenance personnel training, spare supply support, upgrades, and modifications.

Recognizing the growing business potential in aircraft services, Lockheed Martin Aeronautics Sector consolidated several smaller services companies into the Lockheed Martin Aircraft & Logistics Centers (LMALC) in 1997. LMALC is made up of the Lockheed Martin Aircraft Center, Lockheed Martin Logistics Management, and Lockheed Martin Aeronautics International divisions. Today, LMALC, is one of the leading providers of aircraft maintenance, modification, and contractor logistics support for the DoD, foreign military and commercial customers. The company offers international aircraft center support, field services, and logistic services, as well as a network of partnerships designed to help customers find the best value logistics support for their aircraft (Lockheed, 2002).

LMALC maintains partnerships with foreign governments with a significant presence in Europe, Asia, South America and the Middle East and provides a wide array of aircraft services from total fleet management to depot-level maintenance activities. Middle East Services division provides Boeing E-3A Sentry operational and maintenance support for the RSAF. The company manages aircraft maintenance and logistical support for the RSAF fleet of C-130 Hercules aircraft and all C-130 depot-level maintenance in Saudi Arabia. From 1997-1999, Lockheed Martin has provided such maintenance and logistical services for the Romanian Air Force C-130 Hercules fleet.

LMALC is also involved in the privatization of foreign government facilities, having supervised the transformation of Fábrica Militares Aviation in Córdoba, Argentina, to a regional center for military and commercial aircraft customers who require overhaul, repair and maintenance services (Lockheed, 2002). From Aircraft Argentina at Córdoba, LMALC is building the next generation AT-63 Pampa for the Argentine Air Force (AAF).

### **3. Boeing**

The Boeing Company is the world's leading aerospace company, having acquired McDonnell Douglas and Rockwell International in the late 1990s. Boeing is the foremost manufacturer of satellites, commercial jetliners, and military aircraft. In terms of sales, Boeing is the largest U.S. exporter; total company revenues for 2001 were \$58 billion. Boeing has customers in 145 countries, employing close to 179,000 people (Boeing, 2002). Boeing is organized into six major units: Air Traffic Management, Boeing Capital Corporation, Commercial Airplanes, Connexion by Boeing, Military Aircraft and Missile Systems, and Space and Communications. In addition, the Phantom Works provides advanced research and development, working with business units to identify their technology needs and addressing them with innovative, affordable solutions.

Boeing Military Aircraft and Missile Systems is the largest manufacturer of military aircraft in the world. Boeing has delivered more than 130,000 military aircraft and 8,700 missiles to the U.S. Government and international customers (Boeing, 2002). Boeing aircraft presently in production consist of the F/A-18E/F Super Hornet, F-15E Strike Eagle, AV-8B Harrier II Plus strike aircraft, the F-22 Raptor air superiority aircraft, the C-17 Globemaster III, C-40A Clipper, C-32A transports, the T-45 Goshawk Training System and the privately developed KC-767 aerial tankers. Military helicopter programs include the RAH-66 Comanche, CH-47 Chinook, AH-64D Apache Longbow and the joint venture Bell/Boeing V-22 Osprey. Weapons programs include the Conventional Air-Launched Cruise Missile (CALCM), the Harpoon air/ship/submarine-launched anti-ship missile, the Standoff Land Attack Missile Extended Range (SLAM-ER) air-to-surface missile, and the air-launched Joint Direct Attack Munition (JDAM). Through the global Military Aerospace Support division, Boeing offers its Life-Cycle Customer Support (LCCS) solutions, which includes modifications and upgrades, aircrew

and maintenance training systems, supply chain management and full logistics support. LCCS is the fastest-growing segment of its military business (Boeing, 2002).

Compared to the normal procurement practice in which logistics support and services have been procured by the DoD, and subsequently provided by private industry, LCCS represents Boeings attempt to create an integrated ‘cradle-to-grave’ approach to supporting aircraft and weapons systems. LCCS solutions are based on long-term packages of logistics support and services customized to the consumers requirements. An important benefit of LCCS is ‘single point’ accountability, where one organization has the responsibility to supply the required material or service, when it is needed, at a reasonable price (Boeing, 2002).

For DoD, Boeing personnel perform various levels of logistical and technical support of the F/A-18 Hornet, Northrop F-5 Tiger II, Grumman F-14 Tomcat and Sikorsky SH-60 Seahawk aircraft at the Naval Strike and Air Warfare Center at NAS Fallon, as well as for Northrop F-5 Tiger II and McDonnell Douglas A-4 Skyhawk adversary aircraft at MCAS Yuma. At the Boeing Special Operations Forces Aerospace Support Center, company personnel support the Special Operations Command (SOC) fleet of specially modified Lockheed C-130 aircraft, including the Boeing-developed Lockheed Martin AC-130U Spectre gunship.

Internationally, Boeing provides instructors for ground and flight training for Kuwait Air Force (KAF) F/A-18 Hornet pilots. The CF-18 Hornets sold to Canada are supported logistically directly by Boeing under offset agreements with the Canadian Government and industry in the initial sale of the aircraft by McDonnell Douglas. However, F/A-18 Hornets sold to the Swiss Air Force are supported under the DoD FMS system (FAST-Line program); as are numerous versions of the McDonnell Douglas F-4 Phantom II aircraft, now under the PROS II program. The Boeing F-15 Eagles sold to Saudi Arabia and Israel are logistically supported through the FMS system.

Boeing has designed and produced a military aerial tanker version of its commercial 767 twin-engine airliner. Both the Italian Air Force and the Japanese Air Force have placed orders for the new ‘KC-767’ tankers to replace their rapidly aging KC-135/KC-707 airframes. As the U.S. Air Force has shown no interest in the KC-767, there

is no comparative DoD-sponsored version; Boeing will be the only source of logistical support. Since the 767 and 'KC-767' are currently in production, Boeing logistical support will be competitive with the FMS system. However, as production of the 767 passenger jets is eventually phased out, logistical support for the unique 'KC-767' versions will inevitably become more expensive from Boeing; as out of production aircraft require infrequent orders for small numbers of items, an expensive proposition.

#### **4. Northrop Grumman**

Northrop Grumman Corporation was formed in 1994, when Northrop merged with Grumman Corporation and acquired Vought Aircraft. In 2001, they completed the acquisition of Litton Industries and Newport News Shipbuilding. Northrop Grumman is the nation's third largest U.S. defense contractor with nearly 100,000 employees and projected revenues of nearly \$18 billion for 2002 (Northrop, 2002).

FMS logistical support is provided primarily by the Electronic Systems and Integrated Systems sectors. For FMS customers, Northrop Grumman supports avionics supply support, maintenance services, technical publications, and upgrades for the Lockheed Martin F-16, Boeing E-3A, and numerous internal and podded electronic counter measures (ECM) systems. Northrop also has a history of offering logistical support for its F-5 Freedom Fighter/Tiger II series aircraft, most notably in the Peace Hawk program with the RSAF. The Peace Hawk program set up Northrop as the single commercial supplier of logistical support for RSAF F-5 aircraft, and was an early forerunner of FMS non-standard item logistical support practices that would lead ultimately to the PROS II program of today.

Currently, a mix of FMS and direct support provides logistical support. Northrop Grumman maintains a complete logistics organization to provide its commercial customers with single point of reference for logistical requirements. Northrop Grumman provides supply chain management and logistical support, maintenance training, maintenance services, and technical publications for foreign operators of the T-38 Talon and E-2 Hawkeye. Northrop also provides support for out of production aircraft such as the Vought A-7 and its own legendary F-5 series.



## **5. Science Applications International Corporation**

Science Applications International Corporation (SAIC) is the largest American employee-owned technology firm, employing over 40,000 people in 20 countries (SAIC, 2002). In the FMS logistical support arena, SAIC functions as a third party logistics provider. In May 1994, SAIC bought Systems Control Technology Incorporated (SCT). Then, SCT was the prime contractor for the NIPARS non-standard support program. The purchase of SCT denoted the first substantial interest of SAIC in providing FMS logistical support.

SAIC was the prime contractor for the PROS program contract, a contract that continued from February 1996 to February 2001. The PROS program was successful in further reducing repair cycle times for repair parts, order and shipping times for consumables, and decreasing the number of canceled requisitions from that of the NIPARS program.

Since replaced by Lear Siegler Services Incorporated (LSI) and the new PROS II program with the DoD, SAIC has continued to serve interested foreign countries with logistical support when contracted. The primary logistical support function that SAIC provides is purchasing services for reparable and consumable item support. To facilitate any requisitions, SAIC maintains a broad network of vendors to provide logistical support equipment and repair services as required.

## **6. Lear Siegler Services, Incorporated**

Lear Siegler Services, Incorporated. (LSI) specializes in aviation operations, maintenance service, aircraft modification and overhaul, systems integration, logistics support and aircrew and maintenance training to U.S. Government agencies, foreign governments and militaries, and commercial customers throughout the world. LSI has more than 40 years experience in the aviation services field and reports annual revenues of nearly \$350 million. LSI began providing maintenance services to large fleets of aircraft in 1961, followed by its training services to the U.S. military and international customers (Lear, 2002).

LSI has experience in military logistics support, including maintaining weapons systems and supply chain management utilizing networks of vendors and manufacturers,

and DoD supply systems for requisition, storage, and overhaul and repair of parts and components. From 1986 to 2000, LSI managed the RSAF Peace Hawk Northrop F-5 logistical support program in Saudi Arabia. Currently, LSI has a major FMS repair parts contract that includes the procurement and repair of parts for resource-challenged legacy aircraft systems around the world. LSI also holds an aviation logistics contract with the government of Bahrain (Lear, 2002).

Succeeding SAIC in 2001, LSI is a prime contractor for the Parts and Repair Ordering System II (PROS II) in a 5-year, \$1.9 billion contract awarded by the Air Force AFSAC. As the subsidiary Lear Siegler Logistics International (LSLI), LSLI is responsible to AFSAC for cradle-to-grave logistics support to 83 Security Assistance countries that own and operate over 11,000 legacy and established aircraft of various configurations. In addition to Air Force FMS cases, Army and Navy FMS cases will be supported through the PROS II contract (2000).

#### **7. ProcureNet Incorporated**

ProcureNet Incorporated, formally known as W&W Logistics, specializes in purchasing, distribution, and materials management services since 1975. ProcureNet currently provides the majority of its FMS logistical support work under the Navy FAST-Line program. The Fast-Line program is comparable to the Air Force PROS II program for providing logistical support. In contrast to the aviation exclusive PROS II program, FAST-Link sources and procures thousands of line items per year in support of our customers. Standard and non-standard items include requisitions for ground vehicles, ships, chemical/biological/radiological/ nuclear/high-yield explosive defense equipment and demining equipment, in addition to aircraft items.

#### **C. LOGISTICAL SUPPORT FUTURE TRENDS**

The environment the U.S. defense industry developed in has changed greatly in the past decade. Defense spending in the 1980s has been significantly reduced in response to changing world events. The defense industry has endured an extraordinary succession of downsizings and mergers. In combination with changes in industry, the U.S. Government is decreasing research and design funding, and requesting fewer new weapons systems. In addition, the U.S. Government is continuing to advocate outsourcing and privatization, the most important of which for FMS customers is depot

consolidation and privatization. Simultaneously, the defense industry and the U.S. Government has been downsizing, third party companies have been expanding. In FMS logistical support, third party companies normally function as niche providers, concentrating in select areas of logistical support. FMS customers, the U.S. Government, and defense systems manufacturers all use third party companies to assist with logistical support.

#### **D. DIRECT COMMERCIAL SUPPORT CONSIDERATIONS**

After a foreign country has evaluated all the options offered on the world market and has decided to purchase a weapons system from the United States, the customer must decide whether to obtain logistical support commercially, or through the FMS system. The following presents possible considerations that the customer should contemplate when deciding on direct commercial support or third party providers to supply logistical support.

##### **1. Contract Negotiations**

When a foreign country enters a commercial contract with a manufacturer, it bears a greater burden in negotiations than it does under the FMS system. There is no FAR to regulate the contracting process, it is up to the customer to make certain that they have negotiated a fair and equitable deal. This also means that commercial support can be more accommodating than the regulated FMS system. Special financing and other custom tailoring not available under the FMS system can be negotiated under the DCS agreement.

Since there are fewer precautions in commercial contracting, commercial contracts are generally approved faster than FMS contracts. The more rapid the contract negotiations, often leads to more rapid deliveries.

As a rule, foreign customers who have experience in dealing with international business and familiar of U.S. laws, and are well informed in what exactly they require, can use direct commercial support to their advantage. Customers without broad experience in international business or are less certain in what they might require, may choose the FMS system.

## **2. One-Stop Shopping**

Manufacturers can provide FMS customers single point 'one stop shopping' for logistical support. The details depend on the contract that the FMS customer negotiated. However, most FMS customers will own aircraft and associated systems from more than one manufacturer, in addition to having systems supported under the FMS program. As a result, even though manufacturers may provide single point 'one stop shopping,' chances are that a country entering any commercial support agreement will have to commit to more than one manufacturer to secure adequate logistical support. The necessary numbers of contract managers will differ according to the complexity of logistical support contracts and the number of manufacturers with which a country must contract.

## **3. Speed**

In most cases the manufacturers can provide faster logistical support than the FMS system. The manufacturers usually retain an inventory of logistical support items in expectation of requirements. The FMS customer is the manufacturers primary customer under a commercial contract, where the Navy and Air Force are the primary customer of their respective supply and maintenance systems. It is naturally in the manufacturers best interest to provide appropriate support to ensure customer satisfaction.

## **4. Cost**

The cost of commercial logistical support has much to do with the initial sales package; what kind of logistical support did the country request, were there any special financing agreements or offsets, all of which will affect the final price. Because the prime contractor must procure many components from subcontractors, the prime contractor will indubitably charge a fee to cover costs connected with supporting items it does not manufacture, repair, or normally stockpile. A FMS customer contracting directly with each required subcontractor would considerably increase the amount of contract overhead necessary to support the additional contracts. Those items may be more expensive than if they were procured under the FMS program. However, competition in private industry could lower the prices below FMS prices. With commercial support contracts costs can vary, and it is the customer's responsibility to determine the specific costs connected with a given level of logistical support.

## **E. THIRD PARTY SUPPORT CONSIDERATIONS**

### **1. Contract Negotiations**

Considerations are similar to those for dealing with a manufacturer. Contracting with a third party provider is a business negotiation. The country and the type of logistical support required will be determining factors when considering a third party provider.

### **2. One Stop Shopping**

Third party companies are each different in size and capabilities. Generally, they do not offer 'one stop shopping' for all logistical support requirements. Third party providers provide primary supply support. Third party companies often require a network of vendors to produce and repair items, and they purchase parts from agents rather than retaining an inventory and repair capability internally. Some third party companies do have their own repair and inventory capability. It is up to the customer to determine if a third party provider can provide the preferred level of logistical support.

Third party companies are often specialized in the logistical support they provide. Some excel in providing supply support, others specialize in upgrades and modifications. The sheer range of capabilities requires a customer to carry out considerable research before deciding on a third party logistical support provider. Most customers acquire third party logistical support in combination with other methods of logistical support is previously receiving, either commercially or through the FMS system.

### **3. Speed**

Because third party providers offer such a wide variety of services, and provide service to the U.S. Government, manufacturers and FMS customers, it is difficult to make a generalized statement on the speed of support. Where data does exist, in the NIPARS program for example, a third party provider was shown to provide quicker support for non-standard items than did the FMS system it replaced. Results from the PROS program also indicate that PROS provides quicker support than does the FMS system. Because the third party company is in a business relationship, it must stress customer service. It is ultimately up to the FMS customer to determine what speed is required, and if a specific third party company can meet the specified requirements.

#### **4. Cost**

Comparable to the conditions under commercial considerations, cost will depend on the level of service preferred. Third party providers offer the best-cost advantages in providing supply support for out of production items, or what the FMS system term non-standard items. Normally, manufacturers do not produce or repair these items once they are out of production. This lack of interest by manufacturers permits the third party company to compete for support of non-standard, where a third party company cannot compete on price with a manufacturer for items in production.

#### **F. SUMMARY**

This chapter provides a view of the range of companies that provide, or plan to provide logistical support to FMS customers. Manufacturers have organized themselves to provide 'one stop shopping' for their FMS customers. Third party providers function as niche providers, specializing in an exclusive number of the logistical support tasks. Depending on how many dissimilar weapons systems a FMS customer operates, they will have to contract with more than one organization by acquiring logistical support from the commercial sector rather than from the FMS system.

## V. CONCLUSIONS

### A. RESEARCH QUESTIONS

This section provides the conclusions drawn from the findings of the research. The research findings and literature review provide the necessary information to answer the research questions. The answers to the research questions will assist in meeting the research objective – an analysis of FMS logistical support.

#### **Question 1. What essential functions of FMS logistical support does the DoD provide its FMS customers?**

The essential functions of aviation FMS logistical support include a structure and process to receive orders, track status, and facilitate the rapid and accurate movement of data between the customer and the FMS system host; a maintenance function to manage reparable parts; an inventory system to manage consumable items; and an accounting function to record billings, disburse payments and provide financial status to FMS customers. Of all these functions, the DoD actually owns only segments of a computer system that tracks the status of orders. However, the DoD is the central organization that coordinates the process of providing logistical support to FMS customers. From the customer's view, the DoD provides 'one-stop shopping' for FMS logistical support.

#### **Question 2. What FMS logistical support functions have previous outsourcing and privatization efforts undertaken within the DoD?**

NIPARS was the first privatization program that provided a standardized process of providing logistical support, for non-standard items only, to all FMS customers. The PROS program was the replacement for NIPARS, and PROS II and FAST-Line are the current outsourced processes for providing some of the DoD FMS logistical support. The PROS II program was expanded to provide support for some standard items in addition to non-standard items. PROS II and FAST-Line, supervised by the AFSAC and NAVICP-OF respectively, provides the full range of logistical support functions for FMS customers.

The Navy depots and Air Force ALCs provide much of the FMS logistical support for reparable parts. A number of Air Force ALCs, or ALC functions, have just recently been privatized with manufacturers assuming responsibility for the centers.

Logistical support currently provided by those ALCs will move from Air Force control to private industry control. If private industry contentions concerning their capability to provide exceptional service are accurate, some time in the future the FMS customer will observe an improvement in the quality of service at the privatized ALCs.

**Question 3. What FMS logistical support functions does private industry currently provide?**

Industry currently provides all the logistical support functions. However, for each customer the support offered will vary depending on the terms in each commercial case. Manufacturers provide logistical support for their systems, but not always for other manufacturer's systems that are apart of the same weapons systems.

Third party providers are more specialized in the support they provide. Third party providers usually specialize in a few of the FMS logistical functions such as supply chain management. The U.S. Government, manufacturers, and FMS customers use third party providers to provide logistical support. FAST-Line and PROS II programs are examples of third party companies working for the U.S. Government. Manufacturers use third party providers to a great extent for functions such as supply chain management. In some cases a FMS customer will hire a third party company to assume its FMS logistical support requirements.

There is not a single manufacturer or third party provider that can provide 'one stop shopping' for the range of weapons systems similar to the DoD's FMS system. FMS customers relying on manufacturers and third party companies must rely on several different contractual relationships to receive the same level of support supplied by the FMS system.

**Question 4. What are the trends in FMS logistical support in private industry?**

Industry offers, and will continue to offer a complete range of logistical support functions. The question is how industry accomplishes this. The trend for providing logistical support seems towards direct commercial support (DCS) or outsourcing and privatization.



Companies offering direct commercial support have expanded their logistical support programs, even to supporting a number of competitors' aircraft. There are several reasons for this. The FMS system has trained FMS customers in the concepts of cradle-to-grave support and offering the convenience of a single point contact for acquiring logistical support. This training has led to customers insisting on cradle-to-grave support when negotiating for new weapons systems. To remain competitive, firms need to be able to provide a full range of logistical support. As the purchase of new weapons systems continue to decline, commercial logistical support provides the weapons systems manufacturer with a source of revenue to compensate for the decrease in sales.

As the DoD continues to downsize, the opportunities for outsourcing and privatization contracts will increase. Currently, the FAST-Line and PROS II programs are the best example of outsourcing in the FMS system. However, FAST-Line and PROS II programs perform only a small part of the total FMS logistical support task. One can imagine the opportunities increasing with time. Today, manufacturers and third party providers are competing for a wide range of outsourcing and privatization contracts throughout the U.S. Government, the FMS field would be just one more area of competition.

Manufacturers interested in pursuing outsourcing and privatization contracts have competed in U.S. Air Force depot privatization, as with the current B-1B Lancer and SOF C-130 depot-level maintenance programs. In the future one may expect additional depot-level maintenance privatization by several manufacturers and third party companies teaming together. For instance, Honeywell providing aircraft systems integration, Lockheed Martin providing aircraft systems support, and Pratt & Whitney providing jet engine support, with SAIC providing on-site administrative and support, all working together to provide services formerly accomplished by a depot. The great number of aviation systems supported by a depot effectively ensures that a team of contractors will be required to provide the same level of support as a government depot now provides. However, the consequences of contracting out depot-level maintenance and the DoD conceding its depot capabilities on the armed force's ability to effectively defend the United States requires further study.

## **B. CONCLUSIONS & RECOMMENDATIONS**

Conclusion: The future FMS aviation logistical support arena will look different than the current leading DoD FMS Program and smaller Manufacturer/Third Party Provider support relationships that exist today.

Recommendation: The continued outsourcing of DoD logistical support functions, private industry participation in U.S. Government A-76 policy initiatives, defense industry efforts to increase weapons systems support, and the expansion of third party providers, will provide the future FMS customer with balanced alternatives for logistical support. DoD FMS sources (DoD supply system, Navy depots, Air Force ALCs), privatized sources (FAST-Line, PROS II, privatized depots), and commercial sources (manufacturers and third party providers) will eventually offer the FMS customer a full spectrum of aviation logistical support options. However, the U.S. Government must not lose sight of the original goals of the FMS program. This program is not an exercise in supply chain management, but exists as an extension of this country's Security Assistance effort. The FMS program is a flexible foreign policy tool contributing to the strategic objectives of the United States. While Security Assistance activities have become increasingly commercialized in recent years, procedures for administering FMS programs have been around for decades and operate at a smaller cost to the U.S. Government than other versions of crisis intervention.

Conclusion: Effective FMS program logistical support will require partnerships with the defense industry.

Recommendation: To make effective use of defense sector logistical support providers, it is essential that the traditional adversarial contracting relationship be replaced by long-term partnerships established on common goals. There are three characteristics of contract formation that assist in promoting government-industry partnerships and establish common goals: Defining contract requirements in terms of outcomes or outputs rather than inputs, based on consultation with potential providers about what is available in the market; Establishing performance metrics, including measures of customer satisfaction, and linking them to contract incentives, such as higher

profits or contract extensions; and, sharing gains associated with cost reductions and performance improvements between the government and the contractor.

Conclusion: Third party providers can assist in the daily operation of the DoD FMS program without the DoD conceding control of the program.

Recommendation: One potential business area for third party providers is in FMS backorder requisitions. In order to avoid backorder requisitions of non-CLSSA logistical support (typically common consumable materials), a third party provider could be contracted annually to provide commercial purchasing services. If a FMS customer order were unavailable from the DoD supply system, the requirement would be directly forwarded (electronically) to the third party provider for procurement, the entire procurement process monitored by the DoD. This process would allow faster procurement than the FMS customer contracting with the third party provider directly for material found unavailable from the DoD supply system.

Conclusion: Most of the perceived cost savings from A-76 initiatives centers around reductions in government manpower.

Recommendation: The FMS program is part of a larger foreign policy effort that exists to support the interests of the United States throughout the world. The FMS program is operated by the DoD, with the State Department, to support those interests in times of peace and war. If the U.S. Government wishes for the FMS program to only perform at peacetime levels, then the current initiatives in outsourcing FMS logistical support are sufficient. If the U.S. Government wishes for the FMS program to control an increase in the level of work effectively, to support a FMS customer in a time of adversity, it must allow excess capacity to exist in peacetime because there exists a time lag to respond to a war contingency. There is more to effective outsourcing than writing a contract; even if the U.S. Government could hire a contractor immediately, there is still a steep learning curve for integration with the DoD.

## **C. SUMMARY**

The U.S. Government is determined to advance outsourcing and privatization initiatives as much as possible. The current trend is for more privatization, not less. The

FAST-Line and PROS II programs are just the beginning of the DoD outsourcing and privatization efforts in FMS logistical support.

Many manufacturers will seek to provide commercial support to FMS customers as a way of generating revenue during the prospect of declining defense budgets. Third party logistics providers will most definitely thrive as the DoD, FMS customers, and manufacturers continue to utilize their talents. Third party providers have already benefited from outsourcing and privatization programs like FAST-Line. As manufactures provide more DCS support, third party will benefit because the manufacturers often rely on them for assistance in providing support.

As large as some U.S. defense manufacturers are, none currently possess the capability to provide 'one stop shopping' for the range of weapons systems supported by the FMS system. FMS customers relying on manufacturers and third party companies will have to continue to rely on several manufacturers and third party contracts in order to receive the same degree of support provided by the FMS system. Manufacturers will advocate to support their own systems and third party providers will provide more support in the future. However, the FMS systems will remain the only place where a FMS customer can rely on a single provider for all of its military logistical support requirements.

For the FMS customer, the future trends in FMS logistical support have two significant implications. The FMS system will continue to exist, although it will become more privatized. This means that relatively unsophisticated countries will be able to rely on the continued support of the FMS program. And, commercial support is generally more responsive and can be specially tailored to meet the individual customer's unique requirements. More sophisticated countries, experienced in international business, and prepared to maintain several contracts, should examine direct commercial support as a method of acquiring logistical support. These same FMS customers will profit the most from changes taking place in the field of FMS logistical support.

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