
Navy Security Assistance and Technology Transfer Programs

By

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INTRODUCTION

This article discusses the origin and functions of the Navy Office of Technology Transfer and Security Assistance (NAVOTTS). The article also focuses on trends in Navy security assistance and technology transfer programs, as well as current procedures for executing policies in these areas.

Technology transfer and security assistance policies are of vital importance to the U.S. for several reasons. The U.S. has always relied on the quality and advanced technology of its weapons systems, and the associated high technology industries, to maintain a balance of power with the Soviet Union. As a result, diversions of key technologies, such as the sale of advanced machine tools for manufacturing submarine propellers to the Soviet Union by Toshiba (Japan) and Kongsberg (Norway) have had significant consequences for the U.S., e.g., substantially higher costs to counter the enhanced Soviet threat. At the same time it must be recognized that the U.S. no longer enjoys the commanding lead in critical military technologies that it possessed ten or twenty years ago. European countries, as well as Japan, have supported the development of indigenous defense industries and associated high technology industries.

As a result, decisions on the transfer of technology must carefully weigh the following factors:

- the impact on the U.S. of potential diversions to adversaries;
- the availability of comparable technology from other advanced nations;
- the potential that other nations possessing the technology will agree to limit proliferation of the technology; and
- the impact on U.S. industries, in terms of lost revenues, if industries in other nations are successful in selling items that U.S. industry is not permitted to export.

Security assistance activities, broadly defined to include not only sales of equipment and services to foreign nations but also to embrace cooperative development programs and the joint production of U.S.-designed weapons systems, are equally important. The U.S. gains considerable benefits from the force multiplier effect and enhanced interoperability which result when foreign nations use U.S. systems and technologies. At times such gains are quantifiable, e.g., if foreign nations obtain the capability, due to the use of U.S. equipment, to patrol certain areas in lieu of U.S. ships. But of equal or greater importance are the less tangible benefits, such as the improved intelligence that comes from the foreign nation's ability, using U.S. equipment, to provide data that supplements or complements U.S. efforts. Vital intangible benefits, in terms of positive attitudes towards the U.S., also stem from the training provided to foreign military personnel.

Significant savings from foreign sales are also evident in reduced unit costs due to expanded production. For example, foreign sales have lowered the projected cost of the F/A-18 sufficiently to pay for such improvements as an enhanced performance engine for the aircraft. More generally, sales to foreign nations can involve some codevelopment/coproduction, with foreign nations supplying scarce research funds from which both the U.S. and foreign nations benefit.

ORIGINS OF NAVOTTSA

Navy security assistance and technology transfer programs thus play a critical role in the execution of Navy strategies, and merit intensive, high-level review of key policy issues. Moreover, they are intimately related; sales of major systems, as well as the initiation of codevelopment/coproduction programs, are always preceded by an intensive review of potential releasability issues. In the Spring of 1987 the then Secretary of the Navy John Lehman created, via SECNAV Instruction 4900.46A, three new organizations designed to ensure a high level focused review by the Under Secretary and Secretary of the Navy, as well as senior military officers, of all significant Navy international programs relating to technology transfer and security assistance. These new organizations included the following:

- a Deputy Assistant Secretary of the Navy for Technology Transfer and Security Assistance [DASN (TT/SA)], reporting directly to the Under Secretary of the Navy;
- a Navy Office of Technology Transfer and Security Assistance (NAVOTTSA), a second-echelon field activity of the Navy, with the DASN(TT/SA) as Director; and
- a Technology Transfer and Security Assistance Review Board (TTSARB).

The DASN (TT/SA) serves as the principal adviser to the Secretary of the Navy on technology transfer, disclosure, security assistance, and international program policy, and is also the Director of NAVOTTSA. A Rear Admiral (O-7) serves as Deputy Director, and also serves as adviser to the Chief of Naval Operations (through OP-06; OP refers to offices within the Office of the Chief of Naval Operations) on all security assistance and technology transfer issues. NAVOTTSA incorporates primarily the former OP-62 and OP-63 organizations, along with parts of the Naval Supply Systems Command (NAVSUP) responsible for general security assistance policy. Two other organizations that were folded into NAVOTTSA are part of the Technology Transfer Branch of the Office of Naval Research concerned with the potential transfer of technologies to foreign nations, and the entire Saudi Naval Support Program, now called the Saudi Naval Support Office (SNSO).

The SNSO was created in 1974 at the request of Saudi Arabia to develop a comprehensive modernization plan for the Saudi Arabian Navy. All of its programs, as well as all costs of the SNSO itself, are paid by Saudi Arabia. SNSO initially provided oversight for a major expansion of the Saudi Navy's infrastructure, as well as for the procurement of numerous surface combatants. In recent years the scope of its activities has diminished as the Saudi Navy has developed enhanced expertise, and also shifted to other nations for some of its requirements. SNSO currently concentrates on providing logistics and training support for the Saudi Navy. To that end, it has a headquarters in Washington, D.C., as well as detachments in Saudi Arabia; additionally, several Navy activities are responsible for training Saudi nationals.

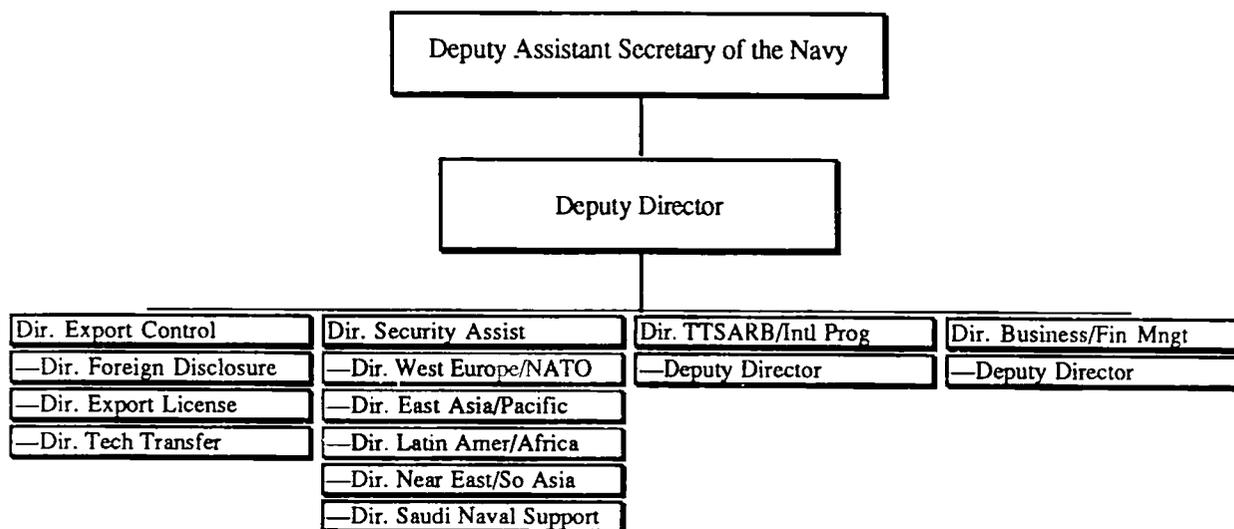
Finally, the TTSARB was created to advise and make recommendations to the Secretary of the Navy on all precedent-setting or significant issues concerning technology transfer, disclosure, security assistance, and international programs. It is composed of both high level military and civilian officials. More specifically, the Chairman is the Under Secretary of the Navy, with the Vice Chief of Naval Operations (VCNO) as Vice Chairman. The DASN (TT/SA) serves as

Executive Director, with the Deputy Director of NAVOTTSA serving as Executive Secretary. Other TTSARB members include: the Assistant Secretary of the Navy for Research, Engineering, and Systems [ANS(RE&S)]; the Assistant Secretary of the Navy for Shipbuilding and Logistics [ASN(S&L)]; the Deputy Chief of Naval Operations for Plans, Policies, and Operations (OP-06); and the Deputy Chief of Staff for Plans, Policies, and Operations for the Marine Corps [DCS(PP&O)].

NAVOTTSA ORGANIZATION

The first DASN(TT/SA) and Director of NAVOTTSA was Mr. Richard B. Levine, who was officially appointed in February 1987. Mr. Levine resigned in August 1988, and was succeeded by the current DASN(TT/SA), Mr. Anthony R. DiTrapani, formerly Deputy Assistant Secretary of the Navy for Civilian Personnel Policy and Equal Employment Opportunity. The first Deputy Director of NAVOTTSA was RADM Gary F. Wheatley, who reported in January 1988. RADM Wheatley retired from the Navy in December 1988, and was succeeded in March 1989 by RADM(Sel) George A. Huchting.

NAVY OFFICE OF TECHNOLOGY TRANSFER AND SECURITY ASSISTANCE (NAVOTTSA)



The NAVOTTSA organization is depicted above. There are four directorates: export control; security assistance operations; TTSARB, international programs, and special projects; and business and financial management. The first two directorates are headed by Navy Captains; the latter two by a member of the Senior Executive Service (SES) and a GM-15. Also, there is an immediate staff for the DASN(TT/SA)/Deputy Director, consisting of an administrative officer with a staff, as well as several assistants. In addition, the Navy Office of General Counsel provides a full-time lawyer to advise the DASN(TT/SA)/Deputy on all legal issues.

NAVOTTSA's total staff amounts to approximately 150 individuals, excluding approximately thirty located in Saudi Arabia in support of SNSO. Approximately one-third of these positions are military, with most of these being officers.

GENERAL TECHNOLOGY TRANSFER AND SECURITY ASSISTANCE POLICY

As noted above, the Technology Transfer and Security Assistance Review Board (TTSARB) sets general technology and security assistance policies. In practice the Board has met only a few times since its inception since in almost all cases issues have been resolved through the preparation of TTSARB decision memoranda.

A TTSARB decision memoranda is initiated when the DASN(TT/SA) or other senior DON official determines that a Navy position is required for a significant technology transfer or security assistance issue. Some of the key factors considered in technology transfer and security assistance decision memoranda include:

- The state of relations with foreign nations.
- Prior commitment by senior officials.
- The impact on regional stability.
- The military benefits, such as interoperability and the resulting force multiplier effect.
- The potential for compromised technology to impact adversely on the U.S. technological lead and/or military operations.
- The potential savings to the DOD from reduced research and development costs and/or reduced unit costs.
- The impact on the U.S. industrial base.

Issues that are likely to create considerable controversy are presented to the Secretary of the Navy for decision; however, in most instances, the Under Secretary makes the final decision. As already noted, on rare occasions when deemed necessary, the TTSARB meets to resolve issues. In 1988 there were twenty-four TTSARB decisions, with close to forty anticipated in 1989. The average processing time for a decision memorandum from the initial drafting of the decision memorandum to the final decision is approximately four months. High priority issues are processed more rapidly, in as little as two weeks.

Of special interest to the TTSARB are the increasing number of Memoranda of Understanding (MOU) with foreign governments. As noted above, many nations, such as Canada, the United Kingdom, Germany, France, Italy, Spain, Australia, and Japan, have encouraged the development of indigenous defense industries, as well as the underlying high technology industries. They are thus increasingly reluctant to purchase complete systems from the U.S. Instead, they prefer to enter into cooperative development and/or production agreements. Consequently, in the future, opportunities for U.S. sales to advanced nations, and even to newly industrialized nations such as Korea, will depend to a considerable extent on the potential for participation by indigenous industries.

These arrangements are likely to result in considerable benefits for the the U.S. Economies of scale from expanded production will enhance the Navy's ability to cope with increasingly limited resources, as will foreign contributions to joint development programs. The U.S. can also benefit from adopting foreign technologies that are comparable to or better than U.S. technologies.

It is essential that there be no misunderstandings between the U.S. and foreign governments concerning the goal of such a cooperative endeavor, as well as any restrictions on the transfer of

technology. Consequently, MOUs are negotiated prior to initiating work with foreign nations, and usually include language relating to the following topics:

- Funds to be contributed by each party.
- Management responsibilities.
- Restrictions on the transfer of technologies and systems to other nations.
- Work to be performed in each country.
- Information each nation is to disclose to other parties.
- Liabilities and termination.

Prior to the initiation of negotiations, all MOUs are reviewed by the Department of Defense. In addition, in light of concerns that cooperative programs could adversely impact the U.S. industrial base, recent legislation requires the Department of Defense to consult with the Department of Commerce on all MOUs that involve research, development and/or production.

MOUs currently in effect for which the Navy is responsible include codevelopment/coproduction with West Germany of the Rolling Airframe Missile (RAM) (designed to protect ships from missiles at short ranges) and coproduction agreements with Japan for the P-3C Anti-Submarine Warfare (ASW) aircraft and the AIM-7 missile. Most of the current significant MOUs under negotiation concern aircraft programs. One potential program for international cooperation is the integration of a radar in the AV-8B aircraft. Several other MOUs relate to classified projects.

Underlying these policy development efforts is a recent initiative to anticipate future foreign requirements, with particular emphasis on the means whereby foreign forces can serve as an effective force multiplier for U.S. forces. As a result, a series of strategic plans has been developed. These classified plans discuss appropriate weapons systems for important prospective customers in light of such factors as affordability, country-specific needs, interoperability with U.S. forces, and releasability. These plans are currently being staffed with various Navy organizations prior to review by senior Navy officials.

TECHNOLOGY TRANSFER

The oversight and execution of Navy technology transfer policy involves several activities, in particular:

- Processing foreign requests to visit Navy and Marine Corps facilities and contractors.
- Reviewing classified Navy publications prior to their release to foreign governments.
- Developing Navy recommendations concerning commercial export license requests submitted to the Departments of State or Commerce.
- Analyzing U.S. and foreign technology developments in order to develop releasability criteria.
- Representing the Navy on interagency committees concerned with technology transfers.

REVIEW OF FOREIGN VISITS AND DOCUMENT REQUESTS

There are approximately 12,500 annual requests by foreign nations to visit U.S. Navy and Marine Corps commands, activities, and contractor sites; over 2,000 classified documents are reviewed annually prior to their release to foreign governments. These requests pertain to, among other matters:

- Review of all training and maintenance publications that are released in connection with sales of equipment to foreign governments to ensure that no sensitive information is compromised.
- Attendance by foreign students at classified Navy and Marine training courses, and the control of the release of classified information at such courses.
- Classified information that can be disclosed to Navy Activities hosting foreign Personnel Exchange Program (PEP) billets and foreign scientists.

All of these activities are conducted in close coordination with the affected Navy organizations, such as offices within the Office of the Chief of Naval Operations (OPNAV), the Systems Commands (SYSCOMs), such as the Naval Sea Systems Command or Naval Air Systems Command, which are responsible for the development and procurement of Navy equipment and systems, and the various operational commands, e.g., the Atlantic or Pacific Fleets.

PROCESSING OF COMMERCIAL EXPORT LICENSE REQUESTS

Export licenses may involve sales of information, technology, or hardware, including the data necessary for codevelopment or coproduction programs. NAVOTTSA is projected to review around 5,500 such cases this year. This volume is approximately double the number of cases reviewed in 1985, and five times the number reviewed in 1979. The case load is likely to continue to increase substantially in future years, since more and more countries are electing to purchase systems directly from a U.S. contractor, rather than from the U.S. Government via FMS channels. With some exceptions, DOD policy is one of neutrality regarding the choice between direct commercial sales and FMS. Certain items such as missiles and some classified avionics and communications equipment are sold only via FMS channels to maintain security and production base controls. In addition, some other systems with limited production facilities, such as the Phalanx Close-In Weapons System (CIWS), intended to protect ships from missiles, are restricted to FMS channels. In this manner the Navy can better ensure that Navy and foreign requirements are properly balanced.

There are several advantages to purchasing via FMS channels:

- Assurance that the equipment satisfies DOD quality control standards.
- Navy expertise in providing a customer with a complete system, including all necessary initial training and logistics support.
- Access to the Navy procurement/contracting organization.
- Assurance of continued logistics support, as well as the opportunity, should the U.S. phase the item out of its inventory, to make a last time purchase for all future requirements.

However, these services have a cost associated with them: a three percent administrative charge is added to all FMS sales. Some countries, especially those with a significant defense

industry, believe that they have sufficient expertise to determine the appropriate configuration for their systems, as well as to judge the proper level of logistics support. They can thereby save the administrative charge by negotiating directly with the contractor for a complete package. In addition, some countries prefer to delegate to one local domestic contractor complete responsibility for a major program, including the procurement of U.S. components. The indigenous company must normally purchase U.S. components directly from the U.S. contractor, since foreign governments usually do not authorize their contractors to purchase items through FMS channels on behalf of the foreign government.

Export license cases are thus expected to increase significantly in the coming years. The vast majority (approximately 5,000) of these cases are munitions cases concerned with defense articles and services. The Arms Export Control Act, as amended, (22 U.S.C. 2751 *et seq.*), authorizes the President to control such exports; this authority has been delegated to the Department of State. Thus, all export license requests are submitted to the Office of Munitions Control in the Politico-Military Bureau (PM-MC) of the Department of State, which makes all final decisions. However, PM-MC routinely refers license requests (approximately 20 percent of the total) to the Defense Technology Security Administration (DTSA), the central focal point in the Department of Defense for technology transfer considerations, and the cognizant military service.

NAVOTTSA is responsible for developing a Navy position for these cases. However, review of sensitive or precedent-setting cases is closely coordinated with affected Navy activities such as the OPNAV codes and the SYSCOMs. If necessary, the TTSARB process described above may be utilized to develop a coordinated Navy position. In the interest of processing munitions cases as expeditiously as possible DTSA set strict deadlines for all service comments; unless the case is especially sensitive or precedent-setting, comments are expected within twelve calendar days.

A significantly smaller fraction of the export license requests (approximately 500) involves dual use commodities, i.e., those with significant uses in both the military and civilian sectors. In such cases the Export Administration Act, as amended, (50 U.S.C. App. 2401 *et seq.*), provides the President with authority to control these exports. This authority has been delegated to the Secretary of Commerce. The Department of Defense is to be consulted with regard to any exports with national security implications. The Department of Commerce thus sends such cases to DTSA for review, which staffs them to the interested services; NAVOTTSA is the central focal point for the Navy. As with munitions controls DTSA sets strict deadlines for service comments.

Exports of dual use commodities to Warsaw Pact nations and the People's Republic of China (PRC) may be subject to special consideration according to the rules of the Coordinating Committee for Multilateral Export Control, known as COCOM. COCOM nations (all members of NATO except for Iceland, as well as Japan and Australia) have agreed to coordinate controls on the export of sensitive systems to such nations. Representatives of member nations meet in Paris [France] throughout the year to update the list of restricted commodities as well as to discuss other technology transfer concerns. The Navy reviews approximately fifty COCOM cases per year.

ANALYSIS OF U.S. AND FOREIGN TECHNOLOGIES

As already noted, it is critical to monitor the state of both U.S. and foreign technologies in order to develop appropriate releasability criteria. Among the technologies of special current concern are inertial navigation systems, electro-optical systems, integral rocket ramjet technology, and infrared surveillance technologies. In addition, one of the key areas where the U.S. maintains a considerable lead is weapons system computer programs. As a result, the release of such software, e.g., as part of the sale of aircraft, is subject to special scrutiny. The results of these technology reviews are also used to update the Militarily Critical Technologies List (MCTL), used

as the basis for U.S. COCOM negotiations. It should be noted that Navy laboratories as well as the Los Alamos National Laboratory help provide many of the technology assessments.

NATIONAL DISCLOSURE POLICY COMMITTEE (NDPC)

The Secretaries of Defense and State have designated the National Disclosure Policy Committee (NDPC) as the central interagency authority within the Executive Branch responsible for the formulation, promulgation, administration, and monitoring of national disclosure policy. By agreement between the Secretaries, the Office of the Secretary of Defense provides the chairman and administrative support to the NDPC. NAVOTTSA represents the Department of the Navy on this committee, which includes the military departments, the Department of State, the Joint Chiefs of Staff, the Central Intelligence Agency (CIA), the Defense Intelligence Agency (DIA), the Department of Energy (DOE), various DOD offices, the Arms Control and Disarmament Agency (ACDA), and the National Aeronautics and Space Administration (NASA).

There must be unanimous agreement among all members on each case brought before the NDPC. The National Disclosure Policy document, usually referred to as NDP-1, establishes specific criteria and conditions that must be satisfied before a decision is made to release classified military information to foreign governments and international organizations. Annex A of the NDP-1 sets forth the maximum classification levels within each category of classified military information that may be released. In cases where the classification level of information to be disclosed exceeds the delegated levels in Annex A with respect to a specific country, an exception to the National Disclosure Policy must be authorized prior to the release of any information. Requests for an exception to policy must document the following: proposed action; consistency with U.S. policy objectives; assurance that the foreign recipient will provide protection comparable to that provided by the U.S.; benefits to the U.S.; disclosure limitations; and prior coordination.

SECURITY ASSISTANCE

NAVOTTSA serves as the primary point of contact for foreign nations that are interested in purchasing, or have already procured, Navy or Marine Corps hardware or services through FMS channels. It also exercises oversight responsibility for Navy security assistance activities. These tasks include:

- Compiling the formal contract for the procurement of Navy and Marine Corps material, known as a Letter of Offer and Acceptance (LOA), DD Form 1513.
- Responding to country requests for Planning and Review (P&R) and Price and Availability (P&A) data for equipment and services. (The distinction between P&A and P&R data is largely one of detail and required documentation, with P&R data suited to general planning purposes; P&A data is that normally incorporated into an LOA.)
- Tracking the status of security assistance programs with foreign nations.
- Developing and monitoring the execution of the Navy FMS Administrative budget.

PREPARATION OF THE LOA

Upon receipt of a foreign request, either from the foreign government directly or via the U.S. security assistance office in the country, the first step in preparing an LOA is to ensure that both the State Department and the Defense Security Assistance Agency (DSAA) have copies of the request. (DSAA is the DOD agency responsible for overseeing the entire DOD security assistance program.) Both of these agencies are expected to notify the military departments of any problems within five days of receipt of the request. A request for a major system is, of course, not likely to be

unexpected. Instead, in most cases it will be preceded by a number of informal discussions between representatives of the country and U.S. personnel, both in Washington and in the foreign nation.

During the past year NAVOTTSA has developed, via the TTSARB process, a coordinated Navy release policy that prescribes which nations can receive which versions of various major systems, such as the F/A-18 fighter/attack aircraft, the E-2C early warning aircraft, the P-7A anti-submarine patrol aircraft (the successor to the P-3, currently in the final stages of development), the HARPOON anti-ship missile, and the AIM-9 air-to-air missile. Decision papers for other systems are in preparation. In addition, where required, appropriate permission has, or is being, received from the NDPC.

As a result, by the time a formal request for a major system is received, Navy disclosure policy is likely to have been determined, or at least to be in staffing. Assuming the system is releasable to the foreign nation, the request is forwarded to the organization within the Navy or Marine Corps responsible for procuring the requested item or services, usually a Systems Command. (The office responsible for the case is referred to as the Case Administering Office, or CAO.) DSAA's goal for the services is a processing time of sixty days between receipt of the foreign request and submission of the LOA for final approval by DSAA. Consequently, NAVOTTSA attempts to send the foreign request to the CAO within five days of receipt. A response from the Systems Command is requested within forty-five days, allowing NAVOTTSA another ten days to finalize the response.

Actual total response times are currently higher than the desired goal, averaging around eighty days. However, the extensive automation effort currently underway, discussed in greater length below, is beginning to improve our response times.

TRACKING OF EXISTING CASES

In addition to initiating new cases for both initial equipment sales as well as follow-on support and training, increased emphasis has recently been placed on managing the implementation of already existing cases. We hope to develop procedures to enable both NAVOTTSA, the CAO, and the foreign customer to monitor better progress in meeting delivery schedules and other milestones. The value of material and services that is to be, or has been, delivered under currently open cases is approximately \$42 billion. (An open case is one for which deliveries or payments, or both, are not yet complete.) The following countries have the largest FMS programs, and account for approximately two-thirds of the total value of outstanding cases: United Kingdom, Australia, Spain, Saudi Arabia, Japan, and Kuwait.

RECENT AND PROSPECTIVE SALES

Preliminary figures for fiscal year 1989 indicate that the Navy sold services and equipment valued at approximately \$1.7 billion to a number of individual foreign nations as well as to a consortium of NATO nations that is procuring the RIM-7 (SEASPARROW) surface-to-air missile. This figure is substantially lower than fiscal year 1988, for which sales totaled \$4.3 billion. However, the sale of forty F/A-18s to Kuwait accounted for approximately \$2 billion of the FY 1988 total. In general, U.S. Navy sales in recent years have averaged around \$2 billion, substantially lower than those of the late seventies and early eighties when Navy FMS sales peaked at over \$7 billion.

As already noted, commercial sales are increasing relative to FMS sales, and thus the earlier peaks are unlikely to be attained again. However, sales comparable to those in FY 1988 are possible if several pending major aircraft sales are realized. More generally, future FMS cases will consist of the following blend of cases: occasional large aircraft sales such as that to Kuwait (in a

range of several hundred million to several billion dollars); medium sales (ten million to several hundred million dollars each) of significant systems for aircraft and ships, such as radars, missiles, and torpedoes; and a large number of logistics support and training cases, each of which is likely to be of relatively low value, i.e., usually less than ten million dollars.

The largest Navy aircraft sales are due to the F/A-18. Australia, Spain, and Kuwait have already purchased the aircraft through FMS channels; Canada procured its F/A-18s commercially. Other aircraft with large potential sales include the P-3 and the follow-on aircraft, now denoted the P-7A, the AV-8B, a Marine Corps attack aircraft, and the E-2C. In addition, although unlikely to generate large dollar volumes, the Navy is initiating efforts to transfer excess A-7 attack aircraft to those countries that do not require the F/A-18 or comparable advanced aircraft. Prior to the sale, these aircraft would be upgraded either by Navy contractors or Naval Aviation Depots. It should be noted that some of the pending sales, especially to European nations, as well as Australia, Japan, and Korea, could be effected through direct commercial channels and/or involve substantial coproduction.

High demand systems include the HARPOON anti-ship missile, the MK 46 torpedo, the AIM-7 (SPARROW) and AIM-9 (SIDEWINDER) air-to-air missiles, the Standard Missile surface-to-air missile, the HARM anti-radiation missile, and the PHALANX Close-In Weapons Support (CIWS) ship defense system. Sales of missiles and other aircraft systems are likely to continue at roughly present levels for a number of years in support of the above aircraft sales. Similarly, we expect sales of ship systems to remain at current levels as foreign nations install U.S. systems for interoperability on indigenous hulls.

FMS WORKLOAD

Although sales have declined in total dollar volume, LOAs offered by the Navy have increased to 800-900 per year, relative to 500-600 in the early eighties, due to the large number of relatively small dollar value support cases for equipment previously sold. Over 80 percent of new cases are, in fact, for logistics support. Several recent FMS initiatives have also considerably increased NAVOTTSAs workload. For example, the lease of eight Brooke/Garcia frigates to Pakistan and four to Brazil (the disposition of the remaining four is still undetermined) necessitated considerable efforts in the area of training and logistics support, as well as the preparation of numerous documents required for Congressional approval of the leases.

Another important initiative is the development of a standard set of patrol boats. Currently, many Third World nations purchase patrol boats commercially from numerous shipyards; these boats are frequently not suited to the country's needs and/or lack logistics support. In response, the Navy has developed specifications for a series of different patrol boats in an attempt to satisfy Third World requirements; economies of scale due to the use of common standards should reduce costs as well as simplify logistics support. Such boats will play a critical role in several areas of vital importance to the U.S., in particular with respect to Philippine counter-insurgency efforts and in drug interdiction operations in South and Central America. In addition, many African coastal areas are unable to patrol their shores to ensure that foreign fishing fleets pay appropriate fees. The availability of suitable patrol boats with adequate logistics support could significantly enhance revenues and thus aid economic development.

FINANCING THE FMS PROGRAM

By law, the FMS program must recover all costs from foreign customers. Most of the funds to support the administrative overhead of the program, as opposed to those costs that can be directly attributed to a specific foreign purchase, are obtained from a charge of three percent levied on all FMS sales. It must be emphasized that the surcharge from Navy sales is not returned directly to the Navy for its FMS programs; instead it is deposited in a central FMS Trust Fund.

DSAA allocates these funds to cover general FMS administrative expenses among the various services and the Office of the Secretary of Defense. NAVOTTSA, as discussed below, plays a major role in apportioning the Navy's FMS Administrative budget.

As a result, the relative decrease in large equipment sales has significant implications for the funding of security assistance programs, since it substantially reduces resources available for the FMS program. At the same time, however, the resources required to administer the FMS program have not diminished proportionately. Ship leases have recently assumed a much more prominent role in security assistance; this trend is expected to continue. However, a lease, as opposed to a sale, generates no revenues for the FMS Trust Fund.

More generally, as noted above, the number of LOAs processed by the Navy has increased, many of which are for logistics support of previous sales. Although much smaller in value, many logistics support programs require almost the same amount of work as a large equipment sale. DSAA recognized this problem several years ago, and instituted a logistics support surcharge (LSC) on logistics support cases. However, the revenues from this source are not sufficient to counter losses stemming from the decline in large equipment sales. As a result, DSAA has recently instituted a major effort with the three services to review security assistance procedures and funding sources.

NAVY SECURITY ASSISTANCE DATA SYSTEM (NSADS)

The Navy has undertaken a major effort to automate parts of the preparation of LOAs by developing the Navy Security Assistance Data System (NSADS). This system became operational in 1986, and has undergone significant expansion since then. Most recently all of the Systems Commands have been electronically linked to the system. NSADS is designed not only to cut costs but also to reduce response times.

NSADS is also associated with a change in the philosophy underlying the preparation of LOAs. Analyses indicate that only approximately 50 percent of the LOAs offered are in fact accepted by the requesting countries. Furthermore, for numerous reasons, e.g., unforeseen price changes or changed country requirements, the value of an LOA almost always undergoes a significant change during the life of the case. As a result, the practice of spending large amounts of scarce FMS Administrative dollars to develop extremely precise estimates for LOAs that would (1) be rejected half the time and (2) be significantly modified in most cases can no longer be justified.

Instead, an analysis of a number of historical cases shows that simple ratios, e.g., 10 percent of the value of the item for training and 25 percent for spare parts (all percentages are purely notional, for illustrative purposes only) provide estimates which, on average, are as accurate as detailed calculations. More generally, the NSADS philosophy is to provide the customer with sufficiently detailed information to make a decision on whether to proceed with procurement of the system. The refinement of cases to match precisely the country's requirements is to be done after the case is accepted, as part of the initial planning conference and survey of the country's capabilities and facilities. There are thus significant savings for the FMS Administrative budget, since the Navy no longer routinely calculates extremely detailed estimates for all parts of the LOA; instead the detailed customizing of a desired procurement is to be performed as part of the case.

The NSADS system is beginning to demonstrate major improvements in the processing of LOAs. DSAA in fact plans to adopt key NSADS elements for its own use as well as for the other services.

NON-RECURRING COSTS (NRC)

Another important function associated with the oversight of Navy security assistance programs is the monitoring of the Navy's collection of Non-Recurring Costs (NRC). DOD regulations require that foreign purchasers pay an equitable share of the research and development, as well as initial production, costs associated with the items being procured. These funds are not returned to the Navy; instead they are used to capitalize the Special Defense Acquisition Fund (SDAF), with the remainder deposited in Treasury miscellaneous receipt accounts. (The SDAF is used to make advance purchases of systems for all military departments that are likely to be sold in future years, but for which there is temporarily a limited demand. It thus promotes more efficient utilization of weapons production lines by limiting annual fluctuations.) It is important to note that these charges are collected on both FMS sales and direct commercial sales. Approximately \$100 million was collected last year in NRC charges for sales of Navy equipment.

DSAA has the authority to waive NRC charges; such waivers, however, are usually effected only when the foreign customer offers the U.S. some reciprocal benefits. For example, NRCs may be waived as part of negotiations concerning base rights or due to benefits to the U.S. from enhanced interoperability.

LOAs include the appropriate NRC charge. However, for commercial exports, it is more difficult to ensure that the appropriate charge is collected. Recently, several efforts have been initiated to ensure that contractors are aware of their obligation to pay NRC charges. Letters have been sent to U.S. Government plant representatives at key defense plants reminding them of standard provisions in defense contracts requiring payment of NRC cost on any sales other than those to the U.S. Government. In addition, all export license requests are being reviewed, with letters sent, where appropriate, to remind contractors of their obligation to pay NRC costs.

NAVY SECURITY ASSISTANCE BUDGETS

A critical role in the oversight of the Navy's FMS program concerns the review of the Navy FMS Administrative budget. In FY 1989, the Navy was allocated approximately \$67 million for overhead associated with the FMS program that is not attributable to a specific case. Over half of this amount went to the Naval Supply Systems Command, which provides numerous logistics and financial support services for the Navy FMS program. In particular, the Navy International Logistics Control Office (NAVILCO) processes all requisitions and other financial documents for most Navy FMS cases. Remaining NAVSUP funds also support the development of improved automated accounting systems for FMS sales, as well as FMS logistics support activities at the two principal Navy inventory control points, the Aviation Supply Office (ASO) and the Ships Parts Control Center (SPCC).

NAVOTTSA is funded primarily from two sources, the FMS Administrative budget for security assistance activities, and operations and maintenance (O&MN) funds for technology transfer programs, with supporting directorates funded from both sources. The Saudi Naval Support Office is funded directly by Saudi Arabia. Other Navy activities (besides NAVOTTSA) with significant FMS Administrative budgets include the Naval Air Systems Command, the Naval Sea Systems Command, the Space and Naval Warfare Systems Command, and the Naval Education and Training Security Assistance Field Activity (NETSAFA).

NAVOTTA reviews all inputs for the entire Navy FMS Administrative Budget from the Systems Commands and other activities in coordination with the Comptroller of the Navy. Subsequently, a consolidated submission is transmitted to DSAA, which makes the final decision on the FMS Administrative Budget.

NAVY INFORMATIONAL PROGRAM (IP)

A final aspect of NAVOTTSA's review of the Navy FMS program concerns the oversight of the Navy's Informational Program (IP). The IP program is designed to familiarize foreign students attending U.S. training schools with U.S. customs, culture, institutions, and values. Schools are specially encouraged to make visits to local factories and farms, as well as cultural and sports events. NAVOTTSA allocates IP funds among the various Navy schools, and monitors expenditures to ensure that proposed activities are consistent with the goals of the IP program.

PROSPECTIVE ORGANIZATIONAL CHANGES

NAVOTTSA has substantially achieved the objectives of a more prominent and better coordinated process for resolving significant technology transfer and security assistance issues. However, as already noted, sales of sophisticated systems to advanced nations frequently involve codevelopment and/or coproduction. As a result, foreign nations seeking to implement such arrangements frequently need to negotiate not only with the DASN(TT/SA), but also with ASN(RE&S), which is responsible for overseeing the conduct of all DON research, and ASN(S&L), which is responsible for procurement policy. Although there is extensive coordination among the DASN(TT/SA), ASN(RE&S), and ASN(S&L), having one central office for all Navy international programs, including codevelopment, coproduction, sales, export licenses, and general technology transfer and security assistance issues, could enhance the conduct of Navy international programs.

A prospective Navy reorganization will create such an entity, the Deputy Assistant Secretary of the Navy for International Programs [DASN(IP)]. This reorganization is intended primarily to strengthen the Navy acquisition process, and is dictated by a broader reorganization of Department of Defense acquisition policies. All acquisition functions, including research, development, and procurement, are to be combined under a new Assistant Secretary of the Navy for Research, Development, and Acquisition [ASN(RD&A)]. All such work that involves international programs is to be the responsibility of the DASN(IP), who will report to the ASN(RD&A). The DASN(IP) will also be director of the field activity that is to succeed NAVOTTSA, as yet unnamed. Although a number of details remains to be resolved, this new organization is likely to be structured similarly to NAVOTTSA, with the directorate for TTSARB, International Programs, and Special Projects taking on additional responsibilities for the coordination of international programs.

CONCLUSION

Cooperation with friendly and allied nations will be critical in the future in light of increasingly constrained defense resources. It can stretch scarce research dollars, and also significantly enhance acquisition funds through economies of scale. At the same time, the U.S. is likely to rely more than ever on superior quality, as opposed to quantity, of weapons systems. Judicious control of the transfer of technology to foreign nations will thus play a key role in future defense planning. The prospective consolidation of all Navy international programs under a DASN(IP), which builds upon the significant achievements of the DASN(TT/SA) and NAVOTTSA, will provide the Navy with an organizational structure well equipped to execute these demanding responsibilities.

ABOUT THE AUTHOR

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