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ilitary equipment is one of the more visible aspects of the Department of Defense. Yet, the procurement process through which that equipment is obtained is perhaps one of the least understood functions of the department.

Everyone—Congress, industry, the public generally—is interested, and rightly so, in how the dollars appropriated for defense are spent. What happens to the \$35 to \$40 billion available annually for contracting? What does DoD buy, and does it do a good job of buying?

There are volumes of material—regulations, text books, records of Congressional hearings, etc.—available which deal with procurement, either in general or with particular aspects of it. These make up the daily "bible" for those who are working in procurement.

But most of us don't have the time to become procurement experts, and it is not the kind of material which makes for easy reading for someone trying to get a quick overview. How can we fill that gap?

TV-Newspapers

The difficulty of "reaching" others was aptly stated recently during hearings held by a subcommittee of a joint Senate-House Committee. Speaking of the difficulty his subcommittee had in interesting other members of Congress in procurement problems, the Senator chairing the subcommittee said: "We do not have any effect unless we reach other members of the House and Senate. You cannot reach them in reports, let's face it, you cannot reach them in hearings. The one way we can reach them is if they watch television, which they do, and read newspapers, which they do. That is the way we get to them, that is the way to reach them."

There is nothing wrong with

being informed through television and newspapers, but all too often the only things about procurement which are considered newsworthy are the things that go wrong. The successes are rarely publicized.

You never hear about programs which are relatively trouble-free, and which exemplify the success which can be achieved with the right combination of procurement and technical expertise. The A-7A attack aircraft was awarded after stiff competition among four prospective manufacturers, was delivered on time, within funding limitations, and proved to be a highly successful aircraft. The same is true of the F-4 aircraft, which has been in production now for almost 20 years.

Total Accuracy Impossible

The mistakes not only receive publicity, but are blown out of all proportion to their importance by being lifted out of context. As a former Assistant Secretary of Defense once noted, considering the volume of DoD procurement, even if we were right 99 percent of the time, which is probably too high to achieve, we would make more than 100,000 mistakes a year. Some criticisms are justified, but the dark picture of defense procurement, too often portrayed in the press, is certainly evidence that the critics may not understand all they should about procurement.

This issue of Commanders Digest is devoted to the subject of procurement, with a view to imparting to a broad segment of responsibile military leaders a better understanding and appreciation of what it is and how it fits into the overall defense mission.

Specifically, what DoD buys, how DoD buys, how DoD organizes for procurement, and what are some of the more significant policies which govern procurement.

DOD PROCUREMENT— A Misunderstood Function



The procurement function in DoD is one of the responsibilities of Arthur I. Mendolia, Assistant Secretary of Defense for Installations and Logistics. Prior to assuming his present post in June 1973, Mendolia was vice president and general manager of the Polymer Intermediates Department, E.I.du-Pont deNemours & Co. He is putting his vast industry experience to practice in trying to streamline and improve the procurement practices of the Department of Defense.

ASPR

. . A composite result of a continuous melding process



The Armed Services Procurement Regulation (ASPR) as it exists to-day is obviously not simply a one-time compilation of all the policies and procedures which procurement managers consider necessary to effect good procurement. Instead, it has gradually evolved over a period of more than 20 years. The regulations are the composite result of a continuous melding process which accommodates numerous interacting pressures and interests throughout the entire Federal Government and which also incorporates advances in business methods.

The sources of procurement policies and regulations are almost as numerous as the policies themselves. The Armed Services Procurement Act is the basis for the ASPR, and it is indeed the cornerstone.

However, many other statutes of less

sweeping significance are also implemented in the ASPR. Also, proposed legislation, Congressional committee hearings, and other indications of Congressional interest are sources of procurement regulations. For example, hearings of the Small Business Committees, the Government Operations Committees, the Appropriations Committees, the Armed Services Committees, and others, frequently result in reports which recommend, either directly or obliquely, changes or additions to the regulations.

The following enumeration of other sources (which is neither all-inclusive nor in order of priority or frequency) illustrates the complexity of interactions which characterize procurement regulations:

 General Accounting Office reports, opinions, and decisions;

Directives from the Secretary of
Defense which he considers necessary

Members of the Armed Services Procurement Regulation (ASPR) committee during one of their recent meetings.

to carry out the mission of the department and which have procurement implications;

- Decisions by courts and boards (e.g., the Armed Services Board of Contract Appeals), particularly those which point up ambiguities in existing regulations;
- Executive orders and other statements of national policy, such as those dealing with Buy American and Equal Employment Opportunity:
- Deficiencies in the regulations which are noted by contracting officers, contractors, or other users and called to the attention of those responsible for maintaining the regulations; and

Regulations issued by other agencies, which have an impact on procurement, such as Labor Department determinations with respect to wages and workmen's compensation; Office of Federal Contract Compliance regulations with respect to Equal Employment Opportunity; Environmental Protection Agency regulations or instructions.

It is not possible to write regulations to avoid every possible mistake or to anticipate every possible procurement situation. To even attempt to do so would be counterproductive. An ASPR designed to protect the mediocre from any blunders would be a millstone around the necks of the very able.

DoD's policy, insofar as developing procurement policy is concerned, is to provide reasonable guidance to contracting personnel, allow sufficient flexibility in the regulations to accommodate a variety of procurement situations, and avoid minutiae which would unnecessarily restrict the judgment of contracting personnel.

Concern With Legislation

Procurement policymakers in OSD are constantly on the alert to offer constructive comments on legislation dealing with procurement. Even if they agree in principle with a particular legislative proposal, they may oppose its enactment. It is often better for the Executive Branch to take administrative action to make whatever changes are necessary in procurement regulations than be subjected to a statutory requirement.

Both [Legislative and Executive Branches] accomplish the same objective initially, but administrative action provides much more flexibility to meet the changing needs of procurement. Once a requirement is made statutory, it becomes very difficult to change or repeal, even though conditions may change so that it no longer serves a useful purpose.

Goldfish Bowl Environment

Defense procurement personnel well recognize their public responsibility. They operate in a goldfish bowl—every action open to Congressional and public scrutiny and criticism. No one would want to change this. However, it is this

very open nature of the procurement operation, coupled with a less than adequate understanding and appreciation of the function, which too often leads to unwise proposals for change.

Nor are the policymakers always successful in persuading Congress not to enact a particular statute. Proposed statutory provisions are often tacked on to other bills as riders or special provisions. When this happens, they are frequently adopted without adequate or substantive committee consideration.

Much of the proposed legislation is designed not so much to improve procurement as it is to use procurement as a vehicle for fostering other objectives. Thus, the procurement process becomes the vehicle for achieving many socioeconomic objectives.

Some legislation favors or benefits only a particular industry or group. For example, in the first session of the 93d Congress, the General Provisions of the FY 73 Defense Appropriation Act were amended to restrict the procurement of certain materials to domestic sources. A provision in the FY 73 Defense Authorization Bill restricts the use of multivear contracts. Another provision, proposed for the first time as part of the FY 74 Authorization Bill, would have required DoD to consider hidden costs (e.g., loss of tax revenue, affect on U.S. jobs, etc.) before making any purchase from a foreign source. DoD opposed this as being impossible to calculate and administer, and also on the basis that the present implementation of the Buy American Act already minimizes procurement from foreign sources.

Congressional Load

At last count, 26 new bills or amendments which would have an impact on Defense procurement were introduced in the first session of the 93d Congress. Only three or four of these have so far been enacted, but many of the remaining ones will continue to be reintroduced until they either pass or their sponsors give up. Not all have an equal impact. Some are supported by DoD. Some only incidentally affect procurement. But the policymakers in DoD need to be alert every day to make sure that their voice is heard on those which would have an im-

pact, and that they head off those which are patently unwise from a procurement standpoint.

Not at Odds

All this is not to say that Defense procurement people are forever at odds with the Congress, or to leave the impression that nothing good ever comes out of legislation. Congress is, in a sense, a Board of Directors in this respect, and individual Congressmen have a responsibility to their constituents too. However, in the overall public interest, Defense procurement policymakers want to ensure that Congress fully appreciates the procurement impact of legislation which it is considering.

Government Procurement

While on the subject of Congress' interest in procurement, the Commission on Government Procurement merits some special mention. Late in 1972, this commission completed an almost-three year study of Federal procurement. It submitted a four-volume report of its findings, with 149 recommendations for changes, to the Congress on December 31, 1972. Congressman Holifield of California sponsored the legislation which led to the establishment of the commission.

Implementing machinery has now been set in motion throughout the Executive Branch to consider these recommendations. In addition, several bills have been introduced in Congress to implement some of the recommendations which require either new statutes or changes to existing statutes.

This was the most indepth government-wide review of procurement that has ever been made. It will undoubtedly lead to some improvements in procurement. It has contributed a great deal to understanding the diversities and complexities of procurement, at least for those who worked with the Commission. Unfortunately, studies of this kind do not get widely read. Even as thorough a study as this may include recommendations for change which should not be adopted for one reason or another.



rocurement is the acquisition of goods, services, real property, studies or research, by contracts, grants, or other agreements. The terms "procurement" and "purchasing" are often used interchangeably to refer to the process of obtaining defense requirements from private industry. However, there is a significant distinction between the two.

"Procurement" is more nearly equated with "acquisition" and encompasses the roles played by many functional managers—such as financial, technical, test and evaluation, logistical—in addition to purchasing and contracting.

On large programs these functional areas are coordinated into an effective acquisition team by a program manager. Thus, the entire process of developing, testing, funding and producing a major system is often described as "acquisition" or "procurement".

On the other hand, the term procurement is often used in the narrow sense of encompassing the actions of the purchasing and contracting officials. This activity involves such things as contract clauses, types of contracts, pricing, source selection, competition, contract administration, etc. In this article, we will be dealing mostly with procurement in the narrow sense, i.e., purchasing and contracting.

The primary mission of defense procurement is the development and acquisition of weapons, supplies and services to support the Nation's defense needs. It is the biggest buying business in the world. The range of items includes everything from fresh vegetables and clothing to airplanes, ships, and real estate; the range of services includes everything from janitorial services to expert consultant services.

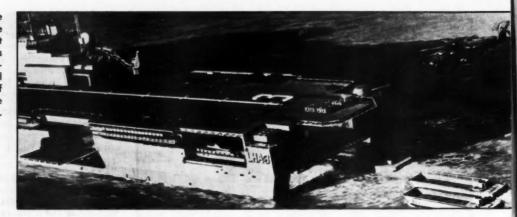
What is the magnitude of the defense procurement task? In the 10 fiscal years 1964 through 1973, Defense purchases averaged more than \$36 billion a year. This accounts for approximately 75 percent of total Federal contracting.

Procurements by any one of the Military Departments alone were 3 to 4 times the volume of procurement by the larger non-military buying agency. There were approximately 10 million procurement actions each year, ranging in value from small petty cash (imprest fund) purchases to major systems contracts amounting to several hundred million dollars.

Purchases in excess of \$10,000 were made from more than 20,000 firms, in every State in the Union and many foreign countries. If the vast number of purchases under \$10,000 are included, the total number of firms involved in defense procurement is approximately 80,000.

While contracts are placed in every state, approximately 50 percent of defense procurement dollars are generally concentrated in only four or five states. However, there is a more even distribution than this prime contract value would indicate, since about 50

Artist concept of the new general purpose amphibious assault ship which was launched last December. The ship will be the backbone of the U.S. Marine amphibious forces.



percent of Defense business is subcontracted, often to several tiers below the prime contractor.

What DoD Buys

The wide range of materials and services which DoD buys can be broken down into three general categories:

- Items which are identical to those required by other government agencies, such as office furniture and supplies, housekeeping items, and commercial tires and tubes:
- Modified commercial items and items of conventional military equipment which are more or less peculiar to DoD requirements but which can be supplied by more than one source and in many cases several sources. including items such as clothing, petroleum products, machinery, lumber, paint, small boats, etc. (These first two categories generally account for less than one-third of DoD procurement dollars.); and
- The research, development, and production of complex military weapons and equipment, by far the largest category, dollar-wise, which includes missiles, aircraft, ships, tanks, electronics and other complicated items which generally have no counterpart in the commercial market.

How DoD Buys

The items in the first category above are generally acquired through the General Services Administration (GSA). GSA has been assigned government-wide responsibility to contract for such items of common usage, and generally does so through formal advertising, i.e., public opening of bids after solicitation of all known sources of supply, and award to the lowest responsive bidder.

GSA, in some cases, buys and stocks items in warehouses or depots from which all government agencies requisition as needed and reimburse GSA. In most cases, GSA writes open contracts (known as Federal-Supply Schedule Contracts) with suppliers.

Other Federal agencies then purchase against those contracts and pay the contractor directly. It is a continuing DoD policy to transfer procurement responsibility for common-use items to GSA on a mutually agreeable basis.

From FY 1964 through FY 1972, DoD placed an average of 600,000 actions annually under Federal Supply Schedule Contracts. The average annual dollar volume of such purchases was approximately \$650 million.

The items in category two above are normally purchased by formal advertising. However, competitive negotiation is generally used for small purchases (those under \$2,500) and also in carrying out programs to aid small business and labor surplus area firms.

The majority of the items in the third category are purchased initially by competitive negotiation, which includes design and technical competition and price competition. But once a contractor is chosen for a particular program, that contractor generally manufactures the initial production quantity and as a practical matter often becomes the sole source for successive production procurements. The heavy investment needed to get into a major program makes it impractical for many firms to even try to compete at all. Even among those who do compete initially, it is generally impractical for those who do not receive the initial production contract to try to break into the market later.

Procurement Organization

The procurement function in the DoD is the responsibility of the Assistant Secretary of Defense (Installations and Logistics). However, DoD does not do any purchasing at the Office of the Secretary of Defense (OSD) level. All purchasing is done by the three Military Departments and the Defense agencies.

The largest of the Defense agencies is the Defense

Supply Agency (DSA), which purchases supply and support items used by more than one Military Department.

Within each Military Department an Assistant Secretary (Installations and Logistics) is in charge of procurement.

The detailed procurement organization varies within each Service. In the three Military Departments, the primary responsibility for research, development and acquisition of hardware and for other aspects of logistics is assigned to a major command or commands. In the Army, this is the Army Materiel Command (AMC); in the Navy, the Navy Material Command (NMC); and in the Air Force, the Air Force Systems Command (AFSC) and the Air Force Logistics Command (AFLC).

Two-thirds of the procurement dollars in DoD are spent by components of these major commands.

Below this level are numerous field organizations. Within the field organizations, specific operating ground rules such as dollar limits of procuring authority, assignment of items or commodities to purchase, levels of review, appointment of contracting officers, etc., are generally fixed by each department to suit its own organizational and operating needs.

Hundreds of activities within each department make purchases. However, not every purchasing organization has the same authority. Procurement is a primary function of many major organizational elements.

For example, a primary function of the Naval Ship Systems Command is the design and acquisition of ships for the operating fleet. Army electronics equipment is generally procured by the Army Electronics Command at Ft. Monmouth, New Jersey, a major field activity under the Army Materiel Command.

In other organizational elements, procurement may be only an incidental function. One example is a laboratory whose primary function is research and which will procure some things to support that research. Below the major command level are the hundreds of smaller field organizations each of which has some limited authority to purchase, commensurate with its needs. This is often referred to as post, camp, and station purchasing or base purchasing, and consists mostly of local or decentralized purchasing to support the particular post, camp, station, or base.

In all cases procurement is, in essence, a service or support function, i.e., it supports something else. It is not an end in itself, but rather a means to an end—to aid the primary mission of the Defense Department.

In a broad sense, DoD controls procurement in several ways, i.e., it exercises authority which determines or influences not only what is procured but how it is procured. One important way is through the budget process. Of primary interest for our purposes here, though, is DoD's role in procurement policy and procedures, specifically how DoD controls the everyday mechanics of contracting for its myriad requirements. DoD's authority to control procurement in this

sense stems from the Armed Services Procurement Act of 1947. This act is the basic general procurement statute for the Department of Defense. It authorizes the Secretary of Defense to prescribe procurement regulations, and the basic requirements of the statute are the foundation for those regulations.

ASPR

The Armed Services Procurement Regulation (ASPR) is the compilation of policies and procedures issued by the Secretary of Defense to implement the Armed Services Procurement Act. The ASPR also provides direction and guidance for complying with other pertinent statutes and executive orders. In addition, it establishes policies and procedures for procurement areas not covered by statute.

It is designed to provide uniform guidance and direction for awarding and administering all DoD contracts. As now issued, the ASPR contains over 3,000 pages, divided into 26 sections and 15 appendices.

As a DoD directive, the ASPR is unique, not only in volume but also in the fact that it is under continuous review and updating, so that it always contains current policies and procedures. It is unique also in that it is supplied directly to the user, with no intervening change.

The Military Departments may supplement the ASPR with such things as internal management procedures, but may not restrict or change the policies set forth in the ASPR.

The Assistant Secretary of Defense (Installations and Logistics) carries out his policy function through the ASPR Committee. Just as the ASPR is a unique directive, the ASPR Committee is unique among DoD committees. It is a permanent committee, chartered by DoD in 1952, with the primary function of establishing and promulgating policies and procedures in the ASPR, and keeping it up to date.

Even before it was formally chartered in 1952, the committee existed as an informal group. It published the initial implementation of the Armed Services Procurement Act soon after the act was signed.

The ASPR Committee is composed of representatives of the three Military Departments and DSA and is chaired by a representative from the Office of the Assistant Secretary of Defense (I&L).

The participation by the Services in developing the ASPR insures that the needs and peculiar problems of each Service are taken into consideration in developing uniform policies and procedures.

Another unique feature of the committee is that the members speak for the Secretarial level of their respective departments. No further internal coordination is necessary on most matters which the ASPR Committee considers.

While not a perfect system, the ASPR process is one which has functioned well and, over the years, has served the maximum needs of the Military Departments with respect to procurement guidance.

REASONABLE Prices for Material and Services

he primary objective of Defense procurement is to obtain necessary material and services for defense needs, at reasonable prices. However, in view of the large amount of contracting done by DoD and the multiplying effect of DoD contracting on the national economy, the DoD purchasing program is also used to further national objectives such as assuring equal opportunity in employment, safe working conditions, minimum wages, environmental protection, strengthening small business, fostering minority business enterprise, and other socio-economic objectives.

The first step in implementing many, if not most, of the socio-economic objectives is the inclusion of special clauses in DoD contracts which require the contractor to do certain things, to take certain actions and/or to flow requirements down to his subcontractors.

Some clauses, such as the Equal Employment Opportunity clause, require active enforcement by DoD on the basis of criteria developed and promulgated by the Office of Federal Contracts Compliance in the Department of Labor.

Some, such as the requirement to comply with certain minimum wage provisions, are enforced by the Department of Labor.

Other clauses require contractors to comply with existing standards with respect to such things as health and safety, workmen's compensation, environmental protection, etc.

Still others (for example, employment of veterans, employment of the handicapped) require the contractor to undertake positive programs.

Contract With Small Business Firms

Some socio-economic objectives, such as awarding contracts to small business firms, labor surplus area firms, and to minority business enterprises, are implemented by active DoD programs. The Armed Services Procurement Act requires that a fair proportion of DoD procurement be placed with small business firms.

Full cooperation is given to the Small Business Administration (SBA) to assure that this is accomplished. A variety of techniques are used to further this objective. For example, large business firms are often excluded from a procurement so that competition is only among small firms. This is known as the setaside technique. (Within set-aside procurements, preference is given to small business firms which are in labor surplus areas.) Set-asides may be made for part or all of a given procurement. Pending procurements are reviewed to determine those which can likely be performed by small business or labor surplus area firms.

Full cooperation is also given the SBA in identifying requirements suitable for placement with minority business enterprises. If suitable terms, including price, can be arranged, such requirements are awarded to SBA for subcontracting with minority business enterprises.

Buy American

National policy on foreign purchases is set forth in the "Buy American Act" which requires that, with certain exceptions, only domestic source end products be acquired for public use in the United States. Domestic end products are defined as those whose material content is more than 50 percent of domestic origin. Thus, a product may contain up to 50 percent foreign components costwise, (i.e., 50 percent of the cost of all components) and still be a domestic product. An evaluation factor of six percent is normally added to the price of a firm offering foreign products. This factor is increased to 12 percent if the low firm offering domestic products is a small business concern. However, DoD currently requires a 50 percent evaluation factor in favor of bids offering domestic products in order to alleviate the adverse impact of DoD expenditures on the U.S. balance of international payments.

In addition to the general restrictions of the Buy American Act, other constraints on foreign purchases are contained from time to time in legislation, particularly in the annual DoD Appropriation Act. The most significant and long-standing "rider" to the Appropriations Act is one which restricts the purchase of such items as food, clothing, wool, and silk to domestic sources. These restrictions in the Appropriations Act differ from the Buy American Act in that they are absolute prohibitions unless a domestic source item cannot be procured on time and at reasonable prices. No evaluation factors or price differentials are used in comparing prices, as is done under the Buy American Act.

A major exception to the preference for domestic supplies is the DoD arrangement with Canada. It is DoD policy to seek the best possible coordination of the materiel programs of Canada and the United States and to assure Canada a fair opportunity to share in production of military supplies of mutual interest. Accordingly, DoD does not apply the restrictions of the Buy American Act to most Canadian supplies. The terms of DoD's understanding with Canada in this respect are contained in a U.S.-Canadian Production Sharing Agreement and a U.S.-Canada Development Sharing Agreement.

rocurement is a much more complex process today than it was even 10 years ago, and there is no sign of a letup. As the hardware becomes more sophisticated and costly, the regulations become more voluminous and far-reaching.

It is, perhaps, too much to hope that things could ever again be as simple as they were when the Army contracted with the Wright Brothers in 1907 for its first heavier-than-air flying machine. Yet, we cannot help but marvel at the results achieved with such a simple document. The contract was a single page and the specification only three pages long.

Procurement Phases

The procurement process begins long before the point of actual contracting is reached, and can be roughly divided into pre-award, award, and post-award phases. The pre-award phase includes determination of requirements, preparation of specifications, solicitation of prospective contractors, and all the other steps preparatory to actually placing a contract. Ideally, contracting personnel should begin to work together with logistics planners, engineers, technicians, and others in the earliest stages of requirements determination, i.e., as soon as the department knows that something will be procured even though it may not know yet precisely what or in what quantity.

Specification of Requirements

The determination of quantity is only a beginning in specifying requirements. There must also be a clear description of what is wanted so as to give the maximum number of potential contractors an opportunity to bid on filling those requirements. Wherever feasible, it is DoD policy to procure commercial type items, or to adapt commercial type items to its use by adding whatever military features are necessary. However, much of what DoD buys is simply not available anywhere in the commercial market, and it must be designed and built to meet peculiar needs of a Military Department.

In all cases, it is DoD policy to specify only the actual minimum needs of the government and to describe these in a manner which will encourage maximum Procurement
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competition. Overspecifying and restrictive features limit the amount of competition that might otherwise be obtained, often cause difficulties and delays in performance, and at best result in increased costs to the government.

Solicitation

Prospective contractors are typically solicited by mailing them the material concerning DoD's requirements. Under formal advertising this is called an invitation for bids (IFB). Under negotiated procurement it is either a request for proposals (RFP) or a request for quotations (RFQ). The RFQ is used more for research and development or complex technical procurements where there is quite likely to be a discussion of technical factors with the prospective contractor.

The significant difference between an RFP and an RFQ is that the response to an RFP is considered an offer to the government which can be accepted by

the government without discussion. The response to an RFQ, on the other hand, is not an offer, but merely the basis for discussion or negotiations between the parties.

The solicitation package normally consists of all the terms and conditions of the proposed contract and all of the specifications and technical material which the contractor will need in order to prepare his bid or proposal. Much of this material, including standard contract clauses and technical material, may be incorporated by reference into the solicitation package, particularly if it is too voluminous, or if it is otherwise available in standard publications or standard specifications which the prospective contractors either have or can obtain independently.

The number of firms solicited is determined by many factors, including how many firms are on the bidders' list, the complexity of the procurement, and the number of firms considered reasonably qualified.

In addition to the solicitation of prospective contractors who are on bidders' lists, the procuring activity publicizes proposed procurements over \$10,000 by placing a brief summary or synopsis of such procurements in the Department of Commerce Business Daily. This lets the industry know who is buying what. Interested companies which were not originally solicited may then obtain copies of the solicitation from the procuring activity concerned.

Written solicitation is generally used in procurements over \$2,500. Millions of small transactions under this amount are handled less formally, with offers solicited orally in many cases.

Contractor Responsibility

It is DoD policy to contract only with responsible firms. A responsible firm is one with a record of business integrity and satisfactory performance plus the financial, production, and technical capability necessary to perform the specific work required by the proposed contract. Prior to awarding a contract, the contracting officer must make a positive determination that the proposed contractor is responsible. In other words, it is not sufficient merely to fail to find disqualifying negative information. If the contracting officer does not have, or is

unable to obtain, positive information showing that the firm is responsible, he cannot award a contract to the firm. Information on which to base a determination of responsibility may be obtained through a pre-award survey of the firm, evaluation of past performance records, or other sources.

Extent of Competition

Competition, both price and technical, is obtained in a large percentage of Defense contracts. In FY 1973, such competition accounted for 43.2 percent of the total DoD procurement of \$33.5 billion. Effective price competition occurs in both formally advertised and negotiated procurement.

Price competition is considered to exist if offers are solicited and received from at least two responsible offerors who are capable of satisfying the government's requirements, and the award or awards are made to the offeror or offerors submitting the lowest evaluated prices. Price competition may also exist even when only one offer is received, if offers are solicited from at least two responsible offerors who normally contend for contracts for the same or similar items. It is not the number of offers received but the fact that the likelihood of other offers created a competitive atmosphere that determines this result. Whether there is price competition for a given procurement is a matter of establishing that each of the foregoing conditions is satisfied.

The conditions under which formal advertising can be used effectively are set forth in the ASPR as follows:

- There is adequate time to carry out the necessary procedures.
- There is the probability of adequate competition, i.e., at least two or more responsible firms which are able to bid on the requirements.
- The specifications are sufficiently precise so that bidders may bid and their bids may be evaluated on a common basis, and
- Award can be made on the basis of the lowest bid from a responsible bidder.

The rules of formal advertising are very rigid and bidders who take exception to any of the terms of an IFB are considered nonresponsive. Only those who are fully responsive to the terms of the IFB are considered for award. Award is made to the lowest responsive and responsible bidder without any negotiations or discussion of either price or other terms of the contract.

Negotiated Contracts

The mention of negotiation often engenders a concept of "back room" or "under the table" dealings with favored suppliers. Many critics of procurement equate negotiations with noncompetitive procurement.

The following quotation from the record of recent hearings before a Con-

ROLE OF THE AUDITOR

No discussion of procurement would be complete without noting the significant role played by the Defense Contract Audit Agency. The auditor has a key role at several stages of the procurement process. He audits and analyzes contractor price proposals in connection with negotiated procurements which do not meet the criteria for effective price competition. He also audits all cost-type contracts after performance, to ensure that claimed costs are allowable and reasonable, and may be called on for special audits in connection with pre-award surveys, progress payments, price redeterminations, etc. In all cases, the audit is a major instrument for protecting the Government's interest.

gressional committee exemplifies this long-standing misconception: "The Defense Department apparently refuses to reverse the long-term trend away from competitive bidding—control over a substantial portion of procurement has been virtually lost as a result of excessive resort to negotiation of Defense contracts."

This is an unfortunate misunderstanding because, in fact, competitive negotiation accounts for a substantial portion of defense procurement. The use of negotiation does not mean the absence of competition. Strictly speaking, it

means the absence of formal advertising.

Negotiated procurement may produce as much competition as a formally advertised procurement, or even more. The principal difference between formal advertising and negotiation is that under formal advertising, after bids are received, nothing can be discussed with bidders. The use of negotiated procurement permits discussion (negotiation) with offerors after their offers are submitted, if the responses to the solicitation indicate that problems need to be resolved prior to award.

This is in the best interests of both parties—the prospective contractor and the government—to ensure that there is complete agreement on technical requirements, on price, and on other details of the contract. This is the way industry buys. Formal advertising in industry is a rarity.

When the criteria for formal advertising are met, the forces of competition will generally assure an award at the lowest price. When any one of these conditions cannot be satisfied, formal advertising is completely ineffective, and negotiation is used. In practice, the majority of DoD procurement dollars are spent through negotiated procurement.

The Report of the Commission on Government Procurement noted the limitations inherent in the use of formal advertising and recommended that competitive negotiation be recognized in law as a normal, sound buying method which the government should prefer where market conditions are not appropriate for the use of formal advertising.

Competition for New Items

When developing complex new military items, procurement normally must continue with the developer until the item has been tested and proved and design is stable. As soon as design can be stabilized so as to get away from a sole source or a limited number of sources. DoD does so.

The advantages of competition from a pricing standpoint are well-known. There are numerous examples available to show that prices have been dramatically reduced when a procurement was shifted from noncompetitive to competitive. The fact that substantial price reductions are often achieved through competitions are often achieved through competitions.



This Navy HH-20 Seasprite helicopter is equipped with a newly developed radar antenna system. The six-foot, eight-inch diameter radome, located under the nose, can be inflated to 52 inches in depth (as shown). The inflatable radome does not reduce the helicopter's landing ability.

tition in no way implies that the previous deals were bad or resulted in exorbitant profits.

It simply illustrates the free enterprise system. Prospective contractors are forced to effect economies and reduce costs in order to be competitive, a discipline they were free of in a sole source situation. One could speculate that competition would have been possible earlier in many such situations, but these are matters of judgment. There are no absolute, objective standards which mark the threshold for going competitive. Competition is introduced as early as practical in a procurement program.

Noncompetitive Awards

Despite continued efforts to utilize various techniques to maximize competition, a large segment of DoD procurement cannot be placed on a competitive basis. Many major programs have little potential for competition and must be acquired through sole source or noncompetitive negotiated procurement. Included here are such major systems

procurements as Safeguard, Trident, nuclear aircraft carriers, the operation and maintenance of Government-owned ammunition facilities, and utility services.

Award Phase

The award phase concerns itself as the name implies with the actual award of the contract after the foregoing steps are completed.

Whether formal advertising or negotiation is used, the policy is to award a contract which will be most advantageous to the government, price and other factors considered. When formal advertising is used, award is made, after the bids have been reviewed, to the lowest responsible bidder. There is no discussion involved except perhaps for the correction of minor clerical errors.

Award is made simply by notifying the lowest responsible bidder. The terms and conditions of the IFB become the terms and conditions of the contract. Unsuccessful bidders in formally advertised procurements are also notified of the award.

In negotiated procurements, there is more flexibility to determine which proposal is the most advantageous to the government. Price, technical factors and other terms of the proposed contract may be discussed with offerors. Of course, even in negotiated procurement award may be made to the low responsible offeror without any actual negotiations taking place. However, this method provides the flexibility for discussions when they are needed.

Contract Types

The ASPR describes a wide variety of types of contracts designed to meet all anticipated procurement situations. These range from firm fixed price to cost reimbursement, with several variations of each, plus a number of special types. The general policy is to be flexible in the choice of the contract type. The objective is to use that type of contract which will most likely assure satisfactory performance at reasonable cost.

The contract type must be compatible with the degree of risk indicated by cost, schedule, and technical uncertainties. When these risks are minimal or can be predicted with an acceptable degree of certainty, a firm fixed-price contract is preferred. Under a firm fixed-price contract, the Government knows what price it will have to pay, and the contractor has the greatest incentive to control his costs since anything he saves will add to his profit.

On the other hand, a firm fixed-price contract is often not desirable for a requirement in which there is a high A 30-foot rotodome is placed atop this Boeing 707-320 converting it to an Air Force airborne warning and control system (AWACS) aircraft. The Air Force designation is EC-137D.

degree of technical risk or economic uncertainty. If the contractor underestimates the risk, he might not be able to perform at all at the fixed price or could only do so by delivering an unacceptable product. If he overestimates the risk, the price might be so inflated that the government ends up paying much more than the product is actually worth. Cost type contracts are preferred in high risk situations until an item is developed to the point where technical and cost risks can be reasonably predicted.

Property Used in Contract Performance

As a general rule DoD would like to have all contractors furnish all of the facilities used in the performance of their contracts. Special incentives, such as higher profit and accelerated depreciation of facilities and equipment, are available to induce contractors to invest in the necessary plant and equipment. However, DoD has never been able to get entirely out of the business of owning, and in some cases operating, certain manufacturing facilities.

The department has acquired or constructed facilities at various times for reasons of mobilization capacity, economy, standardization, expediting production, etc. When the immediate need for such facilities has passed, it is often difficult to put them to other uses or to dispose of them. Thus, they remain in DoD's inventory, either in a reserve status or in limited use.

The extent of Government-owned property used in contract performance varies from the operation of a complete plant to the furnishing of a few items of special tooling or special test equipment to a contractor. DoD maintains a reserve of industrial plant equipment, such as milling machines, lathes, grinders, welders, and general purpose test equipment. This equipment is made available to contractors whenever it is needed to obtain contract performance.

Once a contract is awarded, procurement enters the post-award or performance phase. DoD's relationship with the successful bidder is now a contractual one. Therefore, the contract is the prime reference for all matters concerning performance.

Every attempt is made during the award phase to ensure that the contract is as complete and clear as possible, in order to minimize problems of interpretation and in order to place full responsibility on the contractor for successful performance. Maximum reliance is placed on a contractor's ability, integrity, experience, and the adequacy of his internal controls and planning. However, unless the contract is clear and complete, even the best contractor will have difficulty understanding and complying with the government's requirements.

DoD often takes an active role in contract performance-in the more complex procurements-by such measures as approving design plans or reviewing and approving pre-production models before full scale production is authorized. DoD testing and evaluation, inspection, providing technical information or ordering changes during performance are other functions that may condition the contractor's performance. Of course, even with these, the contract should be complete and unambiguous. DoD's role in these areas is more one of checking off milestones than it is one of becoming involved in the day-to-day management and performance of the contract.

Contract Administration

In its narrow sense, the term "contract administration" is often used to mean only the paperwork aspects of administration and not the technical functions which are really the substantive elements of administering contract performance.

In a broad sense, contract administra-



tion encompasses everything that takes place after contract award. It includes furnishing government-owned equipment or material to the contractor if the contract calls for this, monitoring progress of the contractor's production efforts, checking the contractor's quality control program, inspecting and accepting completed items, arranging for shipment, approving vouchers for payment, and a host of similar actions.

In addition, the contract administration office performs pre-award surveys, when requested by the purchasing activity, to ascertain a potential contractor's ability to perform. Thus, the contract administration office has an important role in the determination of contractor responsibility which the contracting officer must make prior to award.

Contract administration is no less important a part of the procurement cycle than is pre-procurement planning, solicitation, selection of a contractor, or award of the contract. The purpose of procurement is to acquire quality material, delivered on time and at a reasonable price.



The real work of producing the required items only begins after the contract award. Even the most carefully planned procurement, awarded at a fair price to a fully qualified and responsible contractor, may not result in timely delivery of material unless the contract is properly administered. This means that contract administration people must get involved early in the life of the procurement and stay involved until the last item is delivered.

The general policy in DoD is to have contract administration functions performed in the field, at or near the contractor's facility where the item is being produced.

There are several exceptions to this general policy which permit some or all of the administration in connection with a particular contract to be performed by the purchasing office. The exceptions depend on the items or services which are being procured, place of performance, and other such considerations.

Many small purchases require little or no administrative effort. These may be assigned to a contract administration office simply to accomplish acceptance of the items at the point of origin or they may be assigned only for payment.

It is also DoD policy to avoid duplication of contract administration effort and to maintain one face to industry in connection with the administration of contracts. The majority of contract administration in terms of the number of plants and the number of contracts is accomplished by the Defense Contract Administration Services (DCAS) office in the Defense Supply Agency (DSA). DCAS operates through a network of regional, district, and local offices to perform contract administration for the entire DoD.

Major contractors who are performing contract for highly complex and sophisticated defense systems, or shipyards, whose performance is uniquely related to a single Military Department, are not under the DCAS organization. These are retained for contract administration by the Military Departments under the plant cognizance

In the interest of keeping defense

programs on schedule and to maintain an administrative means of promptly mobilizing the Nation's economic resources in the event of war or national emergency, it is a statutory requirement and national policy to require contractors to use industrial priority ratings and allotment authority to support military procurement.

Procurements Contracting Officers (PCOs) have been delegated the authority to rate contracts and purchase orders with industrial priority ratings and to make allotments of controlled materials (steel, copper, aluminum and nickel alloys). Rated contracts and orders pre-empt commercial (unrated) contracts and orders where delivery conflicts occur. Timely deliveries of controlled materials are also assured through the issuance of allotments from material set-asides.

Where normal operations of the priorities and allocations system do not suffice, a Special Priorities Assistance procedure is available to resolve critical industrial resource shortages and production bottlenecks.

Almost a household phrase MAJOR SYS

ajor Systems" is becoming more and more a household phrase in the DoD procurement community. While it is not intended to cover the subject in any detail here, our discussion of procurement would be less than adequate, if we didn't at least mention briefly major systems acquisition.

There is no single precise definition for major defense systems, although certain criteria and dollar thresholds have been set forth in DoD directives. Nor is there anything really new about the concept of systems. The term has evolved and come into wide usage as defense hardware has become more sophisticated and complex, requiring the closer intertwining of several disciplines and capabilities.

A system, as contrasted with a single weapon, consists of an instrument of combat, such as an aircraft or missile, together with all the related equipment and supporting facilities required to bring the instrument to its target or to the place where it performs the function for which it was built. For example, the Minuteman and Safeguard missile systems are made up of the missiles themselves, plus the sites in which they are stored and the complicated electronics involved in detecting enemy threats and "delivering" the missiles (i.e., firing them and guiding them to their targets).

The requirement for a new defense system comes into being as the result of constant assessment of the capabilities of a potential enemy and of technological advances. A new enemy threat may appear which cannot be countered by existing weapons, or a new technological development may make it possible to improve existing weapons to better meet the existing potential threats. Once a requirement has been established and determined to be feasible, DoD's objective is to procure the development, production, and delivery of the defense system into inventory in time to meet the threat and at minimum cost.

Rapid technological advances tend to make complex weapons obsolete even before they can be produced, therefore, it is necessary to telescope the overall development and production task—assuring, on the one hand, that development is sufficiently complete before production

is started, and remaining sufficiently flexible, on the other hand, in order to take advantage of advances in the state of the art—with minimum impact on both time and costs.

The challenge is to "start from scratch" and research, design, develop, test, produce, and deliver a weapon in time to counter the threat which it is intended to meet.

The design, development, production, and operation of a defense system involves several functions normally managed by separate elements of the Military Departments. For example, funding is a comptroller function; procurement is accomplished by purchasing offices; storage, distribution, and maintenance, as well as training of personnel, are separate functions. The problem of coordinating all these responsibilities has led to the development of new management approaches and to the concept of the "program manager". The program manager or project manager or system program director, as he may be variously referred to, is given the responsibility for coordinating and directing all the efforts required to place a defense system in operation.

There is no single method or formula for the program manager which fits all defense systems. The particular management arrangement to be selected depends on such factors as the nature of the item, the state of the art, the degree of urgency, and in-house and industrial capability. As an indication of the scope of the problem, the Nike-Hercules program had 10,000 subcontractors and suppliers, whose efforts had to be controlled and time-phased. Effective planning and programming is required with respect to management of all the equipment and facilities which compose such a system. It not only must be done initially—it must be revised time and time again.

The policies and procedures of the Armed Services Procurement Regulation (ASPR) apply equally to the contractual aspects of systems as they do to other procurements. The basic policy of obtaining competition to the maximum extent practicable is pursued just as vigorously here as elsewhere. Similarly, small business and labor surplus area programs and other socio-economic objectives are equally emphasized.

The kinds of specifications used are the basic ones discussed earlier. There are no additional types of contracts available for special application in systems procurement.

TEMS

Finally, while a defense system procurement may be characterized generally as one where little or no initial cost experience is available, the same may be found in other procurements as well. Various techniques of controlling the cost of new hardware—e.g., competitive prototype development, designing to a cost ceiling, and others—are even more important in connection with major systems and components of major systems because of the large amounts of money involved.

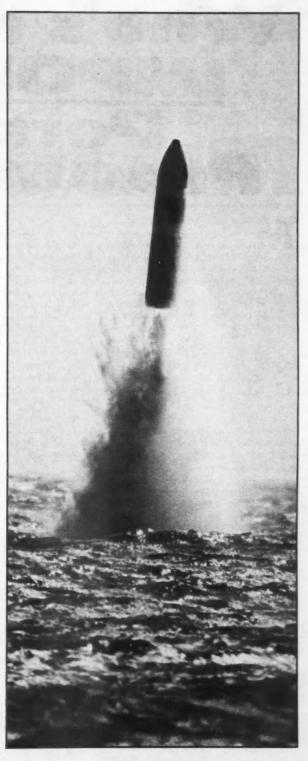
One important ingredient that distinguishes defense systems contracting is the factor of time. Coordination and time phasing are overriding considerations in the procurement area just as in the management area.

The contracting officer must plan, negotiate and incorporate contractual provisions to assure compatibility of effort among all participants in the program. Contracts must be placed for end items, subsystems and support systems so as to insure their availability at the proper time for integration into the weapon system. In fact, all important systems interfaces and time phasing in regard to contractors' operations must be covered in contractual documents.

Systems procurement is usually broken down into phases. It begins with the conceptual phase, during which, as the term implies, the concept of the system is thoroughly reviewed and analyzed. This usually precedes the determination to acquire a major weapon system. The considerations which support the determination of the need for a program, together with a plan for that program, are documented in a Development Concept Paper (DCP).

Once the decision is made to go ahead with a program, the procurement normally takes place in three phases. The first phase involves contracts for design and development work and construction of mockups. Contracts under the second phase call for completion of engineering, production of prototype units and testing of prototypes. The third phase is quantity production. The length of time, the number of contracts, etc., in each phase will vary from program to program depending on the nature and complexity of the system being procured.

A Poseidon missile breaks the water seconds after launching from the U.S. Navy's nuclear powered fleet ballistic missile submarine USS Daniel Boone.



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Who's the Most IMPORTANT Person in Procurement?

he role of the contracting officer is significant enough to merit a little elaboration. The contracting officer is the individual most often mentioned in the Armed Services Procurement Regulation (ASPR) and, in terms of role and responsibility, is the most important person in the procurement organization. He is the one who signs the contract on behalf of the government. He is responsible for the terms and conditions of the contract, which in turn ultimately determine or affect the performance by the contractor.

Contracting officers are formally appointed within the DoD by each Military Department and Defense agency and must meet certain requirements as to experience, training, judgment, integrity, etc., in order to be appointed. In post, camp, and station or base procurement the contracting officer may handle hundreds or even thousands of small transactions each month, perhaps assisted only by a clerk. He receives requests for supplies or service and takes all the action necessary to insure that those requirements are delivered on time. He is in effect a "jack-of-all-trades" -price analyst, negotiator, expediter, etc.

In more complex procurements, and particularly in major systems acquisition, the job of negotiating, writing and administering a contract is not just a one-man task. The contracting officer functions more as the head of a team, coordinating the work of the many functional specialists and experts whose advice and counsel cover the entire procurement spectrum.

The team includes engineers, auditors, price analysts, cost analysts, lawyers, material inspectors, and negotiators—all

specialists in their particular fields. Engineers and requirements specialists insure that the item to be procured is properly identified and described in the specifications. They also assist in the evaluation of bids or proposals to determine whether the items offered by prospective contractors do, in fact, meet the requirements of the specification. Auditors, price analysts, and cost analysts assist in determining whether a contractor's offered price and/or his estimated costs are reasonable. Lawvers ensure that contracts clearly express the intent of the parties and that they comply with statutes and regulations.

Other personnel assist in inspecting and accepting items furnished under the contract and with other details of contract administration, serving as on-the-scene representatives of the contracting officer after the contract has been awarded. It is through this team

arrangement that the contracting officer is able to discharge his responsibility.

One troublesome problem facing contracting officers is that other government personnel, often unwittingly, make commitments to contractors which affect the performance of their contracts, without the knowledge and concurrence of the contracting officer. Such unauthorized commitments disrupt the orderly carrying out of the contracting officer's responsibilities.

Of much greater concern, though, is the fact that such commitments often result in significant claims for additional costs. Much effort is devoted to continually assuring that both DoD contracting personnel and contractor employees are aware of the role and responsibility of the contracting officer, and assuring that they avoid either giving or accepting any direction which affects contract performance, except when clearly authorized by the contracting officer.

Contract Officer Types

The ASPR speaks of three different types of contracting officers—the procuring contracting officer (PCO), the administrative contracting officer (ACO), and a terminations contracting officer (TCO). The PCO is the one who actually awards the contract. The ACO is the one who administers that contract during performance. The TCO comes into the picture only if the contract is terminated, in which case he is responsible for settling the termination with the contractor. In many cases, all three of these roles may belong to the same individual.



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