Logistics Management Institute

# Single-Source Contracting for Depot Maintenance

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July 2001

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Most depot maintenance contracting is awarded on a single-source basis. The term "single-source" includes both sole-source contracting as well as open solicitations with only one offeror. This study assessed the prevalence of single-source contracts in fiscal year 1999, correlated single-sourcing with other contracting characteristics and provided recommendations to develop evaluation criteria for alternatives, improve reporting accuracy, and share management initiatives.

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The views, opinions, and findings contained in this report are those of LMI and should not be construed as an official agency position, policy, or decision, unless so designated by other official documentation.

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# Executive Summary

During the mid-1990s, a study[1] found that 91 percent of depot maintenance contracts were awarded on a single-source basis, accounting for 67 percent of the total contract value.

The implications of this finding could significantly shift the public-private debate for depot maintenance. Most advocates for outsourcing to the private sector cite the cost-saving benefits of competition in the process. Historically, competitions for depot maintenance workloads have reduced the cost by a factor that ranged upwards of 30 percent.[2] However, if the bulk of depot maintenance contracting is single-source, the argument for competitive sourcing may be moot.

LMI designed this study to provide some visibility into the characteristics of depot maintenance contracting and the prospects for further competitive sourcing. It is a comprehensive survey of depot maintenance contracting performed by all contracting activities and encompasses the full spectrum of contract values. To conduct the study within resource constraints we employed sampling techniques and general descriptions of segments of the population.

Table ES-1 is a comparison of the basic data from this study and the earlier effort.

*Table ES-1. Basic Data Comparison*

| | Previous study (FY96–97) | This study (FY99) |
|---|---|---|
| Number of contracts in force | 15,346 | 7,537 |
| Contract value | $2.2 billion | $5.4 billion |
| Single-source volume | 11,930 (91%) | 6,406 (85%)[a] |
| Single-source value | $1.5 billion (69%) | $2.4 billion (44%)[a] |

[a] Estimated through statistical sampling.

[1] GAO/NSIAD-98-130, *Defense Depot Maintenance: Contracting Approaches Should Address Workload Characteristics*, June 1998.

[2] Office of the Secretary of Defense, *Report of the Defense Science Board (DSB) Task Force on Depot Maintenance Management*, Results of Competitions, p. F-31, March 31, 1994.

The comparison depicts a single-source contracting volume that is essentially unchanged over the two periods. The difference in total number of contracts reflects the time frames of the surveys (17 months extending over 2 fiscal years for the earlier study, versus one year for this study). The contract values are significantly different, at least in part because our study encompassed all reported depot maintenance contracting, while the earlier study was restricted to 12 primary contracting activities. Interviews confirmed the percentage of single-source contracting is relatively stable.

Two-thirds of all DoD depot maintenance contracting, but only 6 percent of the value, is managed by the Naval Inventory Control Points (NAVICPs) at Mechanicsburg (ships) and Philadelphia (aviation). The great bulk of NAVICP contracts are single-source. Excluding NAVICPs from the analysis, the remainder of DoD has a contract volume that is 58 percent single-source, with 40 percent of the total contract value.

Two types of contracting comprise the single-source population. One type is the classical sole-source award, where a contract is awarded to a single source without soliciting other bidders. But 6 percent of the time, a second type of contract is awarded to the single offeror who responded to an open solicitation. Both types of contracts were included in the earlier study, and we repeated that practice here, grouping both types under the term "single source."

The justifications for sole-source awards frequently cite the legislative authorities for sole source, and "unique source" is the most frequently used criteria from the list of seven legal possibilities. The justification and authorization (J&A) issued for sole-source awards typically cites a lack of technical data as the reason why a source is unique. Other rationale includes an industrial base consideration to sustain a single source (usually the original equipment manufacturer) or workload, or to preserve a facility that is considered a national asset or "last source."

Depot maintenance contract data is not readily visible for analysis, for a variety of reasons. Financial obligations do not track automatically to contract folders; contract folders and data systems are non-standard; and DD350[3] data is inaccurate and misleading for this type of application. Managers can only provide estimates rather than actuals when depot maintenance functions fall under umbrella contracts that include multiple logistics activities.

Visibility of depot maintenance contracting is decreasing. The proportion of umbrella contract support is steadily increasing for new systems; such contracts do not separately call out maintenance requirements. At the same time, increasing amounts of depot maintenance are bundled into corporate agreements, partnerships, and performance-based logistics contracting. Performance-oriented metrics typically do not track maintenance production.

[3] Defense Reporting Format 350, *Individual Contracting Action Report*, available commercially via the Eagle Eye reporting system.

Maintenance is losing visibility even as maintenance-related decisions become increasingly expensive and important to equipment life cycle. DoD needs standard data systems and metrics to enlighten maintenance decisions. For example, information systems should be able to easily link workload, financial, and contract information.

There are no objective criteria evident for making choices about purchasing depot maintenance technical data. There is no evidence of an objective answer to the question of whether or not single-source contracting is actually more expensive. Obviously, if alternative sources were available, competitive sourcing might be more economical. But that is not the case now. Instead, the services focus on gaining the best value for the government, using whatever means are available within contracting authorities.

There is little potential to increase competitive sourcing for depot maintenance. Contracting activities have well defined but relatively static programs for establishing competitive repair contracts. Competitive sourcing for contract depot maintenance is strongest in particular segments, including platform-level contracts, watercraft, and commodities (e.g., tire re-treading, common altimeters, and common avionics). Competitive source selection for new system acquisition does not automatically lead to competitive repair, because most systems are proprietary and DoD infrequently buys technical data packages to support competitive repair sourcing. While there are mechanisms to establish alternative sources, such activity is resource constrained and, therefore, focused primarily on last-source determinations and diminishing vendors. Several barriers to entry make it difficult for potential market entrants to compete with original equipment manufacturers.

The inventory control points (ICPs) generally believe they have done all they can to promote competitive repair contracts, and additional competition is not necessarily the avenue with greatest potential for best value. DoD must be realistic in its expectations for achieving significant economies in depot maintenance, given the difficulties in achieving competitive sourcing.

Contracting activities have developed a number of alternatives to achieve best value in the single-source environment, including the corporate and umbrella contract structures mentioned earlier. In this environment, negotiation and contract structure are more important than competition for maintenance contracting. Some level of organic capability facilitates establishing and maintaining a "smart buyer," including reverse engineering capabilities. Contractor incentives can effectively deliver desired performance as well as cost reduction.

The following are our recommendations:

- The Assistant Deputy Under Secretary of Defense (Logistics and Materiel Readiness) for Maintenance Policy, Programs and Resources [ADUSD(L)MPP&R] should work with the services to develop an objective evaluation methodology for alternatives to single sourcing. In effect, the methodology should help determine whether enabling competition is worth the effort and expense on a life-cycle basis.

- ADUSD(L)MPP&R should work with the acquisition community to reexamine the DoD policy favoring competitive sourcing for realism and alternatives in the depot maintenance arena. In particular, the policy should "de-link" and separately evaluate the goal of achieving potential savings through outsourcing from the life-cycle costs of establishing and sustaining competitive sources.

- ADUSD(L)MPP&R should request the acquisition community take steps to improve the visibility and accuracy of contract data for depot maintenance.

- ADUSD(L)MPP&R should sponsor forums and the development of course curricula to share management initiatives among the ICPs and the services for depot maintenance contracting.

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# Chapter 1
# DoD-Wide Assessment and Overview

## INTRODUCTION

A series of reports in the mid-1990s assessed the prevalence of sole-source[1] contracting within depot maintenance. The last report in the series[2] indicated 91 percent of all depot maintenance contract actions, and 67 percent of awarded-contract value, were single-source.

The implications of this finding could significantly shift the public-private debate for depot maintenance. Most advocates for outsourcing to the private sector cite the cost-savings benefits of competition in the process. Historically, competitions for depot maintenance workloads have reduced the cost by a factor that ranged upwards of 30 percent.[3] However, if the bulk of depot maintenance contracting is single-source, the argument for competitive sourcing may be moot.

This study was designed to gain an in-depth understanding of depot maintenance contracting, the reasons for single-source awards, and the prospects for the future.

## OVERVIEW

A large number of defense activities contract for depot maintenance. The organizations range from inventory control points (ICPs) to operating commands. This diverse set of activities and their unique information systems complicate this type of study. Since it is likely that this type of study may be repeated at intervals in the years ahead, we have described our process and made suggestions for further work in Chapter 3.

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[1] The General Accounting Office (GAO) used the term "sole-source" to include contracts that were awarded on a true sole-source basis, that is, only one offeror was solicited. The GAO term also included contracts in which a single offeror responded to an open solicitation. This report occasionally distinguishes between the two types; therefore, throughout the remainder of this report, we use the term "single-source" to mean the combination of sole-source and single-offeror contracts.

[2] GAO/NDIAD-98-130, *Defense Depot Maintenance: Contracting Approaches Should Address Workload Characteristics*, June 1998.

[3] Office of the Secretary of Defense, *Report of the Defense Science Board (DSB) Task Force on Depot Maintenance Management*, Results of Competitions, p. F-31, March 31, 1994.

We used data from the so-called "50-50 Report," which is required by 10U.S.C.§2466, as a starting point.[4, 5] This 50-50 data delineates the total amount of depot maintenance financial obligations applied to performance by non-federal (i.e., contract) employees each year. We selected fiscal year 1999 (FY99) for analysis because it was the last fiscal year with complete data at the time we began the study. However, 50-50 data has limited utility because only one of the military departments (Air Force) has an automated link between financial obligations and contract numbers; in many cases the contracting organizations had to provide manual contract data to support the study. The 50-50 data was still useful to provide an outer bound of financial information, as we describe later.

This chapter covers the size and scope of FY99 depot maintenance contracting efforts for DoD components.[6] The information that follows is based on a compilation of contract inventories, samples intended to obtain detailed contract data, characterizations of entire contracting organizations, management interviews, database retrievals, and limited use of the DD350[7] reporting system. Samples, when drawn, were randomly selected from approximately 10 percent of each population; the earlier study had selected samples based on contract value.

Figure 1-1 shows the depot maintenance contract amounts reported by each DoD component for the FY99 50-50 data call.

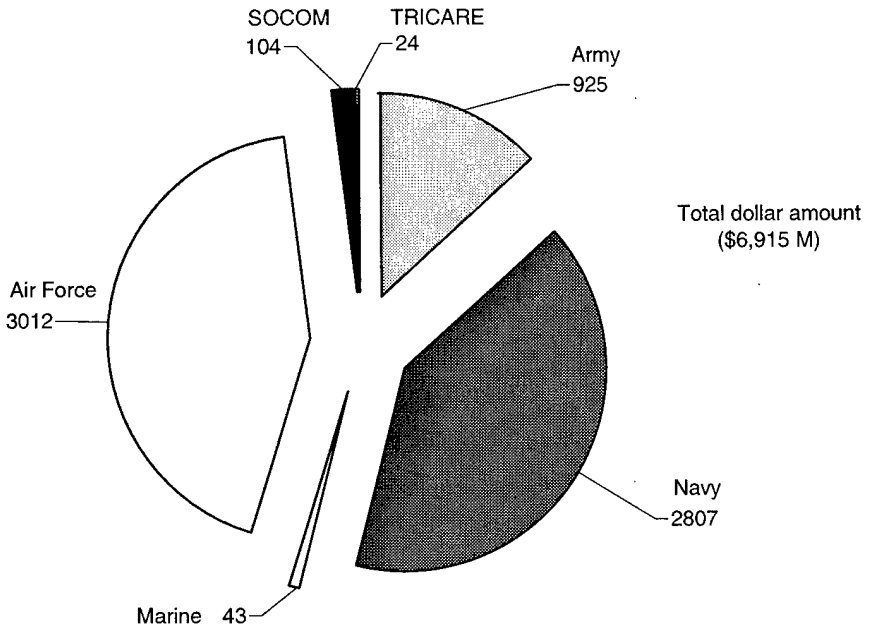
[4] *Distribution of DoD Depot Maintenance Workloads, Fiscal Years 1999 and 2000,* prepared by the Deputy Under Secretary of Defense (Logistics & Materiel Readiness), February 2001.

[5] The 50-50 reports for FY99–FY00 and future years are contained in Appendixes A and B respectively.

[6] For the purposes of this study, a DoD component is defined to be a reporting entity for 50-50 reporting. For FY99, those entities included the Military Departments (Army, Navy, Air Force), the United States Special Operations Command, and the TRICARE Management Activity. TRICARE is the name of DoD's worldwide healthcare program for service families. The term is not used as an acronym.

[7] Defense Reporting Format 350, *Individual Contracting Action Report*, available commercially via the Eagle Eye reporting system.

*Figure 1-1. DoD FY99 Depot Maintenance Contracting (50-50 reporting—dollars in millions)*




Our study found (as expected) a somewhat smaller contract value for FY99 than the 50-50 Report. The differences stem from a number of factors, including a later time frame for this survey than the 50-50 reporting, as well as an inability to track inter-fund transfers (such as inter-service workload funding) from financial obligation systems to actual contract numbers. Figure 1-2 is a summary of the contract volumes and values that we found.

*Figure 1-2. Study Contract Volumes and Values (FY99)*

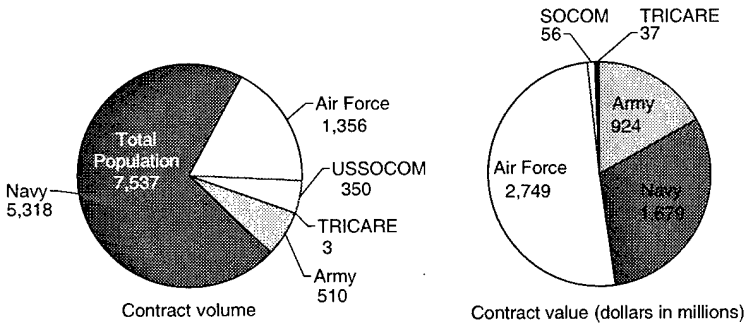
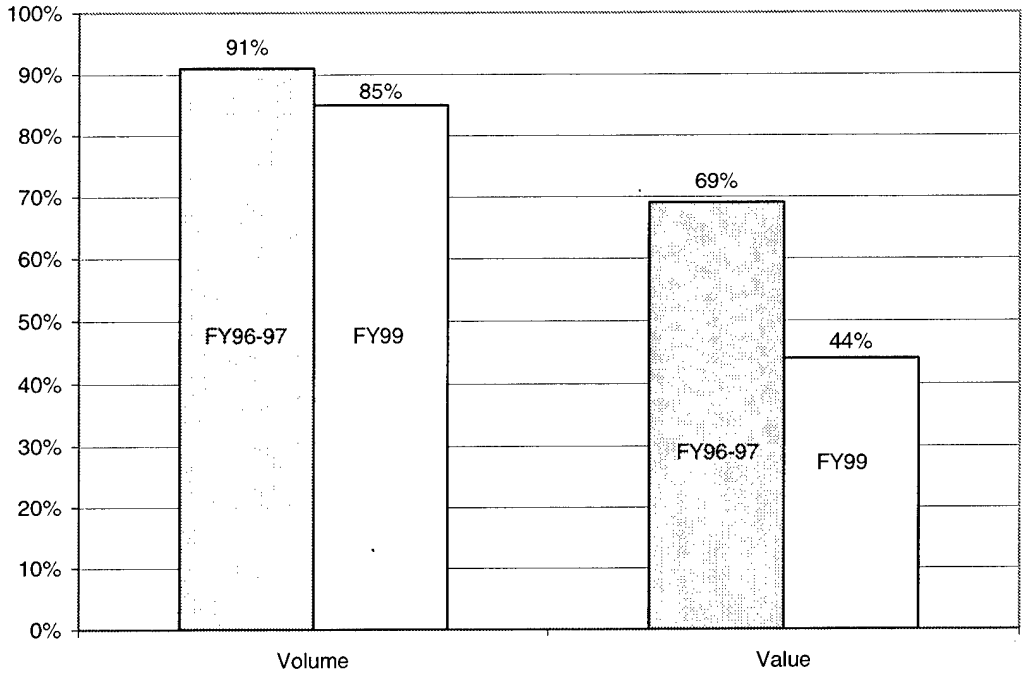



Figure 1-3 compares the single-source percentages for contract volumes and values between the earlier GAO work and this study. The overall results are comparable, despite a number of differences in the two study approaches (discussed later in the report). The percentage of single-source contract values are significantly different, in part because our study encompassed all reported depot maintenance contracting, while the earlier study focused on 12 primary contracting

activities. Interviews confirmed the percentage of single-source contracting is relatively stable.

*Figure 1-3. Single-Source Percentage of Contract Volume and Value*




This assessment continues with a more detailed analysis of contract data elements, followed by an evaluation of the potential for competitive depot maintenance contracting in the future. The chapter concludes with our findings, conclusions, and recommendations.

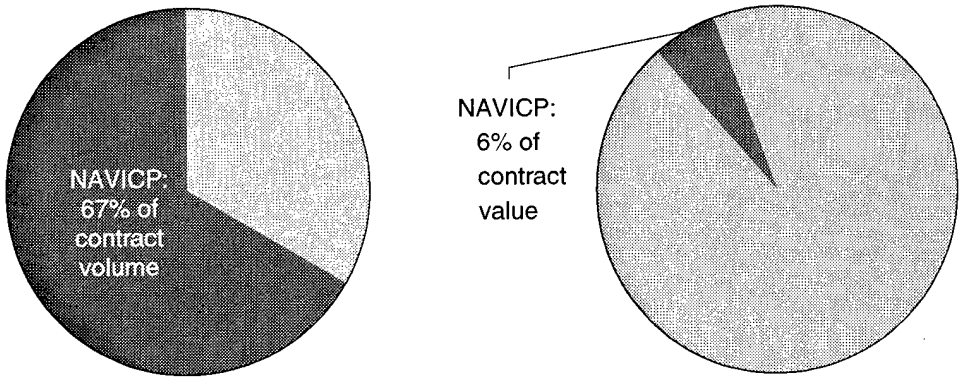
# ANALYSIS

To understand the characteristics of the contract population in more detail, we selected a random sample of contracts and extracted specific data elements from them. A thorough description of this process is in Chapter 3.

## Effect of NAVICP Mechanicsburg and Philadelphia

As noted in Figure 1-4, the two Naval Inventory Control Points (NAVICPs) in Mechanicsburg and Philadelphia account for 66 percent of the total DoD contract inventory, but only 6 percent of total DoD contract value.

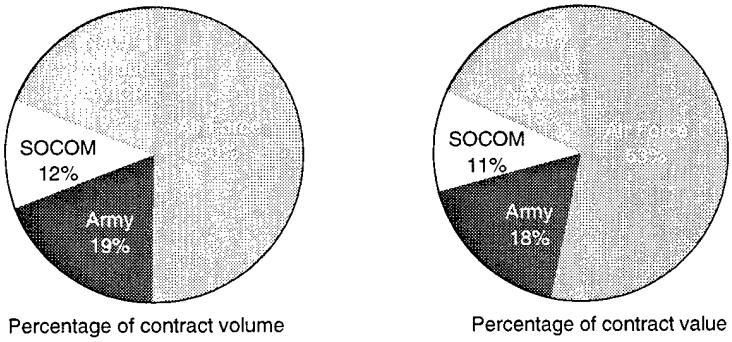
*Figure 1-4. NAVICP Share of Contracts versus Share of Value*




The volume of NAVICP contracts has a significant effect on the overall characterization of the DoD contract population, especially since nearly all of their repair contracts are single-source. In addition, detailed sample information was not available from the NAVICPs, although we did obtain an accurate characterization of the overall NAVICP contract population. For these reasons, the analysis that follows will sometimes exclude Mechanicsburg and Philadelphia when it is appropriate to do so.

Figure 1-5 illustrates this issue. If we exclude NAVICPs, a DoD component's share of contract volume is nearly identical to its share of contract value (compare to Figure 1-2).

*Figure 1-5. Contract Volume versus Value Share (excluding NAVICPs)*




Percentage of contract volume

Percentage of contract value

## Size of Contracts

The total population had an average contract value of $0.7 million. The population without NAVICPs had an average value of $1.9 million. The difference reflects the effect of the NAVICP contracts, which are numerous but have a relatively small value. A sample shows nearly 56 percent of the contracts are worth less than $500,000 each. This reflects the dominant effect of relatively few large dollar-value contracts on the overall average. Table 1-1 illustrates the spread of contract values across the DoD sample.

*Table 1-1. Estimated Breakdown of Contracts by Value for DoD Components (excluding NAVICPs)*

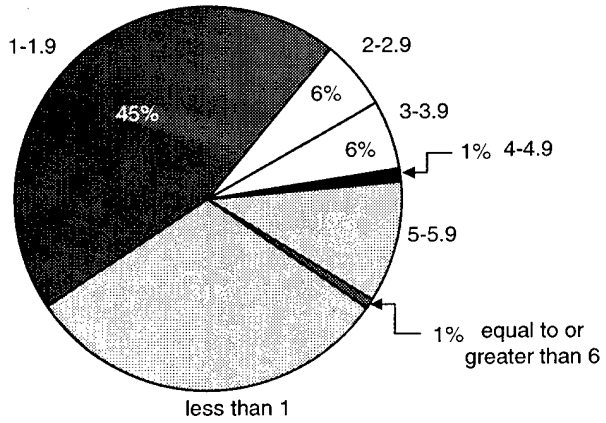
| Dollar range in millions | Percentage of total amount |
|---|---|
| <0.1 | 24.3 |
| 0.1–0.5 | 31.6 |
| 0.5–1.0 | 11.7 |
| 1.0–5.0 | 18.6 |
| 5.0–15.0 | 8.5 |
| 15.0–50.0 | 4.9 |
| >50.0 | 0.4 |

Note: Total contracts sampled = 247.

## Length of Contracts

Contracts have two components that determine the length of the contract period—the base term and the number of option years. Figure 1-6 shows that the base terms tend to be short—an estimated 76 percent of the contracts had base terms of two years or less. NAVICPs were excluded from this analysis because the summary data available for their contracts contained no information on base-term or option periods. Base terms longer than 2 years tend to be infrequent with longer terms proving even more unpopular. An interesting exception is a base term of 5 years, which occurred 10 percent of the time in our sample and may simply be a convenient period for contracting officers to choose when they want a relatively long base term.

*Figure 1-6. Estimated Breakdown of Contracts by Base Terms in Years for DoD Components (excluding NAVICPs)*




Note: Total contracts sampled = 223. Ranges in years.

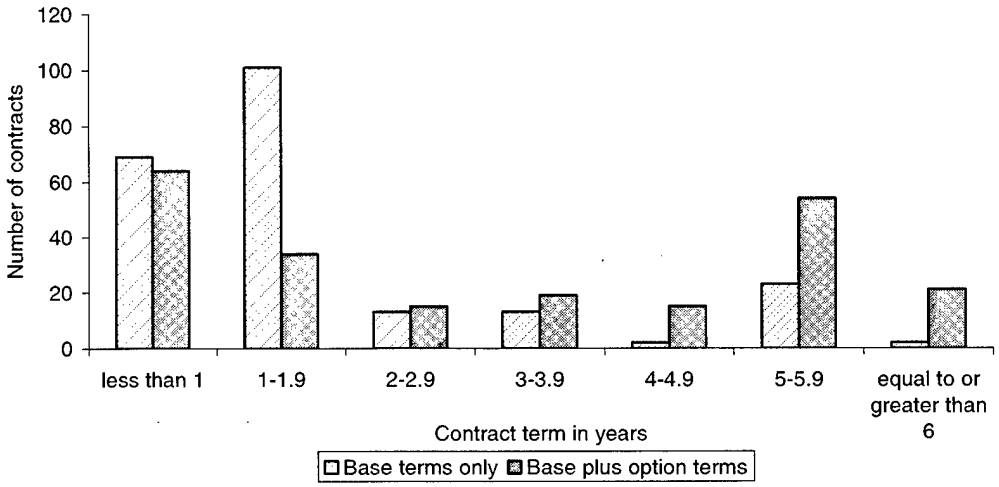
We estimate only 12 percent of the contracts had option periods. As Figure 1-7 indicates, when option periods are added to the base periods in order to determine

total contract length, a U-shaped distribution is established with the shorter contracts and longer contracts still being the most prevalent, but with an increasing frequency of longer term contracts. Note: The total of base plus option years for the first two terms in the figure appears to be smaller than the original base years because the options were for multiple years, moving the contracts farther out on the graph.

We saw an increase in the number of "corporate" contracts, which are loosely defined as contracts that have combined many diverse requirements for the same vendor into one large umbrella arrangement. These corporate contracts tend to have longer base terms as well as a significant number of option years.

Interviews indicated these corporate agreements reduce contract administrative costs and lead times and give the providers better long-term workload stability. However, interviews also emphasized that upfront contract oversight and price negotiations remain vitally important because the agreements restrict other arrangements for extended periods.

*Figure 1-7. Breakdown of Sample Contracts by Base and Option Terms for DoD Components*




Note: Total contracts sampled = 223.

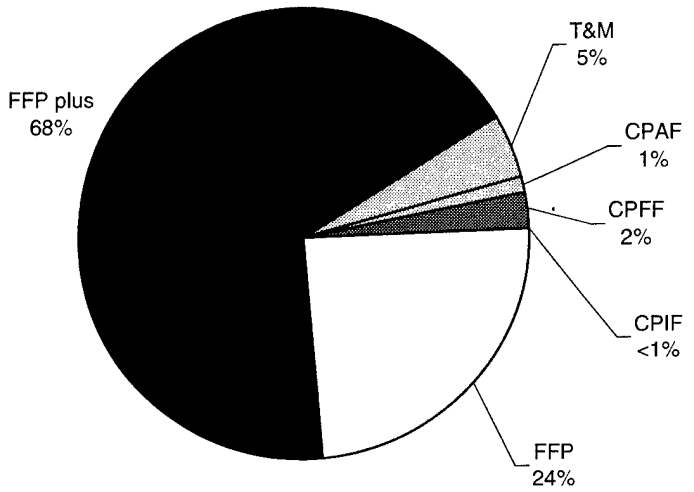
## Fee Arrangements

Firm fixed-price (FFP) arrangements are by far most prevalent in DoD component contracting, as seen in Figure 1-8. With the NAVICPs included, more than 91 percent of all contracts had a type of FFP arrangement. The most common type was a combination of FFP and time and materials (T&M).

These contracts typically included a T&M arrangement for repairs that had not been defined at the time of induction into repair. Using the T&M provisions, the contractor accepts reparable assets with an unknown material condition for assessment and definition of an actual scope of work. Once the contractor defines

the work scope, the contracting officer converts the T&M provisions into a fixed-price order for the actual repairs. In its earlier work, the GAO assessed each order or modification to a contract in terms of its cost base; our current study assessed the type of pricing for the basic contract alone. This difference may help explain a significant shift from previous GAO findings that showed a higher prevalence (23 percent) of cost reimbursement type of fee arrangements.

*Figure 1-8. Breakdown of Sample Contracts by Fee Arrangement for DoD Components*




Note: Total contracts sampled = 747. FFP = firm fixed-price; T&M = time and materials; CPAF = cost plus award fee; CPFF = cost plus fixed fee; CPIF = cost plus incentive fee.

## Competitive Position

As noted in Table 1-2, more than 86 percent of all DoD depot maintenance contracts had a single bidder. Once the NAVICPs are excluded, this figure falls to 58 percent.

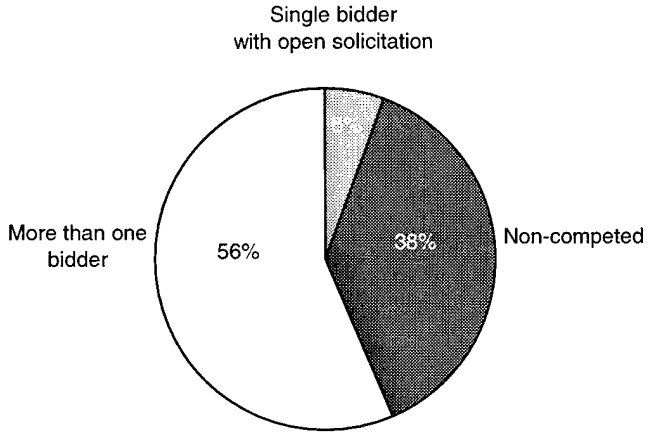
*Table 1-2. Number of Offerors for DoD Components*

| Offerors | Percentage of contracts | | Percentage of contract value | |
|---|---|---|---|---|
| | With NAVICPs | Without NAVICPs | With NAVICPs | Without NAVICPs |
| 1 | 86 | 58 | 44 | 40 |
| 2–5 | 12 | 35 | 53 | 57 |
| ≥6 | 2 | 7 | 3 | 3 |

Less than half (44 percent) of the total dollar amount awarded for all contracts involved only a single bidder. When the NAVICPs are excluded from the contract value analysis, the figures do not change much because of the relatively low proportion of their contract value within DoD. In addition to the percentage of all contracts awarded in which there is more than a single bidder, our sample

indicated there is an additional 6 percent of the total contract value that is awarded through a full and open competition with a single offeror (Figure 1-9). It is doubtful in these cases whether the government is reaping the same benefits as a competitive process with more than one bidder, but it is a situation clearly distinguishable from a non-competitive sole-source award.

*Figure 1-9. Contract Value by Number of Offerors for DoD Components*




Note: Total contracts sampled = 747.

## Reasons for Single Source

### SOLE-SOURCE AWARDS

Contracting activities must justify why they make an award to a contractor without competition. The following lists the sole-source reasons authorized by the Federal Acquisition Regulation and Public Law:[8]

1. Single source can satisfy supplies or services requirements
2. Unusual and compelling urgency
3. Industrial mobilization, engineering and research and development capability, and expert services
4. International agreement
5. Authorized or required by statute
6. National security
7. Public interest.

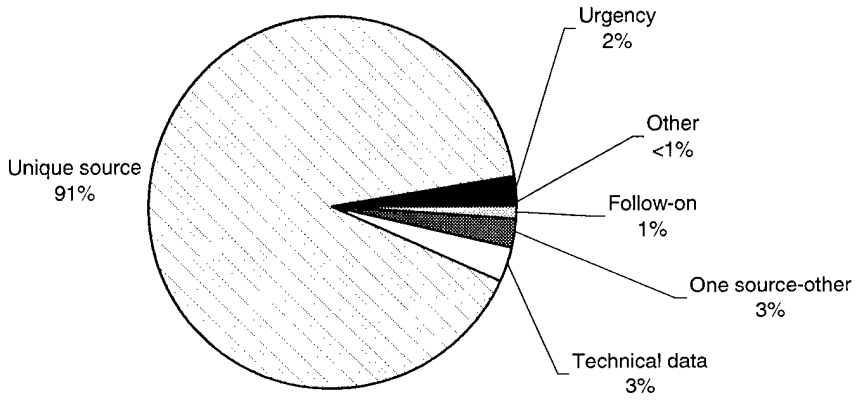
[8] Source: Federal Acquisition Regulation.

Including the NAVICPs, the overwhelming justification for sole-source contracts is "unique source," as depicted in Figure 1-10. This rationale is equivalent to reason number one above.

## AWARDS TO A SINGLE OFFEROR

Contracting activities do not need to justify an award to a single offeror in response to an open solicitation.

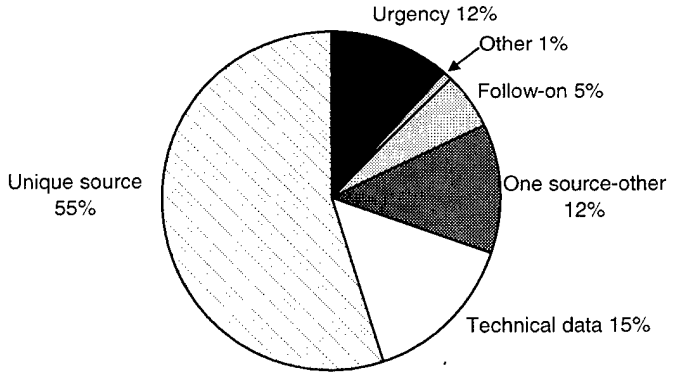
*Figure 1-10. Reasons for Sole-Source for DoD Components*




Note: Total contracts sampled = 637.

Excluding the NAVICPs, "unique source" is still the prevailing justification with the "availability of technical data" the second most-cited reason, as seen in Figure 1-11. The "unique source" justifications frequently include comments that cite the original equipment manufacturers' technical expertise or the lack of technical data to support competition. Within the constraints of the legal authorizations for single-source contracting, unique sources and lack of technical data are one and the same.

*Figure 1-11. Justifications for Sole-Source for DoD Components (excluding NAVICPs)*

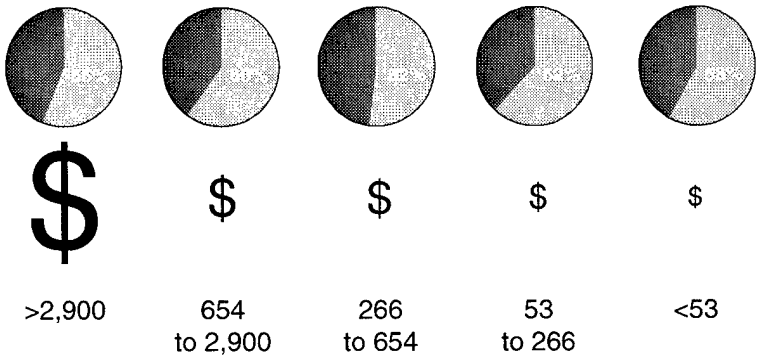



Note: Total contracts sampled = 129.

## Size of Contracts versus Single Source

The contract value does not appear to be a significant factor in determining whether the contract is single-source. As shown in Figure 1-12, we estimate the percentage of single-source contracting is consistent across the values of depot maintenance contracts on a quintile basis, excluding the NAVICPs.

*Figure 1-12. Distribution of Single-Source Across Contract Value in Thousands (excluding NAVICPs)*




Again, excluding the NAVICPs, we also examined the single-source population by using both the estimated average value of the contracts ($3.3 million) and the estimated median value ($376,000). We analyzed the prevalence of single-source contracts below and above both the average and median contract values and concluded the contract value has no apparent relevance as to the frequency of single-source awards. The percentage of single-source contracts is again consistent both above and below the average and median contract values as depicted in Table 1-3.

*Table 1-3. Frequency of Single-Source Contracts Above and Below Sample Average and Median Values in Millions (excluding NAVICPs)*

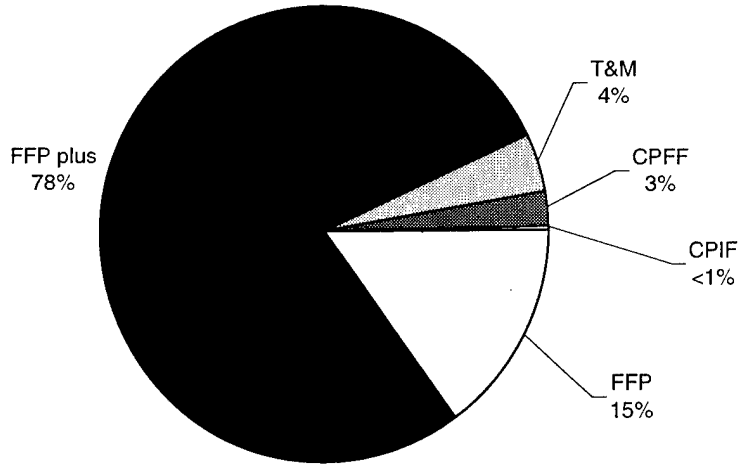
| Statistical method | Sampled number of contracts | Percentage of single-source contracts below | Percentage of single-source contracts above |
|---|---|---|---|
| Average ($3.3 M) | 249 | 58 | 61 |
| Median ($0.376 M) | 249 | 59 | 58 |

## Fee Arrangement versus Single Source

The type of fee arrangement also appears to have no bearing on the frequency of contracts awarded to a single source, as seen in Figure 1-13. The percentages are comparable to the total population as depicted in Figure 1-8. The percentage of single-source contracts by fee arrangement is almost identical to the percentage of total contracts by fee arrangement, with one exception: the percentage of firm fixed-price contracts. There is a difference between pure FFP contracts and those

FFP contracts that also have other variable payment agreements (FFP plus). These differences are relatively minor.

*Figure 1-13. Comparison of Fee Arrangement for Single-Source*

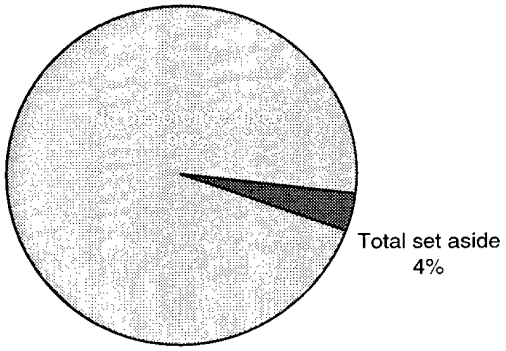



Note: Total contracts sampled = 644.

## Small Business Set Aside

A contracting preference given to a small, disadvantaged business is one type of potential single-source award. As seen in Figure 1-14, we estimate only 4 percent of the contracts were set aside for small businesses. As might be expected, the size of these contracts was much smaller than the average ($500,000).

*Figure 1-14. Small Business Set Aside for DoD Components*




Note: Total contracts sampled = 747.

## Number of Protests

We estimate that less than one half of one percent of the contracts involved a protested award, and the protests universally related to a competitive award. Protests appear to be a relatively insignificant factor in depot maintenance contracting.

# POTENTIAL FOR COMPETITIVE DEPOT MAINTENANCE CONTRACTING

We interviewed senior contract managers at the major depot maintenance contracting activities within the services to assess the potential for increased competition in the future. The responses centered on four topical areas, as follows.

## Impediments to Competitive Depot Maintenance Contracting

Senior managers indicated they all have rigorous coordination cycles for contract requirements, which include a review of competitive sourcing potential. Logistics management specialists monitor industry segments for competitive potential. In practice, however, specific repair requirements are often of relatively small volume, unpredictable in terms of timing, and do not attract competitive interest.

*Technical data:* Interviews universally indicated the military services lack the technical data to attempt competitive sourcing for the majority of depot maintenance contract requirements. On the other hand, contracting activities sometimes count themselves fortunate to find even a single source for a given requirement in an era where companies are consolidating or leaving the defense industry altogether.

*Industrial base:* Depot maintenance contracts are useful to sustain engineering and repair capabilities, either at the original equipment manufacturer (OEM) or at selected repair sites. These capabilities represent industrial base considerations and their preservation may outweigh the need for competitive sourcing. Public Law specifically contemplates such considerations as a justification for sole-source award [10U.S.C.§2304(c)(3)].

*Consumable item transfer*: Several interviews with ICP contract managers indicated the transfer of consumable item management to the Defense Logistics Agency in the early 1990s fundamentally changed the mix of items managed by the ICPs, and reduced their ability to "bundle" a range of manufacture and repair requirements to make an attractive workload for potential competitive sources. According to the interviews, the transfer marked a significant shift toward single-source contracting for the ICPs.

*Competitive categories:* Aircraft and conventional surface ship platforms, including watercraft, tend to be competitively sourced, except when they are configured

with classified or special operations equipment, or bundled into larger support arrangements.

*Vanishing vendors:* As fleet size has gradually declined in many weapon types, demand for specific repair capabilities has become more sporadic and unpredictable. In many cases, the only contractor with an interest in repair-only requirements is the OEM, which may still possess a "warm" manufacturing capability for the item.

Defense industry consolidation has reduced to some extent the number of companies that are in the repair business, and consolidated remaining capabilities in a smaller number of sources. New sources can still enter the market (e.g., Standard Aero Kelly), but the net result of consolidation has been an overall reduction in repair sources.

*Vendor limitations:* Licensing agreements and subcontracts between an OEM and a vendor can sometimes inhibit a potential source from bidding on a repair requirement. The vendor may have a stronger incentive to maintain good relations with the OEM for new manufacturing business than to compete with the OEM for repair. In many cases, the OEM subcontracts the work anyway, so there may be even less incentive for a licensee to compete for the requirement.

*Statement of work:* Performance specifications are in vogue for defense contracting. The idea is to describe the desired outcome rather than the process to achieve the outcome. The concept assumes the contractor is an expert in the process and only needs direction about the desired product or outcome. Performance specifications may actually be a barrier to entry for new, relatively inexperienced sources.

*Bundling:* Workload bundling, described as an alternative to competitive sourcing, can serve as a barrier to entry for a source that does not possess the full range of capabilities required for all of the items in the bundle.

*Obsolescent materiel:* DoD operates a range of equipment that is obsolescent with respect to commercial counterparts. The support structure, including the technological base for repairs, may be similarly outdated. The expertise to accomplish the repair may be resident in a few or a decreasing number of artisans. Aged infrastructure and expertise can be a substantial barrier to entry for established workloads.

*Pre-qualification procedures:* Qualification procedures for potential new sources involve lengthy and costly verification procedures. The qualifying activities design the procedures to assure the source can provide quality materiel that meets minimum requirements. Interviews indicated it is not likely that the procedures can be streamlined without risking product assurance.

Taken together, these factors have led to a sustained proportion—with a possible minor increase—of single-source contracting. The ICPs indicated there was not

much hope in substantially improving the competitive climate, because so much of their work sustains a single source and technical data was never procured. However, the ICPs are actively developing alternatives to competitive sourcing, which we discuss below.

## Is Single-Source Contracting More Expensive?

There is no evidence of an objective answer to this question. Obviously, if alternative sources were available, competitive sourcing might be more economical. But that is not the case now. Instead, the services focus on gaining the best value for the government, using whatever means are available within contracting authorities.

Case-by-case, the ICPs have procedures in place to approach the OEMs to ask what a technical data package might cost (to support competitive contracting). Almost universally, the answer is unaffordable. Some interviewees wondered whether an affordable technical data package might be generated if the requirements were bundled with the original system acquisition, but this idea does not appear to have been tested. In the set of priorities involved with system acquisition, technical data seems to be relatively low on the list, especially since most new systems employ commercial support for extended periods of time.

## Actions to Enhance Competitive Sourcing

*Reverse engineering:* The ICPs have active programs to reverse-engineer technical data packages for materiel. In practice, these programs are utilized to recover "last-source" capabilities when the previous provider stops supporting an item. Once a technical data package has been reverse-engineered, the ICP considers keeping the support in-house if the underlying technology is obsolescent or not commercially available. The result is a low proportion of new additions to competitive sourcing.

*Advertising:* The ICPs continue to advertise their repair requirements, placing a synopsis of each requirement valued in excess of $100,000 in the *Commerce Business Daily*. In addition, they employ "full and open" solicitations in an effort to attract additional offerors. These efforts rarely bear fruit with large companies, although there are a small number of small business set asides for repair each year, and some of these are start-up companies. We found a low percentage of set asides out of a population of more than 5,000 repair contracts in force in FY99.

*Indications of competitive interest:* As a part of our data gathering, we examined the number of protests lodged about repair contracts. We found far less than 1 percent of such contracts incurred protests; and when they occurred, universally the protests related to a competitive solicitation with multiple offerors. Protests do not appear to be an effective indicator of competitive interest in what are otherwise single-source contracts.

*Catalog items:* Commercialization, or the use of commercial materiel, has been encouraged as a way to ensure a competitive marketplace for defense requirements. In the maintenance arena, this avenue has two major drawbacks. First, commercial materiel does indeed have a more competitive marketplace for purchases. However, once an ICP purchases a particular manufacturer's product, the support of that product is frequently even more proprietary than unique defense materiel. The second drawback concerns the loss of accountability inherent in a "catalog" purchase. In particular, the ICPs indicated they frequently find a manufacturer may establish a "catalog" price for a purportedly commercial item, even though the ICP is the only buyer of that particular product. In such cases, some of the ICPs insist on negotiating on price and quality considerations. The program does, indeed, work in certain instances. For example, NAVICP Philadelphia competitively awards contracts for a narrow range of commercial repair, including commodities such as tire recapping, common altimeter repair, and common avionics repair.

With unlimited or substantially increased resources, the ICPs could engage in a new round of reverse-engineering and source qualification. However, they also would need to address the possibility that an OEM might stop supporting a product if it no longer had a repair contract to sustain its operations.

Senior contracting officials we interviewed did not dwell on these issues or limitations; their focus was on pursuing alternatives to competitive sourcing.

## Alternatives to Competitive Sourcing

Given a repair environment that is predominantly single-source, the ICPs have developed a range of initiatives to pursue best value for the government.

*Corporate contracts* amount to the bundling of a range of repair requirements, typically but not exclusively with the OEM. The arrangement saves administrative effort for the ICP, and increases the quantity of items supported under a single contract. The bundled quantity can be made large enough to be attractive, even on an Indefinite Quantity/Indefinite Delivery (ID/IQ) basis. Basic Ordering Agreements (BOAs) are another term for corporate contracting.

*Longer-term contracts* can be useful to "incentivize" contractor behavior. For example, contracts with total terms longer than five to seven years can induce contractors to make capital investments that will substantially improve productivity and reduce cost.

A further development of longer-term contracts includes the transfer of management responsibility to the contractor. These incentive arrangements can encourage the contractor to take management action to reduce overall contract costs, in exchange for a portion of the savings. Examples include performance-based logistics (PBL) arrangements in NAVICP, and the maintenance portions of direct vendor delivery and virtual prime vendor contracts. The Air Force has a total

system program responsibility (TSPR) contract for support of the F-117 with Lockheed Martin. The ICPs are sometimes able to generate competitive interest for these management types of contracts, where the successful bidder negotiates a subcontract arrangement with a third party (which is most frequently the OEM) on a sole-source basis for the repair portion of the requirement.

*Partnering arrangements*, either between contractors or between a contractor and a government facility, can make better use of existing capabilities and expertise to accomplish repair requirements. In the commercial world, partnering is now a global enterprise with express overnight shipments carrying repair parts between customers and sources of repair.

The ICPs generally prefer *firm fixed-price contracts* as a means of controlling costs. Contract structures for maintenance can be fairly complex, including incentive and award fee provisions to "incentivize" contract behavior. Complex repair contracts can also include a time-and-materials line item in what is otherwise a fixed-price vehicle. These T&M lines are useful to define a work scope when it was not feasible to characterize the reparable condition before induction. The ICPs indicated they pay careful attention to definitizing the T&M arrangements within fixed-price orders as soon as the repair scope can be defined.

One interviewee suggested an *auction* might work to attract more bidders, but the concept presupposes the existence of multiple qualified offerors.

The ICPs that are most aggressive in developing alternatives to competitive sourcing also recognize they are slowly giving away their former job. PBLs amount to an absolute reduction in management responsibility for the government. As these concepts proliferate, they engender a number of questions about financial management and organizational structures for the future. This situation, coupled with an aging government workforce, may offer an opportunity to re-engineer contract management structures in the years ahead.

# FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

## Prevalence of Single-Source Contracting

*Findings:* Overall, DoD employed more than 7,500 contracts for depot maintenance in FY99, with a total reported obligation of $6.8 billion. Single-source contracts occurred 85 percent of the time, for 44 percent of the contract value.

*Conclusion:* Single-sourcing remains the predominant contracting method for depot maintenance.

## Potential to Increase Competitive Sourcing

*Findings:* Contracting activities have a well-defined but relatively static program for establishing competitive repair contracts. Competitive sourcing for contract depot maintenance is strongest in particular segments, including platform-level contracts, watercraft, and commodities (e.g., tire re-treading, common altimeters, common avionics). Competitive source selection for system acquisition does not lead automatically to competitive repair, because most systems are proprietary and DoD infrequently buys technical data packages to support competitive repair sourcing. Second-source development is resource constrained and focused on last-source determinations and diminishing vendors. Several barriers to entry make it difficult for potential market entrants to compete with OEMs.

*Conclusions:* ICPs feel they have done all they can to promote competitive repair contracts. Additional competition is not the avenue with greatest potential for best value. DoD needs to be realistic in its expectations for achieving significant economies in depot maintenance, given the difficulties in achieving competition for best value.

## Visibility and Accuracy of Contract Information

*Findings:* Depot maintenance contracts are not readily visible for analysis. Financial obligations do not track automatically to contract folders; contract folders and data systems are non-standard; and DD350 data is inaccurate and misleading. Managers can only provide estimates rather than actuals when depot maintenance functions fall under umbrella contracts.

Visibility of depot maintenance contracting is decreasing. The proportion of umbrella contract support is steadily increasing for new systems. At the same time, increasing amounts of depot maintenance are being bundled into corporate agreements, partnerships, and performance-based logistics contracting. Performance-oriented metrics typically do not track maintenance production.

*Conclusions:* Maintenance is losing visibility as a separable function, even as maintenance-related decisions become increasingly expensive and important to the equipment life cycle. DoD needs standard data systems and metrics to enlighten maintenance decisions; for example, information systems should be able to easily link workload, financial, and contract information.

## Means to Evaluate Alternatives

*Findings:* There are no objective criteria evident for making choices about procurement of technical data. There is no evidence that single-source contracting is more costly than available alternatives to achieve best value.

*Conclusion:* DoD needs a methodology to measure the relative life-cycle benefits of alternatives to increased competitive sourcing.

## Alternatives to Achieve Best Value

*Findings:* Contracting activities are adapting to the single-source environment by modifying their contracting techniques and terms. In this environment, negotiation and contract structure are more important than competition for maintenance contracting. Some level of organic capability facilitates establishing and maintaining a "smart buyer," including reverse-engineering capabilities.

*Conclusions:* The services are developing effective alternatives to achieve best value. Contractor incentives can effectively deliver the desired performance as well as a cost reduction.

## Recommendations

- The Assistant Deputy Under Secretary of Defense (Logistics and Materiel Readiness) for Maintenance Policy, Programs and Resources (ADUSD[L]MPP&R) should work with the services to develop an objective methodology to evaluate alternatives to sole sourcing. In effect, the methodology should help determine whether enabling competition is worth the effort and expense on a life-cycle basis.

- ADUSD(L)MPP&R should work with the acquisition community to reexamine DoD policy favoring competitive sourcing for realism and alternatives in the depot maintenance arena. In particular, the policy should delink and separately evaluate the goal of achieving potential savings through outsourcing from the life-cycle costs of establishing and sustaining competitive sources.

- ADUSD(L)MPP&R should request the acquisition community take steps to improve the visibility and accuracy of contract data for depot maintenance.

- ADUSD(L)MPP&R should sponsor forums and the development of course curricula to share management initiatives among the ICPs and the services for depot maintenance contracting.

# Chapter 2
# Military Department Assessments

## SUMMARY

This chapter is a detailed assessment of contracting for depot maintenance for each of the military departments, with a short overview of United States Special Operations Command (SOCOM) and TRICARE. Table 2-1 is a compilation of the key numbers for the departments.

*Table 2-1. Military Department Summary*

| Department | Number of contracts | Contract value (dollars in millions) | Single-source percentage | Sample size |
|---|---|---|---|---|
| Army | 510 | 924 | 47 | 47 |
| Navy | 5,318 | 2,938 | 97 | 318[a] |
| Air Force | 1,356[b] | 2,749 | 64 | 125 |

[a] NAVICP samples not available.
[b] Air Force contract volume estimated.

## ARMY

The FY99 column from the "50-50 Report"[1] was used to gather preliminary information about Army contracting activities. The staff at Headquarters Army compiles this report from financial management information submitted by each subordinate command. While the data did not include contract numbers, the report did allow for an initial assessment of the contract volumes in each command. We derived contract numbers by asking each subordinate command to use their 50-50 reporting data and submit a list of the contracts used to determine the reported total dollar expenditures. The contract numbers and values were the key information used to determine the relative size of the Army contracting organizations and type of contracting work they are responsible for.

Table 2-2 shows the numbers and values of depot maintenance contracts reported by the Army contracting organizations for the FY99 50-50 data call.

[1] *Distribution of DoD Depot Maintenance Workloads, Fiscal Years 1999 and 2000*, prepared by the Deputy Under Secretary of Defense (Logistics & Materiel Readiness), February 2001 (see Appendix A).

*Table 2-2. Army Contracting Organizations*

| Organization | Acronym | Number of contracts | Contract value (dollars in millions) |
|---|---|---|---|
| 8th United States Army | EUSA | 2 | 1.0 |
| United States Army Reserve | OCAR | 41 | 27.8 |
| United States Army National Guard | USANG | 29 | 65.9 |
| Aviation and Missile Command | AMCOM | 110 | 260.7 |
| Communications Electronics Command | CECOM | 97 | 166.9 |
| Soldier and Biological Chemical Command | SBCCOM | 1 | <0.1 |
| Simulation, Training and Instrumentation Command | STRICOM | 21 | 25.3 |
| Tank-Automotive and Armaments Command | TACOM | 49 | 120.3 |
| United States Army Europe | EUSAEUR | 33 | 56.3 |
| United States Army Intelligence and Security Command | INSCOM | 6 | 6.1 |
| United States Forces Command | FORSCOM | 21 | 33.8 |
| Training and Doctrine Command | TRADOC | 27 | 4.2 |
| Military Traffic Management Command | MTMC | 1 | 0.9 |
| United States Army Space and Missile Defense Command | USA SMDC | 1 | 2.5 |
| Program Executive Office—Aviation | PEO Aviation | 32 | 94.6 |
| Program Executive Office—Command, Control and Communications Systems | PEO C3S | 22 | 22.1 |
| Program Executive Office—Air and Missile Defense | PEO AMD | 3 | 5.7 |
| Program Executive Office—Tactical Missiles | PEO Tactical Missiles | 3 | 10.9 |
| Program Executive Office—Ground Combat Support Systems | PEO GCSS | 7 | 8.1 |
| Program Executive Office—Intelligence and Electronic Warfare & Sensors | PEO IEW&S | 3 | 10.6 |
| United States Army Medical Command | MEDCOM | 1 | 0.1 |
| Totals | | 510 | 923.7 |

Note: Totals may vary due to rounding.

We concentrated on three major subordinate commands—AMCOM, CECOM, TACOM—and USANG, because these are among the largest contracting organizations in terms of contract value. Together, these four activities account for 66.5 percent of the total Army contract depot maintenance dollar amount reported in FY99. Additionally, we included the six program executive offices (PEOs) in the concentration because they account for a substantial portion of the remaining contract expenditures and have contracting offices co-located with AMCOM, CECOM, and TACOM. The four activities selected above and the six PEOs account for 82.9 percent of the total Army contract value.

The study team selected the contracts to be sampled from inventories provided by each activity. The activity subsequently provided the contract data, or team members manually extracted the data during site visits.

We also interviewed and surveyed approximately 60 contracting personnel within AMCOM, CECOM, TACOM, and the PEOs, soliciting their views and ideas on competition within depot maintenance contracting.

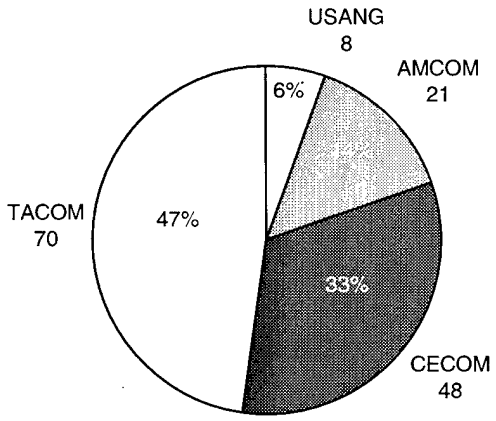
## Analysis

### NUMBER OF CONTRACTS

As noted in table 2-1, there were a total of 510 depot maintenance related contracts with dollars expended in FY99 in the Army. A significant number of additional contracts were included under SOCOM and were not included in the total above (see SOCOM summary at end of chapter). We selected a random sample of 47 contracts from the total Army population. This is a sample of 9.2 percent, slightly less than our target of 10. Several of the pre-selected contract files were not available during the site visits, which caused the shortfall.

In the contract sample, TACOM and CECOM had 80 percent of the total amounts, as seen in Figure 2-1. PEO totals were included with their collocated major subordinate commands for ease of analysis.

*Figure 2-1. Army Sample Contract Value (dollars in millions)*




Note: Sample total = $147 million (15.9% of total Army amount).

### SIZE OF CONTRACTS

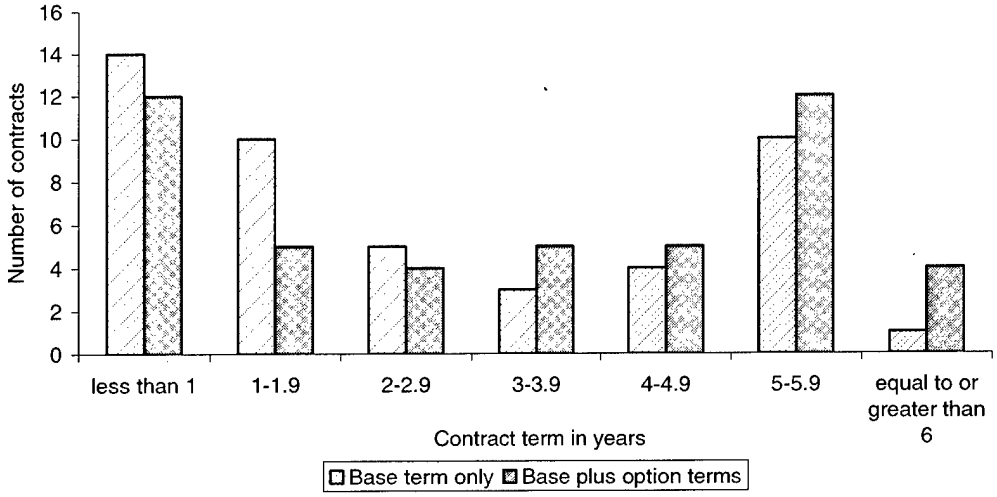
The average value of a contract in the total population is $1.8 million.

### LENGTH OF CONTRACTS

Contracts have two components that determine the length of the contract period: the base term and the number of option years. Figure 2-2 shows that base terms tend to be either short (51 percent of the contracts had base terms less than 2 years) or long (26 percent had terms of 5 years or greater). Base terms greater than 5 years are rare.

We estimate only 25 percent of the contracts had option periods. As Figure 2-2 indicates, when option periods are added to the base periods to determine total contract length, a U-shaped pattern distribution is established with the shorter contracts and longer contracts still the most prevalent, but with an increasing frequency of longer-term contracts.

*Figure 2-2. Breakdown of Sample Contracts by Base Plus Option Terms for the Army*



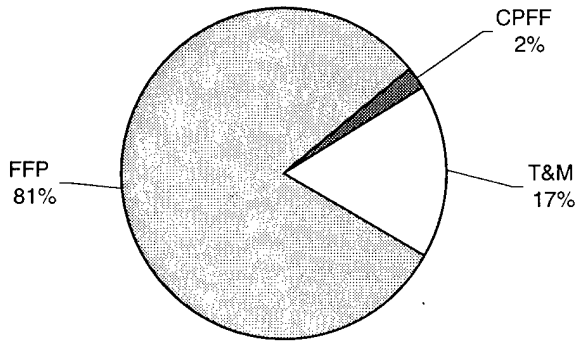

Note: Total contracts sampled = 47.

## FEE ARRANGEMENTS

As depicted in Figure 2-3, firm fixed-price arrangements are the most prevalent in Army contracting. This represents a significant shift from previous GAO findings that indicated 68 percent of Army depot maintenance contracts were a form of cost-reimbursement.[2] FFP arrangements tend to require less oversight than cost-based alternatives, because the parties know enough detail about the scope of work to agree up front about the total cost of the contract. According to comments from contracting officers, once the fixed price is negotiated and the contract signed, oversight is generally limited to ensuring the contractor meets delivery schedules. The contract becomes easier to administer. Therefore, FFP contracts are generally preferred over other fee arrangements. The time and materials contracts tended to be smaller in dollar amount than the FFP contracts with the exception of a single $25 million award through CECOM. There were no incentive-based contracts in the sample.

[2] GAO Study, *Defense Depot Maintenance, Contracting Approaches Should Address Workload Characteristics*, NSIAD 98-130, June 1998, p. 6. See also the discussion on DoD-wide fee arrangements on page 1-7 of this report.

*Figure 2-3. Sample Contracts by Fee Arrangement for the Army*

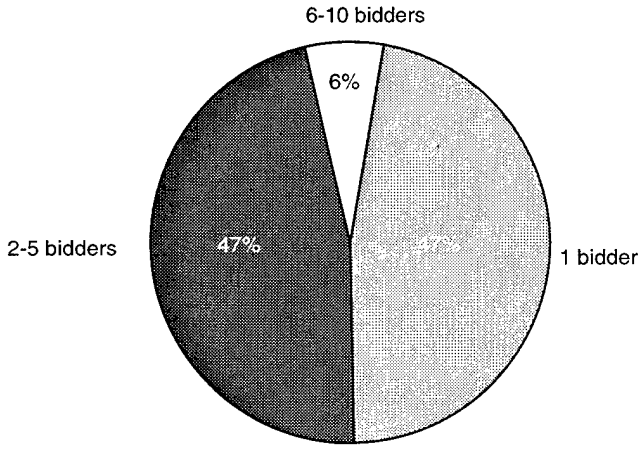



Note: Total contracts sampled = 47.

## COMPETITIVE POSITION

Reviewing Figure 2-4, we estimate 53 percent of sampled Army contracts had more than one bidder. Additionally, another 9 percent were awarded in a competitive solicitation even though there was only one offeror who bid on the contract. This was a competitive process with a single bidder, as distinct from a non-competitive sole-source contract award. This sample shows a significantly higher percentage of competitively awarded contracts than previously reported.[3]

*Figure 2-4. Number of Bidders per Contract for the Army*

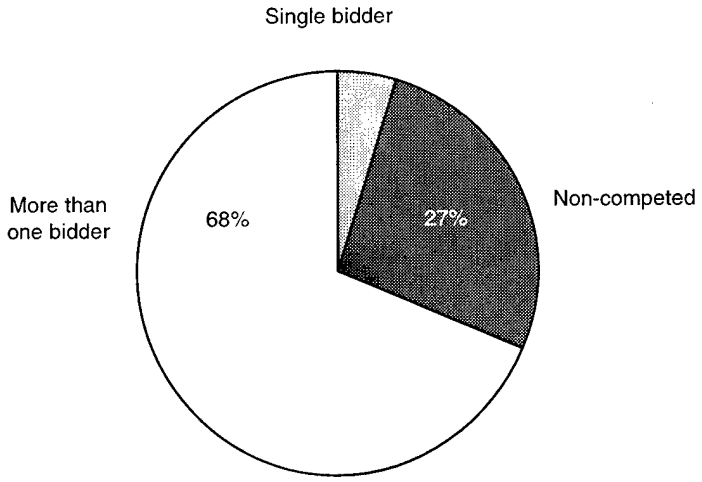



Note: Total contracts sampled = 47.

Figure 2-5 tells a similar story when contract values are compared. We estimate 68 percent of the contract amounts were awarded in a competitive action with more than one bidder, and only 27 percent of the dollar amount was awarded without competition.

[3] Ibid., p. 5.

*Figure 2-5. Contract Value Compared to Number of Bidders for the Army*

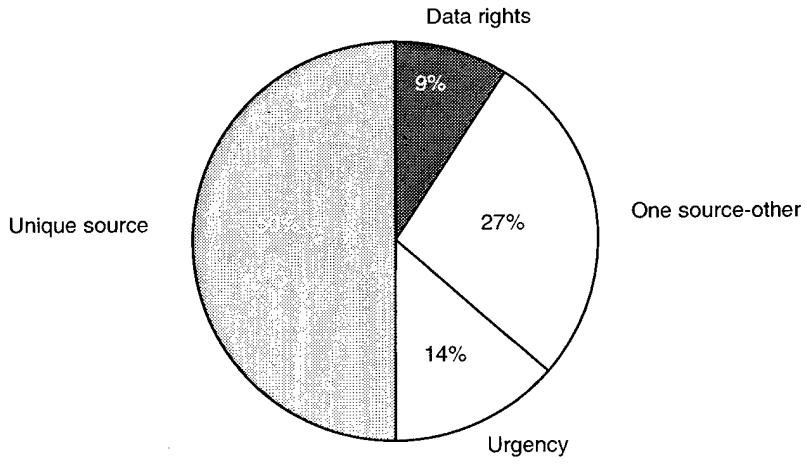



Note: Total contracts sampled = 47.

## REASONS FOR SOLE SOURCE

As depicted in Figure 2-6, we estimate 50 percent of the contracts awarded sole-source were justified as being awarded to a unique source and another 27 percent were sole-source because of "one source—other." Only 9 percent of the justifications for single-source cited data rights. However, surveys and interviews with contracting officers mentioned data rights as the most frequent reason for sole-source contract awards. This illustrates that the uniqueness of sources and the availability of technical data is virtually synonymous for repair contracts.

*Figure 2-6. Reasons for Sole-Source Contracting for the Army*




Note: Total contracts sampled = 22.

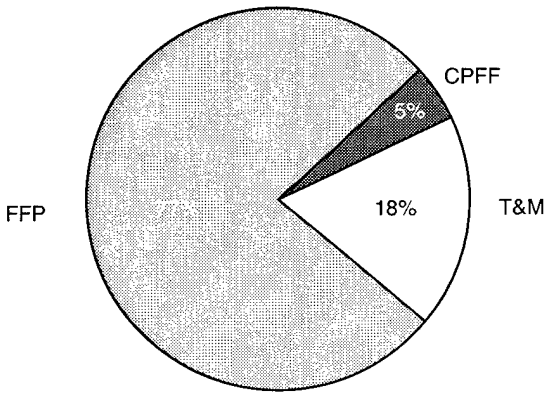
### SIZE OF CONTRACTS VERSUS SINGLE SOURCE

The sample sizes for the individual military departments were too small to make accurate conclusions about any relationship between single sourcing and the value of the contracts. However, as mentioned in Chapter 1, we estimate single-source contracting is spread evenly through all contract value ranges (Figure 1-11) for the total DoD population.

### FEE ARRANGEMENT VERSUS SINGLE SOURCE

Figure 2-7 depicts an estimate of the type of fee arrangement, which had no apparent bearing on the frequency of the contract being awarded non-competitively. The percentages are comparable to the number for all contracts for the corresponding fee arrangement (see Figure 2-3). The percentage of single-source contracts by fee arrangement closely mirrors the total contract population by fee arrangement.

*Figure 2-7. Fee Arrangement for Single-Source Army Contracting*




Note: Total contracts sampled = 22.

## Non-Sampled Contracts

The contracting organizations that did not provide detailed data and participate in site visits constitute 30 percent of the total contract numbers, but only 17 percent of the total contract value. The average contract value in these activities was $1.02 million compared to the total population sample average value of $1.8 million.

# NAVY

Like the Army, we used the Navy FY99 column from the 50-50 Report to gather initial overall financial information about Navy depot maintenance contract activities. The staff at Headquarters Navy compiles this report from financial management (obligation) information submitted by subordinate activities.

Table 2-3 shows the contract values reported by each subordinate activity for the FY99 50-50 Report.

*Table 2-3. Navy Reporting Activities Contribution to FY99 50-50 Report*

| Organization | Acronym | Contract value (dollars in millions) | Percentage |
|---|---|---|---|
| Atlantic and Pacific Fleets | LANT/PAC | 1,224.3 | 41.7 |
| Naval Sea Systems Command | NAVSEA | 298.5 | 10.2 |
| Naval Air Systems Command | NAVAIR | 687.8 | 23.4 |
| Space and Naval Warfare Center | SPAWAR | 4.9 | 0.2 |
| Naval Inventory Control Point Mechanicsburg | NAVICP-M | 117.8 | 4.0 |
| Naval Inventory Control Point Philadelphia | NAVICP-P | 440.0 | 15.0 |
| U.S. Marine Corps | Marines | 46.6 | 1.6 |
| Military Sealift Command | MSC | 118.5 | 4.0 |
| Totals | | 2,938.4 | 100.0[a] |

[a] Numbers do not add because of rounding.

We contacted each reporting activity to obtain information about actual contracts and their volumes. This data differs to some extent from the 50-50 data for several reasons:

- Financial obligation data—used to produce the 50-50 Report—does not link directly to actual contract files.
- Obligation data includes inter-fund transfers such as military interdepartmental purchase requests for inter-service workloads and classified programs, which may not be reflected in a reporting activity's own contract management system.
- Actual contract amounts are subject to change as production runs are completed and finances are "de-obligated."
- There may not be a specific line item to depict maintenance requirements in a contract, even though maintenance occurs as a part of the contract. In such cases, the maintenance amount may be an estimate that itself may change over time.

Table 2-4 is a summary of the contract information provided by the reporting activities for this study.

*Table 2-4. Contract Data Summary from Navy Reporting Activities*

| Activity | Number of contracts | Contract value (dollars in millions) |
|---|---|---|
| LANT/PAC | 14 | 161.0[a] |
| NAVSEA | 65 | 354.5 |
| NAVAIR | 228 | 650.7 |
| SPAWAR | 5 | 2.9 |
| NAVICP Mechanicsburg | 4,114 | 137.7 |
| NAVICP Philadelphia | 839 | 401.2 |
| Marine Corps | 19 | 46.6 |
| MSC | 34 | 85.8 |
| Totals | 5,318 | 1,679.4 |

[a] Contract data for the Atlantic and Pacific fleets only includes 14 unique contracts. NAVSEA's Supervisor of Shipbuilding (SUPSHIP) activities provide essentially all of the contract support for the fleets via their master ship repair contracts. Hence, the fleets provide additional funding for the same contracts reported by NAVSEA for its portion of the contract volume. The Pacific Fleet also obtains a substantial amount of non-federal maintenance for classified programs and via host-nation support agreements in Japan, which are not pertinent to this study. For the remainder of this section, we treat fleet and NAVSEA data as a single entity for analysis (79 contracts, $161.0 M + $354.5 M = $515.5 M).

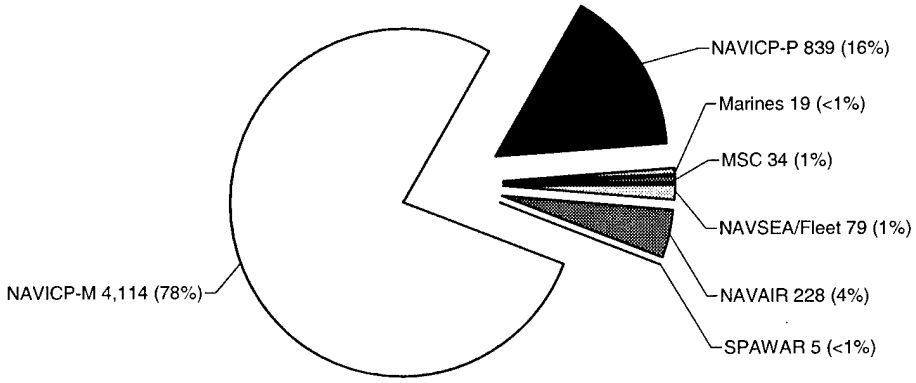
It is immediately apparent that more than three-quarters of the Navy's depot maintenance contracting activity (in terms of contracts issued) occurs at NAVICP Mechanicsburg, although that activity accounts for less than 7 percent of the Navy's contract funding. Within Mechanicsburg's contract volume, small purchase orders accounted for 1,504 contracts (28 percent of the total Navy volume but only 1 percent of the value). These purchases are valued at less than $100,000 each. At NAVICP Philadelphia, the purchase order volume was 441 contracts (more than half of the contracting activity) valued at $23.0 million. Through the remainder of this section, we will occasionally perform statistical analyses that exclude or separately consider the effect of the NAVICP activities.

## Analysis

### Number of Contracts

As noted in Table 2-4, the Navy had a total of 5,318 depot maintenance-related contracts with dollars obligated in FY99. This is a contract volume that is more than twice the size (in terms of number of contracts) of all of the other military departments combined. Figure 2-8 depicts the proportion of contracting activity provided by each of the reporting activities.

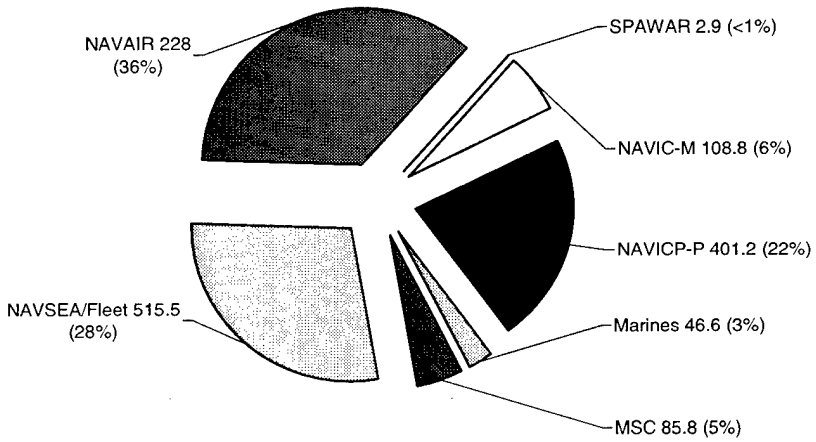
*Figure 2-8. Total Contract Volume for the Navy (number of contracts)*




## SIZE OF CONTRACTS

Figure 2-9 depicts the size and relative proportion of each of the Naval contracting activity's contract values. The average value of a Navy contract was $342 thousand, again reflecting the volume of small-value contracts issued by the NAVICPs. Excluding the nearly 2,000 small-value contracts worth a total $39 million, the average value of the remaining 3,359 Navy contracts is nearly $528 thousand, which is more than a 50 percent increase compared to the overall average. It is apparent that the mode of the population would be in NAVICP purchase orders.

*Figure 2-9. Navy Contract Values (dollars in millions)*




Navy reporting activities use a variety of corporate contracting techniques to bundle multiple requirements with a single contract provider. The use of such techniques reduces the apparent number of contracts in force, even though the actual volume of contract actions is much higher. Each corporate-type contract is repeatedly amended with additional orders and amendments through the course of a fiscal year. There are clear advantages to the contracting activities from this practice, including a significant streamlining of administrative workloads. To illustrate,

NAVSEA and the fleets accomplished their entire contract workload, consisting of 229 individual repair orders, with just 79 master contracts. Table 2-5 is a summary of the contract volumes for the reporting activities.

*Table 2-5. Navy Contract and Contract Action Volumes*

| Activity | Number of contracts | Number of contract actions |
|---|---|---|
| NAVSEA/Fleets | 79 | 229 |
| NAVAIR | 228 | 315 |
| SPAWAR | 5 | 11 |
| NAVICP-M | 4,114 | 5,327 |
| NAVICP-P | 839 | 2,314 |
| Marines | 19 | 28 |
| MSC | 34 | 36 |
| Totals | 5,318 | 8,260 |

## LENGTH OF CONTRACTS

Contracts have two components that determine the duration of the total potential contract, consisting of the base term and the number of option years. Within the Navy reporting activities, the type of contract predominantly determines the length and options, as depicted in Table 2-6.

*Table 2-6. Navy Contract Types*

| Type of contract | Typical term (in years) | Typical options (in years) |
|---|---|---|
| Long-term contracts | 5 | 10 |
| Basic ordering agreements | 1–3 | 1–5 |
| Master ship repair agreements | N/A[a] | N/A |
| "Classic" contracts greater than $100,000 | 1 | 0 |
| Purchase orders less than $100,000 | <1 | 0 |

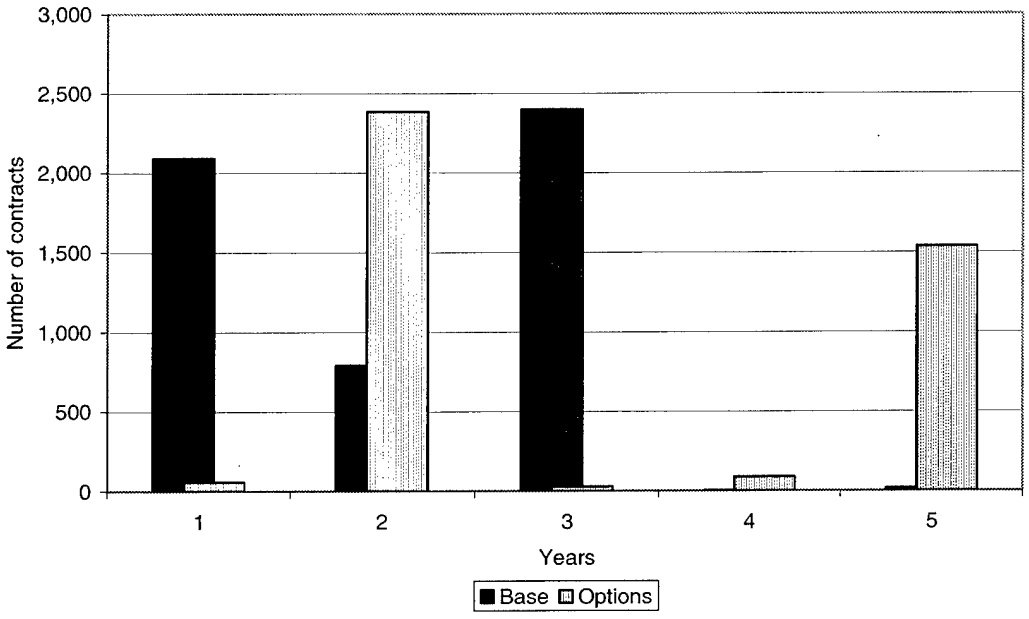
[a] Master ship repair agreements do not have fixed expiration dates, but are subject to a resurvey of the provider's capabilities every three years. They function like basic ordering agreements, providing a framework to definitize specific job orders for actual work.

Base terms tend to be a mixture of one, two, or three years (39 percent of the contracts had base terms of one year or less, 15 percent two years, 45 percent three years). Approximately half a percent of the population had base terms of five or more years. Competitive awards for commercial products, such as tire recapping, altimeter repair, and repair of common avionics, tended to have shorter terms, reflecting the ready availability of the repair service in the commercial marketplace.

There is a trend toward longer-term contracts as the Navy increasingly grants management responsibility to contractors. Examples include performance-based logistics, direct vendor delivery, and lifetime contract logistics support arrangements. Interviews indicated long-term contracts had exceeded 5 percent of the dollar volume for certain contracting activities. In this context, "long-term" could mean 15 or more years, counting base and option periods.

Excluding NAVICPs, we estimate only 22 percent of Navy contracts did not have option periods. In addition, most of the NAVICP purchase orders do not have options. As Figure 2-10 indicates, base periods are largely one or three years. Option periods are typically either two or five years in length. Unlike the Army's data, there is no obvious bathtub shape. NAVICP contracts have the greatest instance of multiple-year base terms and options. Mechanicsburg tends to prefer multiple-year base terms more than Philadelphia.

*Figure 2-10. Breakdown of Sample Contracts by Base Plus Option Terms for the Navy*

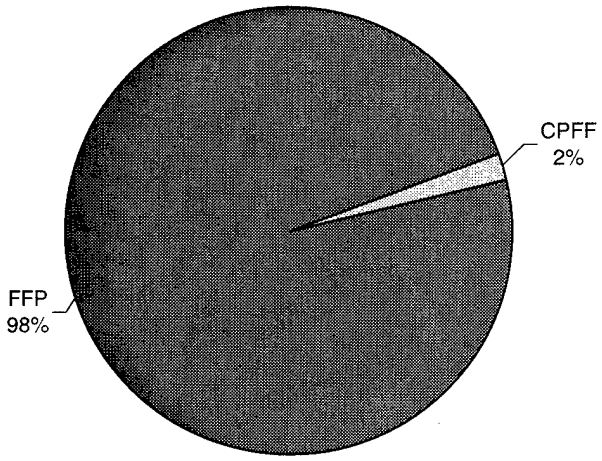



The Navy trend toward long-term contracting is potentially significant because longer-term contracts reduce the administrative costs per contract and lends some stability to the contractor for production scheduling and capital investment planning. To preserve the leverage to renegotiate contract terms should market conditions change, the contracting activities tend to prefer option periods rather than longer base periods.

## FEE ARRANGEMENTS

Fully 98 percent of Navy repair contracts are firm fixed-price arrangements, as indicated by Figure 2-11. This is a substantial increase from the 72 percent found in the GAO sample.[4] The proportion falls to 62 percent by excluding the NAVICP data because the bulk of the cost-plus contracts are in NAVAIR and NAVSEA. FFP arrangements frequently contain "over-and-above" provisions that are T&M based. That is, the parties only definitize the total price of a repair after the actual materiel condition has been determined and a repair scope defined. A large number of contract actions for the NAVICPs are actually modifications initiated by administrative contracting officers to definitize T&M arrangements. In addition, contracts that are more complex can contain incentive and award fee structures in addition to fixed price line items.

*Figure 2-11. Breakdown of Sample Contracts by Fee Arrangement for the Navy*

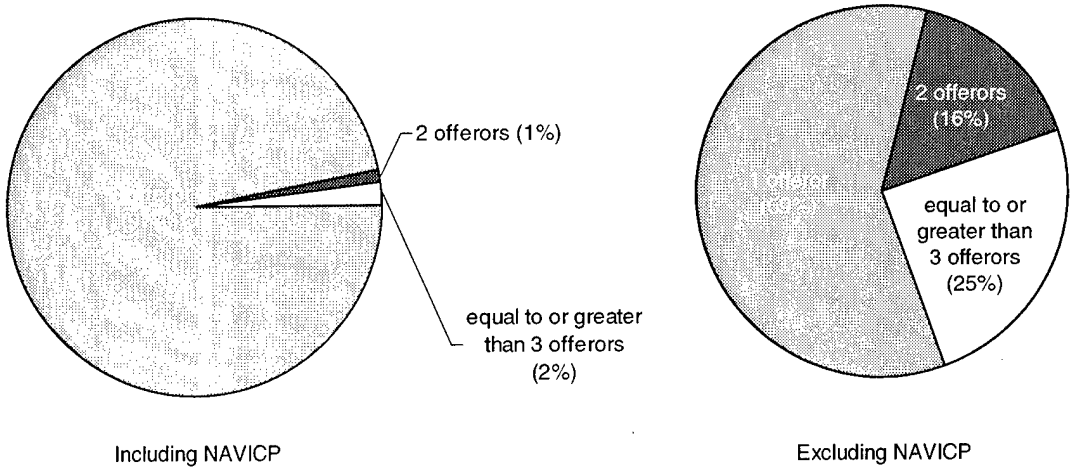



## COMPETITIVE POSITION

More than 96 percent of Navy contracts had a single bidder. That proportion falls to 59 percent by excluding NAVICPs, as seen in Figure 2-12. NAVICP Mechanicsburg is essentially all single-source, and NAVICP Philadelphia is more than 99 percent single source, for repair contracts.

[4] GAO Study, *Defense Depot Maintenance, Contracting Approaches Should Address Workload Characteristics*, NSIAD 98-130, June 1998, p. 6.

*Figure 2-12. Number of Offerors for Navy Repair Contracts*




Slightly more than half of NAVAIR's contracts were awarded on a single-source basis. NAVSEA competed most of its fixed-price contracts. It awarded most of its single-source contracts on a cost-plus basis, for an overall rate of 54 percent single source. The fleets compete most of their workload orders between the established holders of ship repair agreements.

Table 2-7 provides similar insight for contract values compared to the number of offerors. We constructed this table from 338 contract records that had complete contract information available and were not modifications or orders against another contract. These contracts had $1.2 billion in value in FY99, or 73 percent of the total Navy value. This data excludes NAVICPs (detailed contract data not provided) and the Marine Corps (sample data provided). Sixty percent of these Navy contracts and 49 percent of contract value were awarded single source.

*Table 2-7. Contracting Actions Compared to Total Contract Value for the Navy (excluding NAVICPs and Marine Corps)*

| Offerors | Percentage of contracts | Percentage of contract value |
|---|---|---|
| 1 | 60 | 49 |
| 2 | 11 | 21 |
| ≥3 | 29 | 30 |

NAVICPs awarded nearly 100 percent of its 4,953 contracts on a single-source basis. For the Marine Corps sample, one in three of the sampled contracts was awarded single source, from a population of 19. Combined, the total Navy data reflects the NAVICP contract dominance (Table 2-8).

*Table 2-8. Total Navy FY99 Contracting Actions Compared to Contract Value*

| Offerors | Percentage of contracts | Percentage of contract value[a] |
|---|---|---|
| 1 | 97 | 64 |
| 2 | 1 | 15 |
| ≥3 | 2 | 20 |

[a] Numbers do not add due to rounding.

## REASONS FOR SOLE SOURCE

As depicted in Table 2-9, the Navy uses a variety of justifications for sole-source award. This data excludes the 4,953 NAVICP contracts, where the overwhelming majority of the sole-source awards cite the uniqueness of a single source. Throughout the Navy, the sole-source justifications frequently cite the applicable portion of 10U.S.C.§2304, which allows seven conditions under which sole-source awards may be appropriate (listed as the first seven items in the table). In addition, such awards may also include small business set asides.

*Table 2-9. Reasons for Sole-Source for the Navy*

| Description | Number |
|---|---|
| Unique source | 226 |
| Urgency | 1 |
| Maintain source | 7 |
| International agreement | 1 |
| Legal requirement | 1 |
| National security | 0 |
| Public interest (Congressional notification required) | 0 |
| Small business set aside | 4 |

The "unique-source" justifications frequently include comments that cite the original equipment manufacturers' technical expertise or the lack of technical data to support competition. Within the constraints of the legal authorizations for sole-source contracting, unique sources and lack of technical data are the same.

## SIZE OF CONTRACTS VERSUS SINGLE SOURCE

Excluding NAVICPs, the relative size of the sampled contract values had no apparent relationship to the frequency of the contract being awarded to a single source.

Even though we did not have a mechanized way to conduct a similar analysis for NAVICP contracts, it was evident that the nearly 2,000 single-source small

purchase orders would overwhelm this analysis. A review of paper contract listings at Mechanicsburg and Philadelphia indicated the contract values above $100 thousand are distributed similar to the rest of the Navy.

### PRICING ARRANGEMENT VERSUS SINGLE SOURCE

The type of pricing arrangement had no apparent bearing of the frequency of non-competitive contract awards. There were only 79 total cost-plus repair contracts identified within the Navy in FY99, less than 1.5 percent of the total repair contract volume, and those contracts were distributed evenly across the range of contract values as well as competitive versus single-source arrangements. As discussed earlier, time-and-materials or labor-hour contract arrangements are actually a form of fixed price contracting, typically definitized after an initial condition assessment of reparable materiel. Many Navy repair contracts that are otherwise fixed-price have an additional time-and-materials line item to allow for this type of input. Because we lacked detailed NAVICP contract data, we did not attempt to measure the prevalence of time-and-materials arrangements within the Navy.

## Non-Sampled Contracts

As discussed earlier, NAVICP Mechanicsburg and Philadelphia did not provide inventories or full samples of their contract populations. However, they did provide information to characterize their populations with a high degree of confidence. While they represent more than 90 percent of the Navy's repair contracts, they account for less than a third of the Navy's repair funding.

# AIR FORCE

The Air Force utilized the G072D database[5] to compile a list of 1,799 contracts, excluding contract logistics support (CLS) contracts, with funds obligated in FY99. Program managers from each of Air Force Materiel Command's product centers added CLS contract figures to comprise a total population of 1,889 contracts. Table 2-10 depicts each of the Air Force contracting organizations we examined and their associated populations and total contract values. For comparison, the Air Force reported a total of $3,011.7 million in FY99 contract obligations in its 50-50 report.

[5] G072D, Contract Depot Maintenance Production and Cost System (CDMPC). Governed by AFMCR 170-1, it combines financial and production management data of end items in process at the contracting depot for Air Force contract maintenance and cost accounting through Defense Finance and Accounting System (DFAS).

*Table 2-10. Air Force Contracting Organizations*

| Organization (Air Force Materiel Command Air Logistics Centers and Product Centers) | Acronym | Original number of contracts (including CLS/ICS) | Total contract value (dollars in millions) |
|---|---|---|---|
| Oklahoma City Air Logistics Center, Tinker AFB, OK | OC-ALC | 577 | 1,364 |
| Ogden Air Logistics Center, Hill AFB, UT | OO-ALC | 529 | 560 |
| Warner Robins Air Logistics Center, Robins AFB, GA | WR-ALC | 755 | 597 |
| Air Armament Center, Eglin AFB, FL | AAC | 2 | 62 |
| Aeronautical Systems Center, Wright Patterson AFB, OH | ASC | 7 | 142 |
| Electronic Systems Center, Hanscom AFB, MA | ESC | 9 | 5 |
| Space & Missile Systems Center, Los Angeles AFB, CA | SMC | 10 | 19 |
| Totals | | 1,889 | 2,749 |

Note: AFB = Air Force base; ICS = interim contract support.

# Analysis

We subsequently reduced the total population for a variety of reasons:

- A sizeable portion contained invalid contract numbers or were FY00 contracts.
- Some of the contract records were actually interdepartmental purchase requests and accounting codes.
- Some contracts had no actual FY99 funds expensed.
- Some contract files were in transit from the closure of San Antonio Air Logistics Center (SA-ALC) and Sacramento Air Logistics Center (SM-ALC) and were not available for review.

Through this process of elimination, we eventually collected a sample population of 125 contracts out of a total estimated population of 1,356 contracts, for a 9 percent sample rate. Table 2-11 shows this revised total population with sample number of contracts and corresponding values.

*Table 2-11. Air Force Contracting Samples*

| Estimated number of contracts (including CLS/ICS) | Sample number of contracts (final) | Sample contract value (dollars in millions) |
|---|---|---|
| 1,356 | 125 | 442.38 |

The Contract Actions Reporting System J001 database "processes all contract reporting data for the Air Force."[6] Extracting information from this database, WR-ALC was able to provide most of the data elements needed for this study.

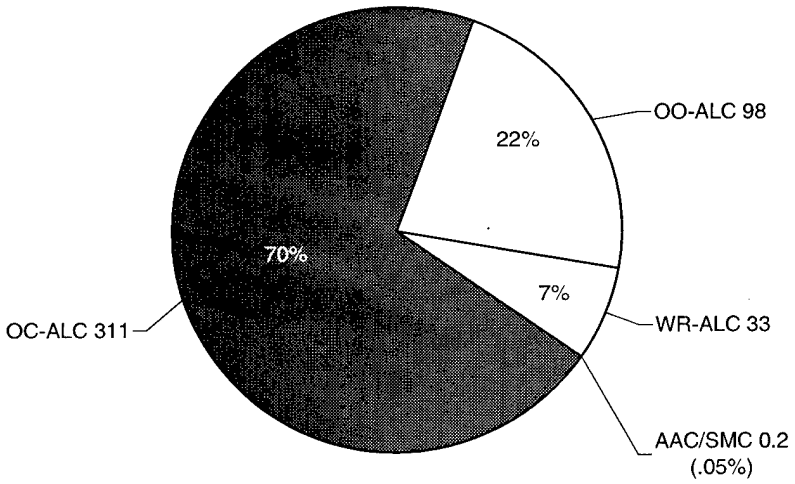
[6] Air Force Instruction (AFI) 64-105, August 1, 2000, p. 2.

Their buyers then filled in the remaining data from the contract files. In contrast, OC-ALC and OO-ALC did not utilize the J001 to support this study. We visited OC-ALC and manually extracted the data, and OO-ALC buyers provided the information from the contract files. Upon receipt of the data, we interviewed representatives from each base's competition advocate office and senior contracting officers directly involved in the depot maintenance contracting process.

## VALUE OF SAMPLED CONTRACTS

Figure 2-13 shows the total sample contract value in relationship to the three ALCs and the CLS/ICS contracts. The enormity of the OC-ALC portion compared to the other agencies reflects the randomly selected inclusion of three CLS contracts, valued at over $218 million, or 70 percent of the total OC-ALC sample contract value. The OO-ALC amount reflects over $18 million worth of CLS contracts, while the WR-ALC sample did not include any CLS contracts.

*Figure 2-13. Total Sample Contract Value for the Air Force (dollars in millions)*




Note: Sample total = $442 million (16% of total Air Force amount).

## SIZE OF CONTRACTS

Within the sample, 79 contracts—or 63 percent—were valued under $500,000; however, their total value was only $11 million, or 2.5 percent of the total contract value of the sample. Additionally, the average contract value of the total sample was $3.5 million.

## LENGTH OF CONTRACTS

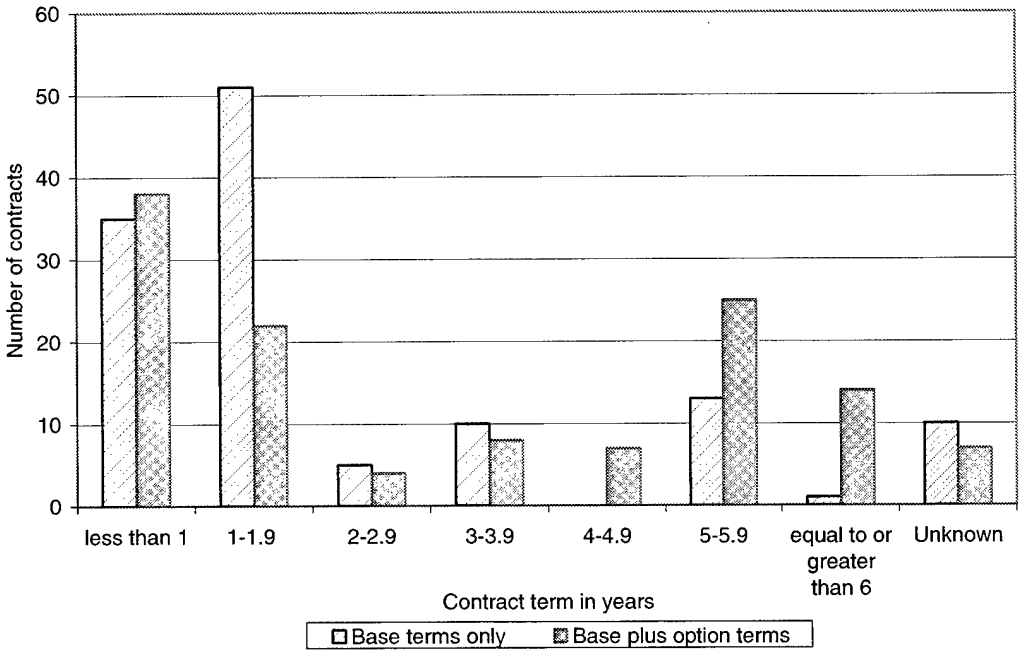
The majority of Air Force contracts we evaluated (86 contracts or 69 percent of total sample number) had base terms of less than two years. These contracts had a total value of $354 million or 80 percent of the total sample contract value. Base

terms of greater than five years accounted for 14 contracts or 11 percent of the total.

Sixty contracts (48 percent) had total terms (base plus option) of less than two years and 39 (31 percent) had total terms greater than five years or more. These longer-term contracts reflect 79 percent of the total sample value, with an average contract value of $9 million.

Seventy-one contracts, or 57 percent of the sample, had no option years. However, the average value of these contracts is only $960,000 and reflects only 15.4 percent of the total sample contract value. Figure 2-14 reflects the breakdown of contracts by base plus option years.

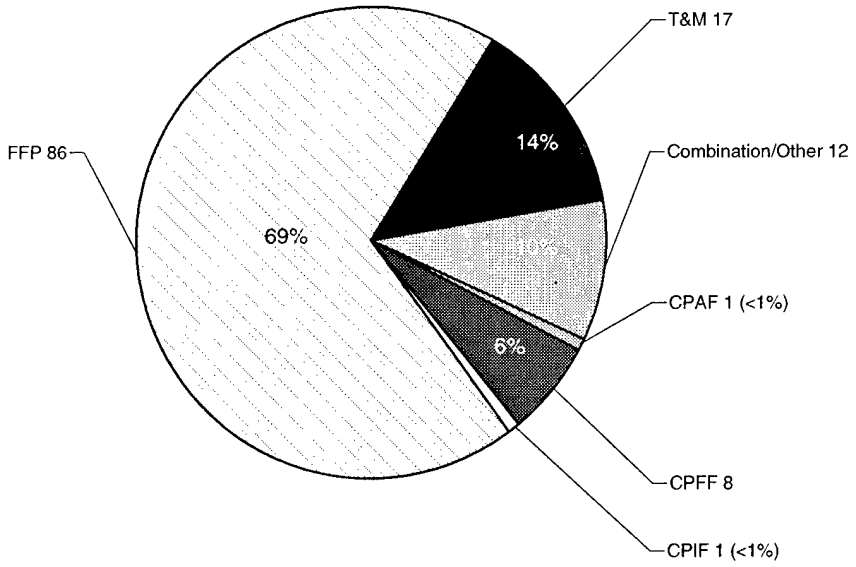
*Figure 2-14. Breakdown of Sample Contracts by Base Plus Option Terms for the Air Force*




## FEE ARRANGEMENTS

As seen in Figure 2-15 firm fixed-price contracts constituted the majority of pricing types in the sample (86 contracts or 69 percent). These contracts had the largest value ($265 million or 60 percent of the total sample contract value). The average value of the FFP contracts tended to be somewhat less than that of the other fee arrangements ($3.1 million as compared to $5.6 million for cost plus fixed fee [CPFF] or $6.5 million for combination fee arrangements).

*Figure 2-15. Breakdown of Sample Contracts by Fee Arrangement for the Air Force*




Note: Total contracts sampled = 125.

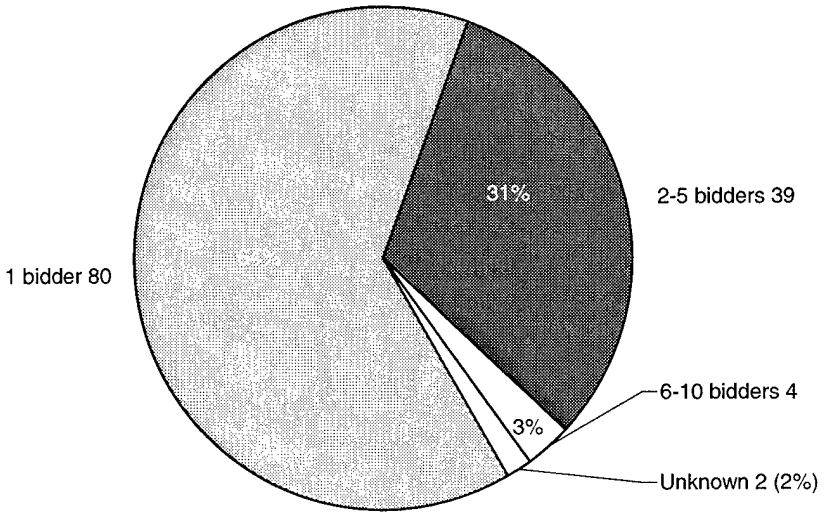
## COMPETITIVE POSITION

Figures 2-16 and 2-17 illustrate that the majority of solicitations received only one bidder (80 actions, or 64 percent of the sample and 34 percent of the total contract value). The average value of the single-source contracts was $1.9 million, as compared to $8 million average value for contracts with multiple bidders. Contracts with two to five bidders numbered 31 percent of the total contract actions (39 actions with an average value of $7.5 million or 66 percent of the total contract value).

Fifty-one contract actions, or 41 percent of the total number of sample contracts, were competitively bid (76 percent of the total sample contract value). While there were more contracts that were sole-source (74 actions or 59 percent), they account for significantly less percentage of the total dollars expensed (25 percent). These figures vary somewhat from the earlier GAO findings. In the GAO study, Air Force sole-source contracting accounted for 50 percent of the total number of depot maintenance contracts, or 43 percent of the total value. Some possible reasons for the increase in proportion that were cited during interviews include the effects of the closure of two Air Force depots, a trend toward corporate contracts or partnering, and consolidation among contractors.

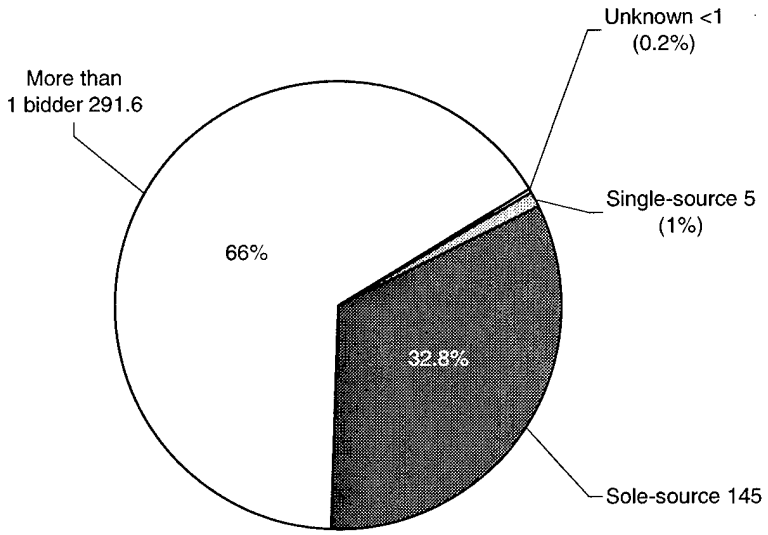
Small business set asides accounted for only 18 percent of the total number of contracts (23 contracts), with only 1 percent of the total contract value.

*Figure 2-16. Estimated Number of Bidders per Contract for the Air Force*




Note: Total contracts sampled = 125.

*Figure 2-17. Contract Value for Number of Offerors for the Air Force (dollars in millions)*




Note: Total contracts sampled = 125.

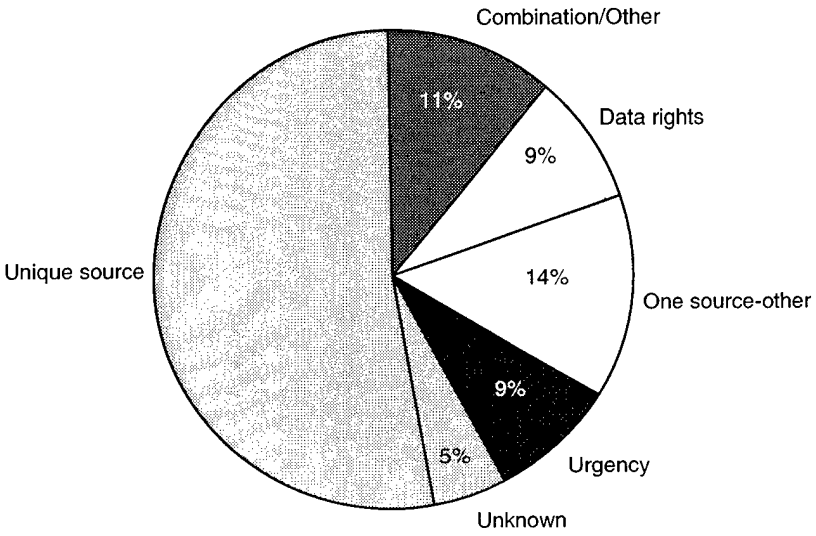
## REASONS FOR SOLE SOURCE

As the GAO found in their study, "most depot-level maintenance is on noncommercial, DoD-unique, weapons systems parts and components for which there is often no competition or a limited competitive market."[7] Indeed, the figures for all three ALCs show "unique source" as the primary reason for sole-source contracting (34 percent, or 42 of the 125 sample contracts), as seen in

[7] GAO/NSIAD-98-130 Defense Depot Maintenance, June 1998, p. 4.

Figure 2-18. Contracting officers at one depot indicated that they believed that lack of technical data was the primary reason for sole source. The GAO acknowledges that small volume, obsolete technology, irregular requirements and unstable funding may discourage private contractors from competition even if the government owns the technical data[8]. However, although the average contract value for sole-source reasons classified as "lack of data rights" was $3.4 million, the actions accounted for only 6 percent of the total number of contracts and 6 percent of the total contract value.

*Figure 2-18. Reasons for Sole-Source for the Air Force*



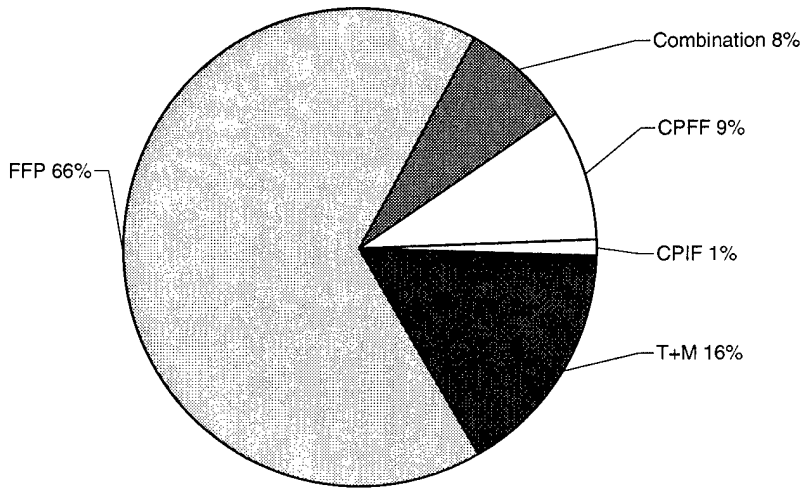

Note: Total contracts sampled = 80.

## FEE ARRANGEMENT VERSUS SINGLE SOURCE

As illustrated in Figure 2-19, we estimate FFP contracts account for 66 percent of all single-source contracts as compared to 69 percent for all contracts. The second most widely used fee arrangement was time and materials, accounting for an estimated 16 percent of all single-source contracts and 14 percent of all contracts. This coding reflected the hybrid nature of T&M contracts, which combine elements of fixed-price and cost-plus pricing arrangements. This coding practice did not appear to be consistently applied across the other services. These figures reflect a consistency in the types of fee arrangements regardless of the competitive nature of the contracting process. The percentages comparable to the total sample population are depicted in Figure 2-15.

[8] Ibid, p. 5.

*Figure 2-19. Fee Arrangement for Single-Source Air Force Contracting*




Note: Total contracts sampled = 80.

## Non-Sampled Contracts

Within the Air Force, the only portion of the contract population that could not be sampled was the set of contracts that had been transferred from the Sacramento and San Antonio ALCs to other ALCs. Almost invariably, these contract files were in some form of manual record storage.

# SOCOM AND TRICARE

The United States Special Operations Command (SOCOM) and the TRICARE management activity were separately included in the 50-50 data for FY99, and were treated separately for this report. The apparent reason for their separate reporting in 50-50 relates to their funding sources, which are distinct from the military departments. Table 2-12 summarizes their contract volume and values.

*Table 2-12. SOCOM and TRICARE Summary*

| Department | Number of contracts | Contract value (dollars in millions) | Single-source percentage | Sample size |
|---|---|---|---|---|
| SOCOM | 350 | 56.5 | 54 | 28 |
| TRICARE | 3 | 36.7 | 0 | 3 |

SOCOM and TRICARE contracts were included in the DoD analysis in Chapter 1. It is worthwhile to mention them separately because their total contract volume (353 contracts) approached the Army (510 contracts). For most of the variables analyzed, the SOCOM and TRICARE sample mirrors the conclusions for DoD. As exceptions, we concluded that SOCOM and TRICARE generally award contracts in a more competitive environment than DoD as a whole.

There was a higher percentage of contracts awarded when there was more than one bidder, as well as a smaller percentage awarded to a sole source without competition.

SOCOM and TRICARE contracts had a much lower percentage of FFP fee arrangements and more T&M and cost-plus agreements. Finally, more than twice as many SOCOM and TRICARE contracts had option periods as part of the contract terms than DoD.

# Chapter 3
# Measurement Issues

## INTRODUCTION

We felt it was necessary to document how we conducted this study in order to compare and contrast our approach with the earlier General Accounting Office study, and to provide some suggestions for future studies in the same arena.

### The Genesis of This Study

As indicated in Chapter 1, in the mid-1990s, the GAO published a series of reports relating to the prevalence of single-source contracting in depot maintenance. In the final report of their series, they stated that 91 percent of depot maintenance contracts were single-source awards.[1]

With this backdrop, we were tasked to determine if single-source awards remain so prevalent; this question is the basis for this report. In preparation for our study, we interviewed the GAO auditors who had conducted the earlier study. Although looking at essentially the same fields, our methods were significantly different from those employed by the GAO.

The GAO began by tasking contracting organizations to classify all depot repair and maintenance contracts as either competitive or sole-source. The organizations identified 15,346 contracts, 13,930 (91 percent) of which the GAO classified as single source. Figure 3-1 depicts the percentage of the total depot maintenance-contract population in each service that was determined to be single source.

[1] GAO, *Contracting Approaches Should Address Workload Characteristics*, NSIAD-98-130, June 1998, p. 5.

*Figure 3-1. GAO Percentage of Service Depot Maintenance Contract Population with Single-Source Awards*

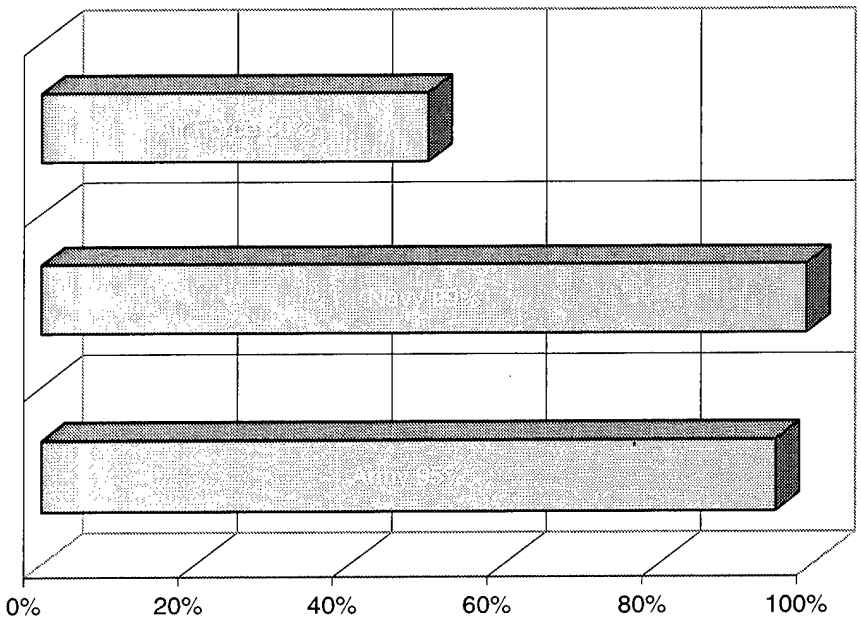
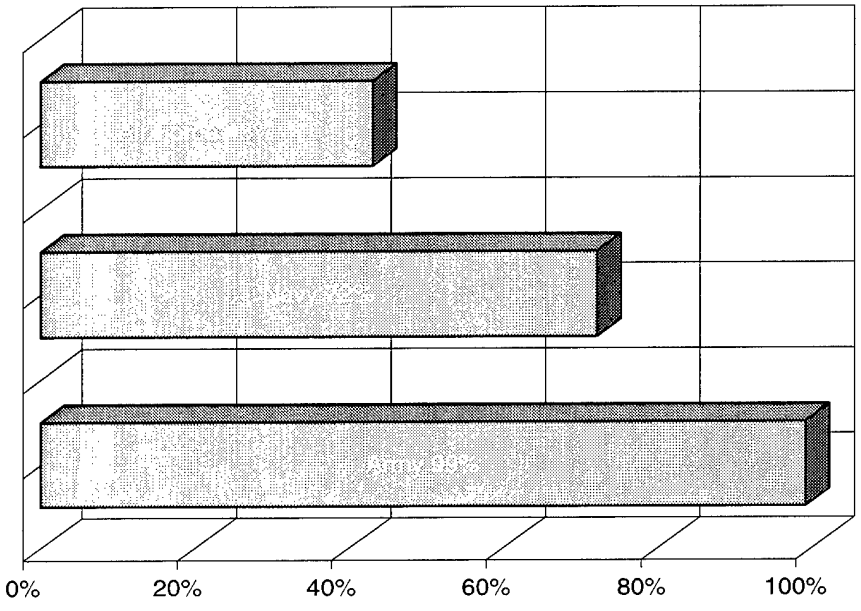



Figure 3-2 is a breakdown of the single-source contract value as a percentage of the total depot maintenance contract funding for each service.

*Figure 3-2. GAO Percentage of Service Depot Maintenance Contract Value with Single-Source Awards*

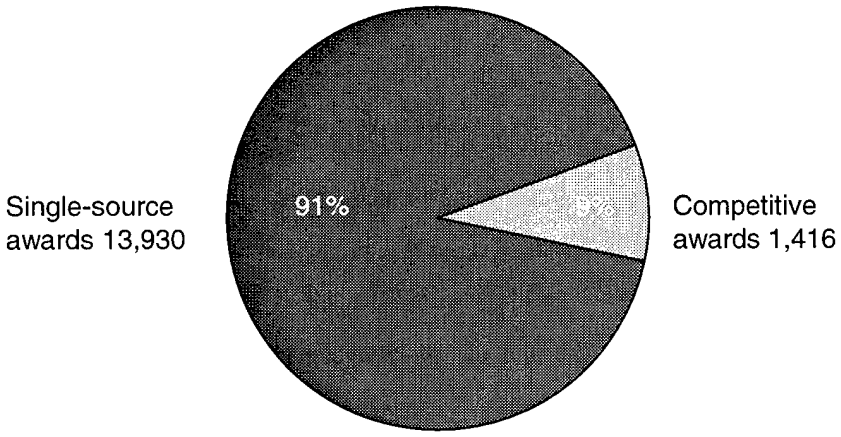


At first, the auditors attempted to assess all contracts in force at the time they visited a contracting activity. However, they found this method extremely time-consuming, primarily because of the need to physically record a large number of data elements and reconcile significant amounts of coding discrepancies in contract data listings. They also discovered considerable duplication in the contract lists. From the total population, though, the GAO determined that the primary reason for single-source contracting was the lack of technical data rights.

Given the volume of contracts and the number of discrepancies, the GAO decided to sample the total population stratified in terms of contract value. They examined 345 contracts in effect between October 1995 (FY96) and March 1997 (FY97). In addition to their assessment of single sourcing, the GAO concluded the primary fee arrangement for single-source contracts was firm fixed pricing.

As part of their examination, the GAO considered each contract file, budgeting three contract file reviews per person per day. They spent a substantial amount of time physically reviewing contract folders to establish the actual prevalence of single-source contracting as well as to review other contract features that are outside the scope of our present study. During their examination, they found a large number of contracts were coded "open source" (i.e., open to any qualified bidder). Despite the fact that the original solicitations for these contracts were coded in the database as competitive solicitations, in many cases only one bidder responded. Single bidders are frequently, if not exclusively, the original equipment manufacturer (OEM). The GAO chose to define "sole source" to mean both contracts that were sole source, as well as contracts in which a single offeror responded to an open solicitation. For the purposes of consistency, we have labeled these combined findings "single source" within this report. Figure 3-3 presents the GAO's summary findings about the percentage of single-source contracting in depot maintenance.

*Figure 3-3. GAO Percentage of Single-Source Contracting*



It is interesting to note that the 91 percent overall figure was not representative of all three military departments. While the Army and Navy had single-source percentages in the mid-to-high 90s, single-source contracting in the Air Force was only 50 percent of their total depot maintenance contracting actions. The departments' percentages of the total contract value awarded as single-source was 99 percent and 72 percent for the Army and Navy, respectively, while the Air Force's total contract value was 43 percent.

The GAO also counted some contracts differently from this current study. In particular, the GAO determined that they would count orders rather than blanket purchase agreements such as basic ordering agreements or master ship repair agreements. Their rationale was that the agreement itself did not involve any actual government expenditure. In the same vein, the GAO examined individual orders to determine whether they were fixed-price or cost-plus arrangements. The LMI data characterized the basic contracts and not the orders.

## Study Approach

Building on the GAO approach, we designed our study to provide a "snapshot" of a single fiscal year's contracting—FY99, the most recent year with completed data reporting at the time we began our study. We also made a distinction between sole-source and single-source contracts. Sole-source, by our definition, is a contract action with no solicitation of bids, going directly to a pre-selected source. Single-source contract actions include sole-source as well as those contracts that had a solicitation of bids but only one bidder responded. We sought to make a more detailed assessment of single-source contracting, and determine if there is a correlation between single-source contracting and other factors, such as value, type of pricing, and length of contract term. We also sought to determine whether a larger, more uniformly distributed sample would yield different proportions for single-source.

We selected 18 data elements to sample for each contract (Table 3-1). The elements represent a judgmental set of the contract characteristics that would most likely have strong correlations with single-source contracting. One of the data elements we considered was the number of protests the contract action had received. We added this element at the suggestion of our expert contracting consultants, who postulated that the existence of protests in a single-source contract situation could be an indicator of competitive interest, despite the basis of contract award.

*Table 3-1. Selected Data Elements*

| | |
|---|---|
| Military service | Term of basic contract in years |
| Requiring activity | Options in years |
| Contracting activity | Type of pricing (FFP/CPIF/CPFF/etc.) |
| Contract number | Number solicited |
| Award date | Number of offerors |
| Contractor | Primary reason for sole-source |
| Work description | Small business set aside (yes or no) |
| Location of work performed (zip code) | Number of protests |
| Contract value (obligations) | Sole- or competitive-source award (full and open or exception number) |

As the basis of our data gathering, we used the 50-50 reporting information (mandated by 10U.S.C.§2466), which includes a defined value for depot maintenance contract obligations in a given fiscal year. We theorized the underlying 50-50 data would be easier to obtain and analyze than a new data call. The data set would also define what contracts were included in the services' definition of depot maintenance, because the legal definition includes workloads accomplished throughout the military services, not just at the major depot maintenance facilities.[2]

We found the services typically do not collect actual contract information to prepare their 50-50 reporting. Instead, they rely on financial management information systems within the depot community and on data submissions from program offices and other activities that contract for depot maintenance. As a result, in the Army and Navy, the 50-50 reporting is a compilation from a series of cascading points of contact at each echelon of organization; and none of the reporting levels has actual contract data. The Air Force was able to provide a complete listing, including contract numbers, for its centrally managed contracts issued by its inventory control points.[3] However, the system did not include contracting performed by program offices, which required separate data retrieval.

As we contacted each reporting organization, we visited the actual contracting activities that supported the organizations and reviewed physical contracts. In some cases, the contracting offices also provided complete listings of their depot maintenance contracts using separate databases. However, there are no automated links between the two systems, other than within the Air Force. In some cases, we had to manually search for applicable contract files. In other cases, we were unable to identify actual depot maintenance contracts to correlate to the 50-50 listings.

[2] A major depot maintenance facility is defined as a facility that has 400 or more military or civilian personnel engaged in depot maintenance activities. Nineteen such facilities exist at the time of this report writing.

[3] Extracted from the GO72D management system.

The differences in our methodology and time frame versus that of the GAO and the significant amount of duplication in the GAO's contract lists may help to explain the wide variance between the GAO's population of 15,346 contracts and our population of 7,537. Table 3-2 summarizes the differences in the GAO total population as compared to our total contract population.

*Table 3-2. GAO Study Compared to LMI Study*

| Study | Timeframe (months) | Initial data source | Total contract population | Contract files |
|---|---|---|---|---|
| GAO | 17 | Data call | 15,346 | Reviewed entire file |
| LMI | 12 | 50-50 Report | 7,537 | Reviewed data elements |

## Fiscal Year 1999

We picked fiscal year 1999 as our year of study for several reasons: (1) it was the latest complete year for financial and workload reporting information when we began the study in the fall of 2000; (2) sufficient time had elapsed to allow for GAO and other types of auditors to test the accuracy of reporting; and (3) FY99 was relatively free of major perturbations such as new Base Closure and Realignment Commission (BRAC) rounds or weapon system retirements. The BRAC-related closure of SA-ALC and SM-ALC did, however, affect our access to contract files in the Air Force, as outlined in Chapter 2.

In FY99, DoD spent more than $125 billion in contract awards of all types. More than 41 percent of that amount, or $52 billion, was for "Other Services and Construction," which is the contract category in which depot maintenance contracting falls.

Also in FY99, DoD had $15.4 billion in funds made available for all forms of depot-level maintenance performed by all of the DoD components. From this total, non-federal personnel contracted to perform $6 billion, or 44.9 percent.[4]

The Depot Maintenance Cost System[5] recorded the total costs, in terms of competed job orders, for the top ten depot maintenance contractors in FY99. These costs are listed in Table 3-3.

[4] *Distribution of DoD Depot Maintenance Workloads, Fiscal Years 1999 and 2000*, prepared by the Deputy Under Secretary of Defense (Logistics & Materiel Readiness), February 2001.

[5] DoD 7000.14-R, Volume 6, Chapter 14.

*Table 3-3. Top Ten Depot Maintenance Contractors*

| Company | Total cost (dollars in millions) |
|---|---|
| Lockheed Martin | 208.1 |
| Boeing | 196.5 |
| Raytheon | 151.9 |
| PEMCO | 105.6 |
| Northrop Grumman | 90.6 |
| AlliedSignal | 89.1 |
| McDonnell Douglas Corp. | 87.1 |
| Pratt & Whitney Inc. | 86.0 |
| Newport News Shipbuilding | 74.6 |
| General Dynamics | 43.5 |
| Total | 1,133.0 |

Thus, the top ten companies in FY99 accounted for 19 percent of the total contract depot maintenance funding.

Subsequent mergers and acquisitions would combine Boeing with McDonnell Douglas, Litton (number 16 on the FY99 list) with Northrop Grumman, and AlliedSignal with Honeywell. Further mergers, including Newport News with General Dynamics or Northrop Grumman, were pending at the time this report was written. The net effect of these mergers is to further centralize the predominance of depot maintenance contracting in the top ten companies.

As we received 50-50 data from the services, and the contract listing from the Air Force, we overlaid the listings with data from other sources. For example, DoD maintains a database of all contract actions valued over $25,000 that are reported on a DD Form 350 (DD350). We found the database could be misleading, however, because it contains coding that indicates contract modifications are sole source to an existing contract, regardless of the competition for the original contract award. Because most maintenance contracts are modified repeatedly through the course of a year to definitize new work or approve amendments to pricing, the DD350 database was not a reliable source of coding to explain the rationale for single-source contracting, although it was useful to obtain other of the 18 required data elements. We also found a significant amount of missing or inaccurate data in the database, which reflects the manual inputs that must be made to collect the data and problems with mechanized input systems. Finally, we found that the FY99 database does not contain sufficient information to be able to identify maintenance contracts with a high degree of confidence. We could not use the database as a starting point, but did refer to it repeatedly once we had listings of contract numbers from other sources. Appendix C compares DD350 data for each of the data elements in our study.

When the ICPs provided contract information in a specially generated or manual format, we conducted a cursory verification of the data. Whenever the data was incomplete or provided as a standard system run (e.g., DD350), we sampled the population to verify the data and to fill in gaps in the data fields.

Using the FY99 50-50 reports as a starting point, we contacted the reporting activities, and ultimately the contracting activities, or each reporting organization. Table 3-4 is a summary of the reporting organizations within each service. In addition to the services, two additional entities reported depot maintenance obligations in FY99, the United States Special Operations Command (SOCOM), and the TRICARE support activity. SOCOM is funded as a DoD direct reporting activity, and also finances depot maintenance contracts through its service component commands. TRICARE financed the depot maintenance for its medical evacuation fleet of aircraft in FY99.

*Table 3-4. 50-50 Reporting Activities*

| Army | Navy | Air Force | SOCOM |
|---|---|---|---|
| AMCOM | Marine Corps | OC-ALC | HQ AFSOC |
| ARNG | MSC | OO-ALC | NAVSPECWARCOM |
| CECOM | NAVAIR | WR-ALC | WR-ALC |
| EUSAEUR | NAVICP | AAC | USASOC |
| FORSCOM | Mechanicsburg | ASC | |
| HQ AMC | Philadelphia | ESC | |
| OCAR | NAVSEA | SMC | TRICARE |
| PEO OFFICES (6) | LANTFLT | | |
| STRICOM | PACFLT | | |
| TACOM | SPAWAR | | |
| TRADOC | SUPSHIP | | |

Note: HQ AFSOC = Headquarters Air Force Special Operations Command; HQ AMC = Headquarters Army Materiel Command; LANTFLT = Atlantic and Pacific Fleets; NAVSPECWARCOM = Navy Special Warfare Command; PACFLT = Pacific Fleet; USASOC = United States Army Special Operations Command.

Once we contacted each contracting activity, we determined the best way to obtain contract data from them based on their particular data system capabilities and locations. In some instances with multiple contracting activities, such as NAVAIR, the activity determined that it would be easiest to develop a total inventory of their contracts, and they presented it to us as a three-ring binder. In others, the activities could provide partial or complete inventories of their depot maintenance contracts through data systems.

When contracting activities could not provide the complete set of data elements we required for the study, we took a sample of their data rather than performing a full inventory. The next section describes the confidence levels we attained with this method.

Once we had a complete sample set, as well as full inventories and characterizations, the contract information was input into LMI databases for analysis. Table 3-5 illustrates the kinds of interrelationships between data elements that we investigated as a part of this analysis. Chapter 1 contains several insights drawn from this approach.

*Table 3-5. Relationships of Study Data Elements*

| | Service | Major sub command | Number of contracts | Total contract value | Contractor | Basic term in years | Total contract length | Type of pricing | Solicitation type | Number of offerors | Extent of competition | Sole source | Small business set aside | Number of protests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Service | N/A | | ✓ | ✓ | | | | | | | | | | |
| Major sub command | | N/A | ✓ | ✓ | | | | | | | | | | |
| Number of contracts | ✓ | ✓ | N/A | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Total contract value | ✓ | ✓ | | N/A | ✓ | | | | | ✓ | | | | |
| Contractor | | | | | N/A | | | | | | | ✓ | | |
| Basic term in years | | | ✓ | | | N/A | | | | | | | | |
| Total contract length[a] | | | ✓ | | | | N/A | | | | | | | |
| Type of pricing | | | ✓ | | | | | N/A | | | | | | |
| Solicitation type | | | ✓ | | | | | | N/A | | | | | |
| Number of offerors | | | ✓ | ✓ | | | | | | N/A | | | | |
| Extent of competition | | | ✓ | | | | | | | | N/A | | | |
| Sole source | | | ✓ | | ✓ | | | | | | | N/A | | |
| Small business set aside | | | ✓ | | | | | | | | | | N/A | |
| Number of protests | | | ✓ | | | | | | | | | | | N/A |

Note: ✓ = the relationship to be displayed between variables; N/A = not applicable.

[a] Total contract length = base + option years.

As summarized in Chapter 1, we also conducted interviews with contract managers to gain their perspective on the competitive prospects for depot maintenance contracting in the future. Taken together, the data and the interviews formed the primary basis for this report.

# STATISTICAL ANALYSIS

The primary goal of our analysis was to discover how often DoD awards depot maintenance contracts on a single-source basis. This analysis was an essential first step to assess the prospects for competitive sourcing in the future. This section outlines the statistical methods we used to address that issue; it also shows we have a high level of confidence in our findings.

To help provide a more complete picture of depot maintenance contracts, we also:

- Looked at some other data—value, length, work description, etc.—in addition to the proportion of single-source contracts.
- Analyzed each individual Military Department—in the same way we did for DoD as a whole.

The statistics we produced for these two additional parts of the study are not as precise as those for our primary goal, but they add depth to our understanding of the nature of depot maintenance contracts.

There are two basic components of this section on statistical analysis. First, we describe the data we used; next, we discuss the statistical reliability of the analysis.

## How We Derived Our Statistics

Table 3-1 lists the data elements we wanted for each contract; however, we could not obtain each data element for every contract. For many contracts, we only received the contract number, value, and an indication of whether or not the contract was single-source.

### COLLECTED A SAMPLE FROM 7,539 DOD DEPOT MAINTENANCE CONTRACTS

Instead of looking at each DoD depot maintenance contract, we selected a sample of contracts on which we performed a statistical analysis. We did not analyze the entire population for the following reasons:

- There was no reliable database with the information for each depot maintenance contract.
- There were many cases where we needed to review the actual contract file to determine whether it was a single-source contract—it would require more time than we had available to do so for every contract.
- There were many contracts that, for various reasons, we could not access for this study. For example, all of the data on certain contracts was classified; other contract files had already been archived.

### USED A PARTICULAR METHOD FOR CHOOSING CONTRACTS TO ANALYZE

At the start of the study, we did not know the size or nature of the entire population of depot maintenance contracts—we did not receive a "master" list of depot maintenance contracts. Instead, various commands from each military department (e.g., AMCOM and CECOM from the Army, NAVSEA and NAVAIR from the Navy) gave us contract lists, with varying levels of detail, over four months.

The fact that we did not know the size and makeup of our population at the outset made constructing a reliable sample difficult. We needed to choose a sample size that would be large enough to produce a statistically reliable result, yet not so large that we would not have time to obtain data for all of the sample points. Based upon the number of contracts found in the earlier GAO studies and our own sense of how many contracts we expected, we decided on a 10 percent sample. We constructed the sample by listing the contracts (grouped by military department) in order of value, and then chose every tenth contract.

In doing so, we obtained a cross section of large, mid-size, and small contracts. There are two major exceptions where we did not follow this model:

- Army: We did not have a list of all contracts with dollar amount. In this case, we arranged the contracts in order of contract number.
- NAVICP: We received the total number of contracts and total value of these contracts from the two locations. They also told us that they awarded all of their contracts on a single-source basis at NAVICP Mechanicsburg, and most of their contracts at NAVICP Philadelphia.

In the next section, we discuss how these and other factors affect the reliability of our findings.

## Confidence Level for Our Statistical Findings

### EFFECTS OF THE POPULATION

In the last section, we discussed two occasions when our choice of sample points deviated from our normal convention. One has a minor effect on the reliability of our results—for our primary goal—while the other does not affect reliability at all.

Because the Army did not give us the total value for each of its contracts, we were not able to ensure we sampled a cross section of contracts with high, mid, and low values. Technically, this affects the level of "randomness" in our sample, and margin of error calculations assume the sample is random. However, we did select the Army contracts randomly—just not by the same scheme as with other contracts. Therefore, the Army sample is random, but not "as random" as we would like. The net consequence is probably minimal. Furthermore, the number of Army

contracts is relatively small, so we have a minimal effect on a small number of contracts. Thus, the overall effect on DoD results is most likely minimal.

Because all of the contracts at NAVICP Mechanicsburg are single-source, no matter how we chose the sample, each sample contract would be single-source. Therefore, this does not affect the reliability of our results for estimating the proportion of single-source contracts in DoD. NAVICP Philadelphia, which has a smaller population of contracts, could characterize their population sufficiently for us to estimate the percentage of competitive sourcing.

### High Confidence for the Entire DoD Sample and Average/Total Contract Value

As noted previously, we constructed our sample with our primary goal in mind—estimate the proportion of single-source depot maintenance contracts in DoD as a whole. Our statistic here is very reliable. Our sample size of 747 gives a margin of error—at a 95 percent confidence level—of ±2.5 percent. Because we estimated that DoD has 86 percent single-source contracts, we can be 95 percent sure that the actual percentage is somewhere between 83 percent and 89 percent.

One important note: When we indicate an average value for a contract, that value is based upon the actual total population, not our sample. We know the total value of contracts for each service, and the number of contracts. Therefore, the reliability of our estimate for average/total contract value is exactly equal to the reliability of the data.

### Lower Confidence for the Findings We Present on the Services

We used the same sample to find an estimated proportion of single-source contracting for each service. For the Army, the margin of error in this case is ±14 percent. For example, because the sample proportion of single-source Army contracts is 47 percent, we are 95 percent confident that the actual Army proportion is between 33 percent and 61 percent. This range is far less precise than that for DoD as a whole. Why are these results so different?

As noted in the last section, one factor—the most influential—affecting the margin of error is sample size: the higher the sample size, the lower the margin of error. Because the size of the sample from a service is necessarily smaller than that for DoD, the margin of error will be correspondingly higher.

Still these results are useful. Though we do not have a precise estimate for the proportion of single-source Army contracts, we are very sure that it is a lot lower than the proportion in DoD.

### CONFIDENCE LEVELS NOT MEASURABLE FOR SOME DATA ELEMENTS

As noted earlier, we did not receive information on each data element for every contract in our sample. Most notably, NAVICPs only gave us information on contract value and single-source. Because we do not have information on the other data elements, we cannot say how precise our findings are for these data elements. However, we can assume that they are less precise than our other findings.

NAVICP Mechanicsburg did not give us detailed contract data because all of their contracting is single-source. NAVICP Philadelphia did provide an inventory of contract numbers and values, but they also indicated that most of their contracts are single-source. Interviews with contracting experts at both sites gave us the most useful information about contracting at the NAVICPs.

A summary of our statistical analysis is in Chapter 1 for DoD and Chapter 2 for the services.

## Looking Ahead

This chapter is a chronicle of the steps we took to accomplish a study of single-source contracting based on contract histories from the late 1990s. It is likely that the Office of the Secretary of Defense will want to repeat the study in the future. The voice of experience says there might be easier ways to do so. Here, in no particular order, are some ideas about future assessment possibilities:

- Federal supply classes have recently been modified to include J-series maintenance codes. Because this coding is the first element of a contract description, future iterations of DD350 databases may allow sorting to identify maintenance contracts. This possibility can be tested in another year or so as the database gains sufficient size with the revised coding structure.

- The 50-50 Report was not a useful starting point for this study, although the data did provide some useful insight for comparison with the data we obtained from contracting activities. A full repeat of this study would benefit from starting directly with the contracting activities.

- Depot maintenance contracting exists in an atmosphere of inevitable tension with high levels of public scrutiny and countervailing advocacy for organic depot maintenance in the public sector. The sections of Public Law that address depot maintenance in Chapter 146 of Title 10, U.S. Code, reflect this tension. The 50-50 Report is itself an example of a law intended to measure the tension. Given this atmosphere, DoD would be well served to periodically perform detailed measurements of the contracting environment to identify trends and issues that merit attention. The implication is that the technique should be standardized if it is to be repeated at intervals.

- The prevalence of single-source contracting in depot maintenance is an important factor in the ongoing debate over privatization of depot maintenance in the future. Single-source contracting may not yield the same degree of benefits, compared to competitive sourcing. However, a policy shift to require support programs to be capable of supporting competition would almost certainly be more expensive during the acquisition phase, even if there were life-cycle benefits from the shift. Given that any particular contract must remain single-source, there are proven alternatives to classic contract structures that incentivize contractor behavior to achieve better value for the government. Unfortunately, as discussed in Chapter 1, there are not objective measures in place to help choose between a variety of choices. Future studies might be better focused on developing the measures.

# Appendix A
# FY99 Distribution of DoD Depot Maintenance Workloads

This appendix contains the FY99 distribution of DoD depot maintenance workloads.

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE

3015 DEFENSE PENTAGON
WASHINGTON DC 20301-3015

ACQUISITION AND
TECHNOLOGY

FEB 1 2001

Honorable Richard B. Cheney
President of the Senate
Washington, DC 20510-0011

Dear Mr. President:

Section 2466(e)(1) of title 10, United States Code, requires the submission to Congress of a report identifying, for each of the armed forces (other than the Coast Guard) and each Defense Agency, the percentage of funds that were expended during the preceding two fiscal years for performance of depot-level maintenance and repair workloads by the public and private sectors.

Pursuant to the requirement, I submit the enclosed report. A copy of this report has been provided to the Speaker of the House and the defense committees.

Sincerely,

Dave Oliver

Enclosure:
As stated

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE

3015 DEFENSE PENTAGON
WASHINGTON DC 20301-3015

ACQUISITION AND
TECHNOLOGY

FEB 1 2001

Honorable J. Dennis Hastert
Speaker of the House
Washington, DC 20515-6501

Dear Mr. Speaker:

Section 2466(e)(1) of title 10, United States Code, requires the submission to Congress of a report identifying, for each of the armed forces (other than the Coast Guard) and each Defense Agency, the percentage of funds that were expended during the preceding two fiscal years for performance of depot-level maintenance and repair workloads by the public and private sectors.

Pursuant to the requirement, I submit the enclosed report. A copy of this report has been provided to the President of the Senate and the defense committees.

Sincerely,

Dave Oliver

Enclosure:
As stated

OFFICE OF THE SECRETARY OF DEFENSE

# DISTRIBUTION OF DOD DEPOT MAINTENANCE WORKLOADS

## FISCAL YEARS 1999 AND 2000

FEBRUARY 2001

Prepared by the
Deputy Under Secretary of Defense (Logistics & Materiel Readiness)

# INTRODUCTION

Section 2466(e)(1) of title 10, United States Code, requires that the Secretary of Defense submit, by February 1 of each year, a report identifying, for each of the armed forces (other than the Coast Guard) and each Defense Agency, the percentage of funds referred to in section 2466(a) of title 10, United States Code, that were expended during the preceding two fiscal years for performance of depot-level maintenance and repair by the public and private sectors.

The following conventions were used in the preparation of this report:

- Limited to military materiel.
- Applies to all depot maintenance support requirements, regardless of the source or sponsor of the program.
- Applies to all funding sources and all customers budgeted or managed by the Military Department or Defense Agency.
- Funds made available are depot maintenance and repair actual obligations for fiscal year 1999 and fiscal year 2000.
- Reporting is made from the Principal's perspective (i.e., the component that manages the funding for, or owns the equipment, that is being repaired or maintained).
- Includes all locations performing depot-level maintenance and repair (i.e., all maintenance and repair tasks designated or coded as depot-level that are performed in field or other non-depot locations).
- Includes interim contractor support (ICS) and contractor logistics support (CLS) (or any similar contractor support) to the extent that such support is for performance of depot-level maintenance and repair.
- Depot-level maintenance and repair work performed by employees of the Department of Defense is reported regardless of the location where the work is performed.
- Depot-level maintenance and repair work contracted for performance by non-Federal Government personnel is reported regardless of the location where the work is performed.
- *Acquisition* of modifications and upgrades is excluded; however, *installation* of excluded modifications and upgrades is included when the installation is considered a depot-level service.

# REPORT

The information on distribution of depot-level maintenance and repair workloads by the public and private sectors for the Military Departments and Defense Agencies is provided at Table 1-1. This is the portrayal applicable to compliance with the section 2466(a) of title 10, United States Code, 50 percent limitation on the funds made available to a Military Department or Defense Agency that can be used to contract for performance by non-Federal Government personnel. Table 1-2 provides the breakout of Department of Navy data between the Navy and Marine Corps. Defense Agencies not listed in Table 1-1 had no funds made available for depot-level maintenance and repair of military materiel as defined by section 2460 of title 10, United States Code. Also provided at Table 2 is information reported for defense organizations other than Military Departments and Defense Agencies.

The Air Force exceeded the 50 percent limit on funds used to contract for performance by non-Federal Government personnel for fiscal year 2000. However, the Secretary of the Air Force exercised a waiver for fiscal year 2000 for reasons of national security in accordance with 10 U.S.C. 2466(c). The waiver was transmitted to Congress on January 11, 2000.

Variation between fiscal year 1999 data reported last year and fiscal year 1999 data in this report is based on several factors. De-obligations have subsequently taken place. Corrections have been made based on review and comment by the General Accounting Office and the Service audit agencies. Also, the additional time afforded in the interim has allowed a more careful accounting by the submitting armed forces and defense organizations.

## Table 1-1

## Distribution of DoD Depot Maintenance Workloads for Military Departments and Defense Agencies Fiscal Years 1999 and 2000[1]

| | Navy[2] | Army | Air Force |
|---|---|---|---|
| **FY 1999 Funds Made Available for Depot-Level Maintenance ($M)** | 6,693.4 | 1,959.2 | 6,605.2 |
| **Total Workload Performed by Federal Employees ($M)** | 3,843.4 | 1,034.5 | 3,593.6 |
| **Percent by Federal Employees** | 57.4% | 52.8% | 54.4% |
| **Total Workload Contracted for Performance by Non-Federal Personnel ($M)** | 2,850.0 | 924.7 | 3,011.7 |
| **Percent by Non-Federal Personnel** | 42.6% | 47.2% | 45.6% |
| **FY 2000 Funds Made Available for Depot-Level Maintenance ($M)** | 7,250.4 | 2,154.3 | 6,265.4 |
| **Total Workload Performed by Federal Employees ($M)** | 3,983.5 | 1,167.1 | 3,066.3 |
| **Percent by Federal Employees** | 54.9% | 54.2% | 48.9% |
| **Total Workload Contracted for Performance by Non-Federal Personnel ($M)** | 3,267.0 | 987.2 | 3,199.1 |
| **Percent by Non-Federal Personnel** | 45.1% | 45.8% | 51.1% |

Notes:
1. Numbers may not add due to rounding.
2. Department of Navy including Marine Corps.

## Table 1-2

## Distribution of Depot Maintenance Workloads for Department of Navy[1] Fiscal Years 1999 and 2000[2]

| | Navy | USMC[3] | Total |
|---|---|---|---|
| **FY 1999 Funds Made Available for Depot-Level Maintenance ($M)** | 6,490.2 | 203.2 | 6,693.4 |
| **Total Workload Performed by Federal Employees ($M)** | 3,683.6 | 159.8 | 3,843.4 |
| **Percent by Federal Employees** | 56.8% | 78.6% | 57.4% |
| **Total Workload Contracted for Performance by Non-Federal Personnel ($M)** | 2,806.6 | 43.4 | 2,850.0 |
| **Percent by Non-Federal Personnel** | 43.2% | 21.4% | 42.6% |
| **FY 2000 Funds Made Available for Depot-Level Maintenance ($M)** | 7,055.1 | 195.3 | 7,250.4 |
| **Total Workload Performed by Federal Employees ($M)** | 3,832.7 | 150.8 | 3,983.5 |
| **Percent by Federal Employees** | 54.3% | 77.2% | 54.9% |
| **Total Workload Contracted for Performance by Non-Federal Personnel ($M)** | 3,222.5 | 44.5 | 3,267.0 |
| **Percent by Non-Federal Personnel** | 45.7% | 22.8% | 45.1% |

Notes:
1. The 10 U.S.C. 2466(a) 50 percent limitation is by Military Department and Defense Agency. However, 10 U.S.C. 2466(e)(1) requires reporting for each of the Armed Services (other than the Coast Guard). This table provides the required breakout for the Department of the Navy.
2. Numbers may not add due to rounding.
3. USMC = US Marine Corps.

## Table 2

## Distribution of DoD Depot Maintenance Workloads for Defense Organizations Other Than Military Departments and Defense Agencies[1] Fiscal Years 1999 and 2000[2]

| | SOCOM[3] | TMA[4] |
|---|---|---|
| **FY 1999 Funds Made Available for Depot-Level Maintenance ($M)** | 120.0 | 23.9 |
| **Total Workload Performed by Federal Employees ($M)** | 16.4 | 0 |
| **Percent by Federal Employees** | 13.7% | 0% |
| **Total Workload Contracted for Performance by Non-Federal Personnel ($M)** | 103.6 | 23.9 |
| **Percent by Non-Federal Personnel** | 86.3% | 100% |
| **FY 2000 Funds Made Available for Depot-Level Maintenance ($M)** | 140.1 | 27.8 |
| **Total Workload Performed by Federal Employees ($M)** | 22.3 | 0 |
| **Percent by Federal Employees** | 15.9% | 0% |
| **Total Workload Contracted for Performance by Non-Federal Personnel ($M)** | 117.8 | 27.8 |
| **Percent by Non-Federal Personnel** | 84.1% | 100% |

Notes:
1. Defense organizations not meeting the 10 U.S.C. 101(a)(8) and (11) definitions of a Military Department or Defense Agency; therefore, not subject to the 10 U.S.C. 2466(a) 50 percent limitation.
2. Numbers may not add due to rounding.
3. SOCOM = US Special Operations Command.
4. TMA = TRICARE Management Activity.

# Appendix B
# Future Distribution of DoD Depot Maintenance Workloads

This appendix contains the future distribution of DoD depot maintenance workloads.

**PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE**

**3015 DEFENSE PENTAGON**
**WASHINGTON DC 20301-3015**

ACQUISITION AND TECHNOLOGY

APR 1 200

The Honorable Richard B. Cheney
President of the Senate
Washington, DC 20510-0011

Dear Mr. President:

Subsection 2466(e)(2) of title 10, United States Code, requires the submission to Congress of a report identifying, for each of the armed forces (other than the Coast Guard) and each defense agency, the percentage of funds that are projected to be expended during each of the next five fiscal years for performance of depot-level maintenance and repair workloads by the public and private sectors.

Pursuant to the requirement, I submit the enclosed report. A copy of this report has been provided to the Speaker of the House and the defense committees.

Sincerely,

Dave Oliver

Enclosure:
As stated

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE

3015 DEFENSE PENTAGON
WASHINGTON DC 20301-3015

ACQUISITION AND
TECHNOLOGY

APR 1 2001

The Honorable J. Dennis Hastert
Speaker of the House
Washington, DC 20515-6501

Dear Mr. Speaker:

Subsection 2466(e)(2) of title 10, United States Code, requires the submission to Congress of a report identifying, for each of the armed forces (other than the Coast Guard) and each defense agency, the percentage of funds that are projected to be expended during each of the next five fiscal years for performance of depot-level maintenance and repair workloads by the public and private sectors.

Pursuant to the requirement, I submit the enclosed report. A copy of this report has been provided to the President of the Senate and the defense committees.

Sincerely,

Dave Oliver

Enclosure:
As stated

OFFICE OF THE SECRETARY OF DEFENSE

# DISTRIBUTION OF DOD DEPOT MAINTENANCE WORKLOADS

## FISCAL YEARS 2001 THROUGH 2005

APRIL 2001

Prepared by the
Deputy Under Secretary of Defense (Logistics and Materiel Readiness)

# INTRODUCTION

Section 2466(e)(2) of title 10, United States Code, requires that the Secretary of Defense submit, by April 1 of each year, a report identifying, for each of the armed forces (other than the Coast Guard) and each defense agency, the percentage of funds referred to in section 2466(a) of title 10, United States Code, that are projected to be expended during each of the next five fiscal years for performance of depot-level maintenance and repair by the public and private sectors.

The following conventions were used in the preparation of this report:

- Limited to military materiel.
- Applies to all depot maintenance support requirements, regardless of the source or sponsor of the program.
- Applies to all funding sources and all customers budgeted or managed by a defense organization.
- Funds made available are projections for depot maintenance and repair obligations for fiscal year 2001 through 2005.
- Reporting is made from the Principal's perspective (i.e., the component that manages the funding for, or owns the equipment, that is being repaired or maintained).
- Includes all locations performing depot-level maintenance and repair (i.e., all maintenance and repair tasks designated or coded as depot-level that are performed in field or other non-depot locations).
- Includes interim contractor support (ICS) and contractor logistics support (CLS) (or any similar contractor support) to the extent that such support is for performance of depot-level maintenance and repair.
- Depot-level maintenance and repair work performed by employees of the Department of Defense is reported regardless of the location where the work is performed.
- Depot-level maintenance and repair work contracted for performance by non-Federal Government personnel is reported regardless of the location where the work is performed.
- *Acquisition* of modifications and upgrades is excluded; however, *installation* of excluded modifications and upgrades is included when the installation is considered a depot-level service.

# REPORT

The information on distribution of depot-level maintenance and repair workloads by the public and private sectors is provided at the attached Table.

The first portrayal entitled "Military Department/Defense Agency" is applicable to compliance with the section 2466(a) of title 10, United States Code, 50 percent limitation on the funds made available to a military department or defense agency that can be used to contract for performance by non-Federal Government personnel. Defense agencies not reporting have no projected workload, based on the definitions of military materiel and depot-level maintenance and repair.

The second portrayal entitled "Armed Services" is applicable to the section 2466(e)(2) of title 10, United States Code, requirement for reporting for each of the armed services (other than the Coast Guard) in that it provides the required breakout for the Department of the Navy.

The third portrayal entitled "Other Defense Organizations" provides information for organizations not meeting the sections 101(a)(8) and (11) of title 10, United States Code, definitions of a military department or defense agency and, therefore, not subject to the 50 percent limitation.

Regarding the Air Force, workload data for fiscal years 2003 through 2005 has not been updated to reflect organic and contract price increases. These updates will be addressed during the fiscal year 2003 Presidents Budget.

Effective October 1, 2000, the responsibility for the C-9A Aeromedical Evacuation Program transferred from the Defense Health Program to the Air Force. Accordingly, there are no depot maintenance and repair workload projections for TRICARE Management Activity beginning in fiscal year 2001.

# Projections For Distribution Of DoD Depot Maintenance Workloads for Fiscal Years 2001 Through 2005

| Military Department/ Defense Agency | Workload Distribtion | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|
| Dept of Navy | Total Funds | 6,960.7 | 7,759.4 | 8,307.1 | 7,594.1 | 7,802.2 |
| | Federal Work | 3,745.7 | 4,281.9 | 4,684.0 | 4,323.1 | 4,456.0 |
| | Non-Federal Work | 3,215.0 | 3,477.5 | 3,623.1 | 3,271.0 | 3,346.2 |
| | Public Portion | 53.8% | 55.2% | 56.4% | 56.9% | 57.1% |
| | Private Portion | 46.2% | 44.8% | 43.6% | 43.1% | 42.9% |
| Dept of Army | Total Funds | 2,344.6 | 2,355.9 | 2,675.8 | 2,937.1 | 2,721.2 |
| | Federal Work | 1,256.6 | 1,278.0 | 1,575.2 | 1,769.9 | 1,670.4 |
| | Non-Federal Work | 1,088.0 | 1,077.9 | 1,100.6 | 1,167.2 | 1,050.8 |
| | Public Portion | 53.6% | 54.2% | 58.9% | 60.3% | 61.4% |
| | Private Portion | 46.4% | 45.8% | 41.1% | 39.7% | 38.6% |
| Dept of Air Force | Total Funds | 6,869.4 | 7,340.5 | 6,965.5 | 6,964.9 | 7,011.5 |
| | Federal Work | 3,349.6 | 3,997.6 | 3,607.4 | 3,603.6 | 3,642.0 |
| | Non-Federal Work | 3,519.8 | 3,342.9 | 3,358.1 | 3,361.3 | 3,369.5 |
| | Public Portion | 48.8% | 54.5% | 51.8% | 51.7% | 51.9% |
| | Private Portion | 51.2% | 45.5% | 48.2% | 48.3% | 48.1% |
| **Armed Service** | | | | | | |
| Navy | Total Funds | 6,759.7 | 7,585.3 | 8,105.6 | 7,382.1 | 7,587.8 |
| | Federal Work | 3,583.7 | 4,144.8 | 4,525.3 | 4,156.2 | 4,287.2 |
| | Non-Federal Work | 3,176.0 | 3,440.5 | 3,580.3 | 3,225.9 | 3,300.6 |
| | Public Portion | 53.0% | 54.6% | 55.8% | 56.3% | 56.5% |
| | Private Portion | 47.0% | 45.4% | 44.2% | 43.7% | 43.5% |
| USMC | Total Funds | 201.0 | 174.1 | 201.5 | 212.0 | 214.4 |
| | Federal Work | 162.0 | 137.1 | 158.7 | 166.9 | 168.8 |
| | Non-Federal Work | 39.0 | 37.0 | 42.8 | 45.1 | 45.6 |
| | Public Portion | 80.6% | 78.7% | 78.8% | 78.7% | 78.7% |
| | Private Portion | 19.4% | 21.3% | 21.2% | 21.3% | 21.3% |
| **Other Defense Organizations** | | | | | | |
| SOCOM | Total Funds | 173.8 | 168.0 | 176.8 | 181.4 | 187.2 |
| | Federal Work | 29.5 | 30.0 | 31.1 | 32.5 | 33.9 |
| | Non-Federal Work | 144.3 | 138.0 | 145.7 | 148.9 | 153.3 |
| | Public Portion | 17.0% | 17.9% | 17.6% | 17.9% | 18.1% |
| | Private Portion | 83.0% | 82.1% | 82.4% | 82.1% | 81.9% |

Dollars in millions
USMC = U.S. Marine Corps
SOCOM = U.S. Special Operations Command

# Appendix C
# Comparison of DD350 Data Elements

The following table lists the contract data elements we used for this study, and compares the elements to the information available in the DD350 database. References to Eagle Eye relate to a commercial compilation of DD350 data.

*Table C-1. Contract Data Element Comparison.*

| Contract data element | In DD350 database? |
|---|---|
| *Military service* | Yes |
| *Requiring activity* | No |
| *Contracting activity* | No |
| *Contract number*: A sequential alpha-numeric code assigned by the purchasing officer following the successful negotiation of a contract. It is used to reference all related contract actions between the Federal Government and the recipient of the award. One contract number can reference any number of contract actions over a period of months or years. | Yes |
| *Award date* (action date in Eagle Eye): The date on which a mutually binding contract agreement was reached between a contractor and the Federal Government involving an obligation of funds. | Yes |
| *Contractor*: Identifies the name of the incumbent contractor, or the contractor that received the award. | Yes |
| *Work description* (contract title in Eagle Eye): Describes the main goods or services procured on a contract. | Yes |
| *Location of work performed* (place of performance city and state in Eagle Eye): indicates the city and state where procured goods will be produced, manufactured mined, grown, or where procured services will be performed. | Yes |
| *Dollar value*: Dollar value of all awards made against a contract in FY99. | Yes |
| *Term of basic contract in years*: This is not an actual field in Eagle Eye. We used the action date and the expected completion date to gauge the term. | No |
| *Options in years* | No |
| *Type of pricing* (FFP/FPIF/CPIF/CPFF/etc.): Code indicating one of 11 possible type of contract pricing, including firm fixed price, time and materials, etc. | Yes |
| *Number solicited* (Eagle Eye lists number of offerors) Code indicating a range of number of offerors, e.g., 2 to 5, 16 to 20, 1, etc. | No |
| *Sole- or competitive-source award* (extent of competition code in Eagle Eye): A code indicating whether the contract was a competed action, not available for competition, follow on to a competed action, or not competed. | Yes |
| *Primary reason for sole source* (authorization other/full in Eagle Eye): One character code indicating what justification was used to exclude a contract from full and open competition. There are 15 possible codes, each relating to some aspect of FAR 6.302. | Yes |
| *Small business set aside*: Code indicating the type of preference, if any, given to small, disadvantaged business for an award. | Yes |
| *Number of protests* | No |

# Appendix D
# Abbreviations

| | |
|---|---|
| AAC | Air Armament Center |
| ADUSD | Assistant Deputy Under Secretary of Defense |
| ADUSD(L)MPP&R | Assistant Deputy Under Secretary of Defense (Logistics and Materiel Readiness) for Maintenance Policy, Programs and Resources |
| AFB | Air Force base |
| ALC | Air Logistics Center |
| AMCOM | Aviation and Missile Command |
| AMD | Air and Missile Defense |
| ASC | Aeronautical Systems Center |
| BOA | Basic Ordering Agreement |
| BRAC | Base Closure and Realignment Commission |
| C3S | Command, Control and Communications Systems |
| CECOM | Communications Electronics Command |
| CLS | contract logistics support |
| CPAF | cost plus award fee |
| CPFF | cost plus fixed fee |
| CPIF | cost plus incentive fee |
| DoD | Department of Defense |
| ESC | Electronic Systems Center |
| EUSAEUR | United States Army Europe |

| | |
|---|---|
| FFP | firm fixed price |
| FORSCOM | United States Forces Command |
| FY | fiscal year |
| GAO | General Accounting Office |
| HQ AFSOC | Headquarters Air Force Special Operations Command |
| ICP | inventory control point |
| ICS | interim contract support |
| ID/IQ | Indefinite Quantity/Indefinite Delivery |
| J&A | justification and authorization |
| LANT/PAC | Atlantic and Pacific Fleets |
| LANTFLT | Atlantic and Pacific Fleets |
| MPP&R | Maintenance Policy, Programs and Resources |
| MSC | Military Sealift Command |
| NAVAIR | Naval Air Systems Command |
| NAVICP | Naval Inventory Control Point |
| NAVSEA | Naval Sea Systems Command |
| NAVSPECWARCOM | Navy Special Warfare Command |
| OC | Oklahoma City |
| OCAR | United States Army Reserve |
| OEM | original equipment manufacturer |
| OO | Ogden |
| PBL | performance-based logistics |
| PEO | Program Executive Office |
| SA | San Antonio |

| | |
|---|---|
| SM | Sacramento |
| SMC | Space & Missile Systems Center |
| SOCOM | United States Special Operations Command |
| SPAWAR | Space and Naval Warfare Center |
| STRICOM | Simulation, Training and Instrumentation Command |
| SUPSHIP | Supervisor of Shipbuilding |
| T&M | time and materials |
| TACOM | Tank-Automotive and Armaments Command |
| TRADOC | Training and Doctrine Command |
| TSPR | total system program responsibility |
| USANG | United States Army National Guard |
| WR | Warner Robins |