Audit Report

OFFICE OF THE INSPECTOR GENERAL

CONTRACTOR SOFTWARE CHARGES

Report No. 95-012 October 19, 1994

Department of Defense

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Acronyms

ADP	Automatic Data Processing
CAS	Cost Accounting Standards
DCAA	Defense Contract Audit Agency
DCMC	Defense Contract Management Command
DCMD	Defense Contract Management District
DFARS	Defense Federal Acquisition Regulation Supplement
DLA	Defense Logistics Agency
FAR	Federal Acquisition Regulation
GAO	General Accounting Office
IRM	Information Resources Management
OCE	Overhead Center of Excellence

INSPECTOR GENERAL
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October 19, 1994

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR
ACQUISITION AND TECHNOLOGY
DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Audit Report on Contractor Software Charges
(Report No. 95-012)

We are providing this report for your review and comments. The report discusses contractor software costs and limitations on Defense reviews of contractor automatic data processing costs. Management comments on a draft of this report were considered in preparing the final report.

DoD Directive 7650.3 requires that all recommendations and potential monetary benefits be resolved promptly. Therefore, we request that the Under Secretary of Defense for Acquisition and Technology provide comments on Recommendation B.2. and the Director, Defense Logistics Agency, provide comments on Recommendation B.1. by December 19, 1994.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Ms. Bobbie Sau Wan, Audit Project Manager, at (703) 604-9236 (DSN 664-9236). Copies of this report will be distributed to the organizations listed in Appendix E. The audit team members are listed inside the back cover.

David K. Steensma

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Deputy Assistant Inspector General
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Office of the Inspector General, DoD

Report No. 95-012 **October 19, 1994**
(Project No. 3CA-0045)

CONTRACTOR SOFTWARE CHARGES

EXECUTIVE SUMMARY

Introduction. This audit was performed because computer software costs, as compared with hardware costs, have increased during recent years. Software costs are a major cost element of total contractor automatic data processing costs. Contractors charge the Government approximately $5 billion annually, through indirect rates, for internal contractor automatic data processing activities. Examples of computer software costs that contractors charge through indirect rates are material management systems, security systems, labor accounting systems, and computer-aided design and manufacturing. The Defense Logistics Agency performs technical reviews, and the Defense Contract Audit Agency performs audits of contractor software costs.

Objectives. Our audit objectives were to determine whether existing legislation, regulation, and other authoritative guidance adequately protect the Government's interest with respect to the equitable cost accounting treatment of contractor software costs. We also assessed internal controls over Defense Contract Audit Agency audit coverage and Defense Logistics Agency technical coverage of contractor computer software costs and management's implementation of the DoD Internal Management Control Program as it applied to the audit objectives.

Audit Results. Existing legislation, regulation, and other authoritative guidance are inadequate to protect the Government's interest with respect to the equitable cost accounting treatment of contractor computer software costs. Additionally, Defense Logistics Agency technical review coverage of contractor software costs needed improvement.

o Contractors charged current Government contracts for computer software expenditures intended to benefit future Government and commercial business. Consequently, the Government incurred increased costs in current periods that should have been deferred to future periods or that should not have been incurred at all (Finding A).

o The Defense Contract Management Districts West and Northeast contractor automatic data processing review teams are commended for identifying $387 million of cost avoidance for FYs 1990 through 1993. However, the Defense Contract Management Command was not aware of the benefits of the teams' work and provided insufficient priority to the reviews to effectively monitor contractor automatic data processing costs that are charged to DoD contracts. Further, outdated Federal and DoD regulations limit Defense Contract Management Command reviews of contractor automatic data processing costs. As a result, DoD was exposed to potential unwarranted contractor automatic data processing costs (Finding B).

Internal Controls. The audit did not identify any material internal control weaknesses. The portions of the Defense Logistics Agency and the Defense Contract Audit Agency Internal Management Control Programs that we reviewed were effectively implemented. See Part I for a discussion of the internal controls reviewed.

Potential Benefits of Audit. Potential benefits will result from updated and expanded guidance and improved technical oversight of approximately $5 billion of contractor automatic data processing costs charged annually to DoD contracts. However, we could not quantify the amount. See Appendix C for details on the potential benefits of the audit.

Summary of Recommendations. We recommend that DoD propose that Cost Accounting Standards be revised to require contractors to capitalize and amortize acquired and internally developed software projects over $500,000. We recommend centralizing and improving the Defense Contract Management Command contractor automatic data processing review function. We also recommend updating and revising DoD and Federal regulations to permit expanded Government review and oversight of contractor automatic data processing costs.

Management Comments. The Director, Defense Procurement, nonconcurred with the recommendations, stating that they share concern that contractor software costs be accounted for properly, DoD has requested the Cost Accounting Standards Board to address accounting for contractor software costs, and that there is no data on whether software costs warrants capitalization treatment. The Director further stated that they do not know whether it is appropriate to revise the definitions and cost principles for contractor automatic data processing costs. The Defense Logistics Agency partially agreed to centralize and improve the Defense Contract Management Command contractor automatic data processing review function. A discussion of the responsiveness of management comments on the recommendations is in Part II of the report. The complete text of management comments is in Part IV.

Audit Response. We maintain that the Cost Accounting Standards Board needs to address software capitalization and we are forwarding our report directly to the Board for consideration. DoD and Federal regulations should be revised to properly address the $5 billion cost issue of contractor automatic data processing costs. We revised our recommendation to exclude "robotics" from our recommended definition of "information resources management." Defense Logistics Agency proposed actions on its contractor automatic data processing review function are not adequate. We request that the Under Secretary of Defense for Acquisition and Technology and the Director, Defense Logistics Agency, provide additional comments by December 19, 1994. Because the Office of the Inspector General for Audit Policy and Oversight, DoD is conducting a full review of the Defense Contract Audit Agency operational audit process, we deleted draft Finding C. which addressed Defense Contract Audit Agency operational audits. Therefore, we do not require additional comments from Defense Contract Audit Agency.

Table of Contents

Executive Summary i

Part I - Introduction

Background 2
Objectives 2
Scope and Methodology 3
Internal Controls 5
Prior Audits and Other Reviews 5

Part II - Findings and Recommendations

Finding A. Cost Accounting Treatment of Contractor Software Costs 8
Finding B. Defense Logistics Agency Contractor Automatic Data Processing Oversight 15

Part III - Additional Information

Appendix A. Defense Contract Management Command Contractor Automatic Data Processing Review Summaries 26
Appendix B. Defense Logistics Agency Contractor Automatic Data Processing Review Cost Avoidance 29
Appendix C. Summary of Potential Benefits Resulting From Audit 30
Appendix D. Organizations Visited or Contacted 31
Appendix E. Report Distribution 34

Part IV - Management Comments

Under Secretary of Defense for Acquisition and Technology Comments 38
Defense Logistics Agency Comments 42

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, Department of Defense.

Part I - Introduction

Background

Computer Software Costs Increasing. Computer software costs that contractors charge to the Government have significantly increased over hardware costs. We calculate that contractors charge the Government approximately $5 billion annually,* through indirect rates, for internal contractor automatic data processing (ADP) activities.

Sources of Computer Software. Contractors can develop computer software internally, acquire software from an outside source, or acquire an existing software package and modify it for specific applications. Generally, acquiring an existing software package and modifying it to meet unique user requirements is more cost-efficient than developing the software from the beginning.

Direct Compared With Indirect Software Costs. Government purchases of computer software (direct costs) are subject to more cost accounting visibility than software costs charged to the Government as indirect expenses. Most major contractors incur computer software costs that cannot be identified with any specific cost objective; therefore, those costs must be allocated through indirect rates.

Examples of Indirect Computer Software. Examples of computer software that are charged to the Government as indirect expenses are material management systems, security systems, labor accounting systems, and computer-aided design and manufacturing.

Objectives

The primary audit objective was to determine whether existing legislation, regulation, and other authoritative guidance adequately protect the Government's interest with respect to the equitable cost accounting treatment of contractor software costs. We assessed internal controls by reviewing the adequacy of Defense Contract Audit Agency (DCAA) audit coverage and Defense Logistics Agency (DLA) technical review coverage of contractor computer software costs. We also assessed management's implementation of the DoD Internal Management Control Program as it applied to the audit objectives.

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*Calculation is derived from a Defense Contract Management Command contractor ADP review team estimate that average annual internal contractor ADP costs represented approximately 4 percent of sales, which we multiplied by the $120 billion approximate annual DoD procurement.

Scope and Methodology

Judgmental Sample of Contractors. We obtained a list of major Defense contractors from the DCAA Agency Management Information System. We also obtained a list of major contractors with large indirect software expenditures from a DCAA analysis paper, "Software Developed for Internal Use," November 30, 1992. Using these two DCAA lists of contractors, we judgmentally selected 15 contractors for review. We made the selection after contacting the cognizant DCAA field offices to obtain further relevant information (for contractor FYs 1990 through 1993) about the contractors on:

- percentage of flexibly priced contracts,
- contract audit experience,
- approximate annual dollar value of the contractor's software development and acquisition efforts that are charged indirect and the number of employees that perform software development and acquisition activities,
- organizational structure of the group or groups responsible for software development and acquisition, and
- recent DCAA audit findings pertaining to computer software costs.

Also, we selected the contractors from different industries such as shipbuilding, engineering, and manufacturing.

Methodology. We obtained and reviewed documentation at each contractor location including:

- an overall organizational chart and a detailed organizational chart of the groups responsible for software development, acquisition, and maintenance;
- the contractor's Cost Accounting Standards (CAS) Disclosure Statement;
- written policies and procedures for software development, acquisition, maintenance, and associated accounting treatment; and
- a list of all company software development and acquisition projects that were charged indirect for contractor FYs 1990 through 1992.

From the software development and acquisition project list provided by each contractor, we judgmentally selected projects for review. For the selected projects, we obtained detailed information and interviewed the responsible program managers and users to determine:

- how much of the total project budget is spent on each step of the software development life cycle,

- how close each project's actual costs come to the initial budget, and

- whether the project was approved by contractor management in anticipation of expected future monetary or intangible benefits.

Review of DCAA Audit Coverage. We visited the DCAA field offices with audit cognizance over the contractors selected for review. We reviewed DCAA audit workpapers and other relevant documentation. We also visited with the five DCAA regional offices and the DCAA Technical Services Center, Memphis, Tennessee, to obtain data concerning DCAA operations audits. We coordinated our review with the Office of the Assistant Inspector General for Audit Policy and Oversight, DoD, which has oversight responsibility for DCAA.

Review of DLA Technical Review Coverage. We visited the two contractor ADP review teams at the Defense Contract Management Districts (DCMDs) Northeast and West, which belong to Defense Contract Management Command (DCMC). We interviewed the chiefs of the contractor ADP review teams to obtain an understanding of the mission, scope, and activities of the teams. We also reviewed data and documentation concerning the contractor ADP review team functions and activities.

The contractor ADP review teams of DCMDs Northeast and West performed ADP technical reviews at 13 of the 15 contractors that we visited. See Appendix A for summaries of relevant information from each ADP review.

Authoritative Guidance on Software Costs. We reviewed existing legislation governing contractor software costs. Specifically, we reviewed the existing Cost Accounting Standards (Public Law 91-379) to determine whether the standards adequately address the proper accounting treatment for contractor software charges. We also reviewed existing DoD and Federal regulations, private-sector accounting guidance governing contractor software charges, and documentation maintained by the Defense Acquisition Regulations Council.

Use of Computer-Processed Data. As part of our site selection process, we relied on the DCAA Agency Management Information System to obtain a raw list of major contractors. Additionally, we relied on various contractor computer systems to provide lists of major contractor software development and acquisition projects. Nothing came to our attention as a result of audit procedures that caused us to doubt the reliability of the computer-processed data.

Audit Period, Standards, and Locations. We performed this economy and efficiency audit from May 1993 through March 1994 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included such tests of internal controls as were considered necessary. Appendix D lists the organizations visited or contacted during audit.

Internal Controls

We evaluated the internal controls over contractor software costs charged to DoD contracts as indirect expenses. Specifically, we assessed the adequacy of DCAA audit and DLA technical review coverage of contractor software costs. No material internal control weaknesses were identified. See Appendix C for details on the potential benefits of the audit.

Prior Audits and Other Reviews

Since 1991, the General Accounting Office (GAO) issued two reports concerning DCAA operations audits of Defense contractors. Operations audits evaluate the economy and efficiency of a specific contractor function or operation.

GAO Report No. NSIAD-93-225 (OSD Case No. 9434), "Contract Pricing: Issues Related to DCAA Staff Levels," July 1993, refers to GAO Report No. NSIAD-92-16 and states that, although operations audits are effective, the resources that DCAA devoted to these audits continued to decline. Actual audit hours devoted to performing operations audits declined from 80,131 hours in FY 1991 to 63,683 hours in FY 1992. GAO states that the midyear staff hours used for operations audits in FY 1993 were 25,119 hours.

GAO Report No. NSIAD-92-16 (OSD Case No. 8690-A), "Contract Pricing: Economy and Efficiency Audits Can Help Reduce Overhead Costs," October 1991, states that DCAA had reduced its use of operations audits as a tool to identify unnecessary contractor costs. The report states that DCAA decreased the number of staff days spent on operations audits relating to overhead costs from 147,288 hours in FY 1985 to 74,400 hours in FY 1990--a decrease of almost 50 percent. According to GAO, the reduction in operations audit staff days represented a decline from more than 3 percent of DCAA direct audit time to less than 1 percent. GAO recommended to DoD that DCAA increase the priority of operations audits. DoD concurred with the finding, stating that audit resources had been shifted to meet a backlog of incurred cost and defective pricing audits. However, DoD only partially concurred with the GAO recommendation, stating that demand assignments, which are performed as a result of an audit request from an outside agency, must take priority over "discretionary" audit assignments, such as operations audits.

Part II - Findings and Recommendations

Finding A. Cost Accounting Treatment of Contractor Software Costs

Of the 15 contractors reviewed, 14 charged current Government contracts for computer software expenditures intended to benefit future Government and commercial business, instead of capitalizing the internally used computer software. The charges to current Government contracts occurred because no authoritative cost accounting rules exist that govern contractor software costs. As a result, the Government incurred increased costs in current periods that should have been deferred to future periods or that should not have been incurred at all.

Background

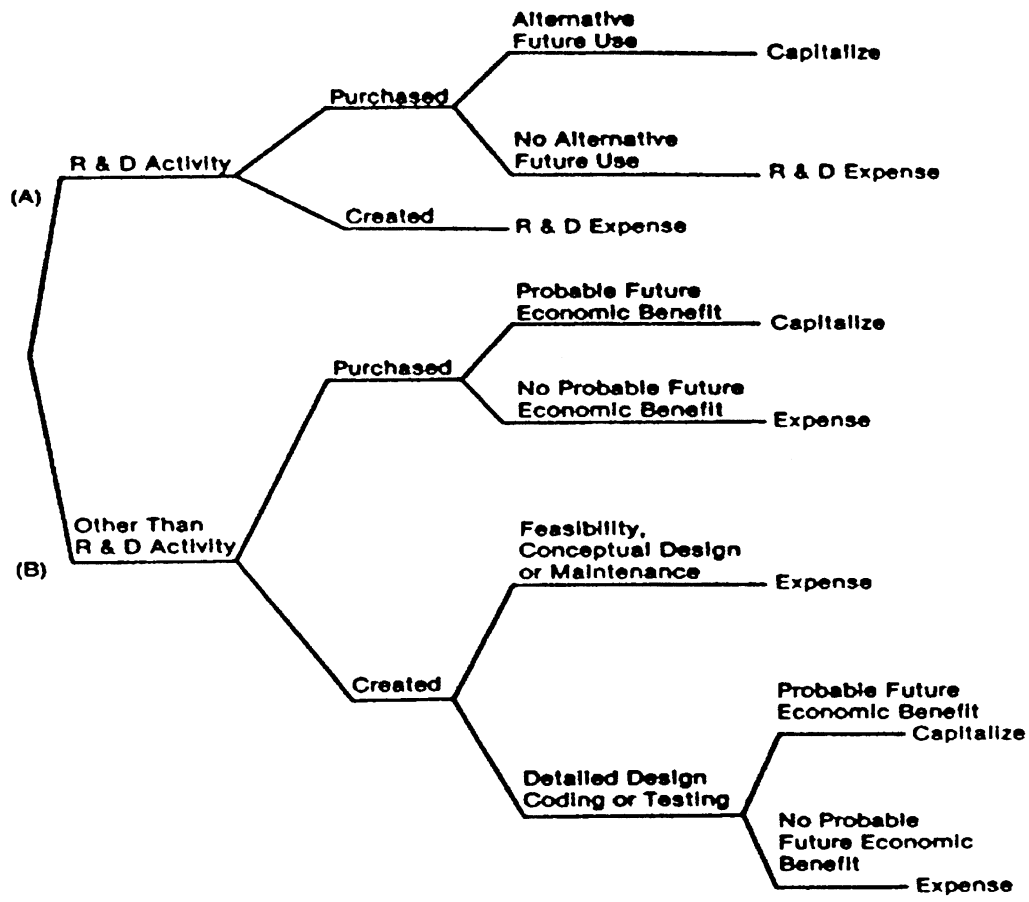
Legal and Regulatory Guidance. Extensive legal and regulatory controls exist with respect to direct Government purchases of computer software. However, guidance is limited concerning contractor computer software costs charged by contractors as indirect expenses and allocated to Government contracts through indirect rates. Federal Acquisition Regulation (FAR) subpart 31.2, "Contracts with Commercial Organizations," provides general guidance that all costs charged to the Government must be allowable, reasonable, and allocable to the Government. FAR 31.205-2, "Automatic Data Processing Equipment Leasing Costs," requires Government contractors to furnish the administrative contracting officer with data and justification for their ADP equipment lease costs and to obtain administrative contracting officer approval when such costs exceed specified thresholds.

Private-Sector Accounting Guidance. No authoritative guidance addresses the proper accounting treatment of contractor costs for internally used computer software, which is software that the company intends for in-house use instead of for outside sale. In August 1985, the Financial Accounting Standards Board issued Statement No. 86, "Accounting for the Costs of Computer Software to be Sold, Leased, or Otherwise Marketed," which states that certain software development costs for software intended for outside sale or lease should be both capitalized and amortized against future revenues. The Financial Accounting Standards Board never addressed the accounting treatment for internally used software.

The Institute of Management Accountants (formerly the National Association of Accountants), an organization that generally focuses on cost accounting issues, took the position that development costs for internally used software, including costs for detailed design, coding, and testing, should be capitalized if the software has a probable future economic benefit. The Institute of Management

Accountants published an issues paper, "Accounting for Software Used Internally," March 7, 1985, which summarizes, using the flowchart in Figure 1, the conditions under which internally used software should be capitalized.

Accounting for Software



(A) Current generally accepted accounting principle according to Financial Accounting Standards Board Statement No. 2 and Interpretation No. 6.

(B) Institute of Management Accountants suggested accounting treatment.

Source: Institute of Management Accountants, Montvale, New Jersey

Figure 1. Process for Determining Accounting Treatment for Software

Contractor Charges for Computer Software Expenditures

Contractor Charging Practices. Of the 15 contractors reviewed, 1 contractor capitalized major (more than $500,000) software development projects in accordance with a written advance agreement with the Government, and 14 contractors expensed as incurred all costs for internally developed software. Of the 15 contractors, 4 contractors capitalized software acquired from outside sources in accordance with generally accepted accounting principles.

Capitalization of Internally Used Software--Arguments for and Against. Whether or not to capitalize internally used computer software is an area of controversy within the accounting profession and the Government contracting community. The major argument for capitalizing software costs is that software provides economic benefits in accounting periods beyond the period in which the software is developed or acquired. Therefore, the matching and cost allocability principles of accounting dictate that software costs should be capitalized and amortized over the expected useful life of the software.

Three major arguments reject defining computer software as an asset to be capitalized.

- Research and development costs, which clearly should be expensed as incurred, are inseparable from non-research and development costs; therefore, all software development costs should be expensed as incurred.

- Future economic benefit is uncertain.

- Measuring the cost of internally developed software is difficult.

Software Development--Research and Development Versus Asset Production. Contractor software development activities aimed at developing software for internal contractor use are, in substance, asset-producing activities after the feasibility studies are complete and the detailed design phase begins. The detailed design phase converts general design specifications into a blueprint for the proposed software product. Costs to produce software are generally predictable once the functionality of the software has been established. We reviewed 73 software development projects, valued at $190.1 million, at the 15 contractors visited. Of the 73 projects, the actual development cost for 65 projects was within a 25-percent variance of the initial budgeted amount.

The contractor project management personnel directly involved with the software development projects generally agreed that, after user requirements are identified for the software to be developed, software development is a relatively predictable activity subject to accurate forecasting. Software development is not an indeterminate research and development activity, especially, as two contractor project managers stated, because of significant advances in computer-aided software engineering tools and technology during the past 10 years. According to the project managers, when actual project costs varied

significantly from the initial budgets, the variances were generally caused by changes in user requirements, not unpredictability of the software development process.

Future Economic Benefits. Large software development projects intended for the contractor's internal use are typically approved by contractor management if management expects to realize a future economic benefit. Of the 73 projects reviewed, 59 were approved by management citing an expected future economic benefit. Although a specific expected useful life was generally not cited, all project managers that we interviewed expected the useful life of the software to continue indefinitely, subject to periodic software maintenance and upgrades. Thus, the contractors generally intended software costs invested and charged to Government contracts in current periods to benefit future periods.

Measurement of Indirect Software Costs. Contractors generally possess the resources and accounting systems necessary to accurately measure software development and acquisition costs. Of the 15 contractors visited, 11 contractors used their existing cost accounting system to segregate by project software development and acquisition costs for software to be used internally. Four contractors either did not differentiate software development and acquisition costs from other types of indirect costs or did not segregate software costs by project within their cost accounting system. However, all of the contractors reviewed either collected software development and acquisition costs by project in memorandum records used as management tools or possessed cost accounting systems capable of collecting such costs by project without major modifications.

Adequacy of Authoritative Cost Accounting Rules

DCAA Position on Software Costs. DCAA has taken the position that contractor costs for software intended for internal use should be capitalized if the software benefits future periods. The DCAA Contract Audit Manual, section 7-104, states that, although the Cost Accounting Standards (CAS) do not specifically address contractor computer software costs, "the rationale underlying the CAS in general and CAS 404 in particular require that costs of computer software developed for internal use be capitalized and amortized over the period benefited."

Director, Defense Procurement, Request for CAS Board Guidance. In March 1991, the Director, Defense Procurement, requested the CAS Board to consider a CAS change to clarify the proper cost accounting treatment of software costs. Although the Director did not take a position on whether computer software should be classified as a tangible or an intangible asset, she presented several questions and issues that should be considered by the CAS Board. The CAS Board has not taken a position on the proper treatment of contractor software costs, and the issue is not under active consideration by the CAS Board.

Questioned Contractor Software Costs

DCAA Audits Involving Contractor Software Costs. In audits involving contractor software costs, DCAA has questioned costs for contractor software expenditures that were expected to benefit future periods. Examples of circumstances under which DCAA questioned contractor software costs follow.

o A DCAA resident office questioned $9.3 million of a contractor's forward-pricing-rate submission for costs of software development services that were provided by a third party. DCAA took the position that, because the contractor's policy was to capitalize purchased computer software, then the software development services provided by the third party should also be capitalized.

o A DCAA resident office questioned $1.7 million of a contractor's incurred cost claim for the contractor's purchase of a manufacturing resource planning software package and related modules. The DCAA audit disclosed that the contractor intended the purchased software to benefit future periods. DCAA contended that generally accepted accounting principles require that expenses be matched with the benefited period. Therefore, DCAA rejected the contractor's claim that the software costs should be expensed in the period in which they were incurred.

o A DCAA resident office questioned $9.2 million of a contractor's claimed incurred costs for the implementation of two purchased software packages. DCAA cited the matching principle under generally accepted accounting principles as the basis for its position.

Sustaining Questioned Costs. In all of the cited DCAA audits, the DCAA offices did not know whether the questioned costs would be sustained by the responsible contracting officer because definitive guidance governing the proper accounting treatment of contractor software costs was inadequate.

Conclusion

In our opinion, the CAS Board should adopt a standard that requires contractors to capitalize software development costs for software intended for internal use for projects exceeding $500,000. We agree with the position taken by the Institute of Management Accountants that non-research and development software costs, starting with the detailed design phase, should be capitalized if the software has a future economic life.

Our review of contractor software projects showed that once an initial feasibility study is completed, a cost/benefit analysis is generally performed to determine whether the project should continue. All contractors that we visited had a different procedure for approving projects to be completed; however, most

contractors require a future benefit to be demonstrated before approving a project. Most of the software projects we reviewed were, in substance, production activities and not research and development. Although accurately estimating an expected future economic life of a software package is difficult or impossible, the costs should be capitalized if the software is expected to benefit a period of more than 1 year. Other assets, such as patents or trademarks, have an uncertain useful life, yet are capitalized and amortized against an estimated useful life.

By appropriately requiring contractor capitalization of costs for internally used software, the Government will be able to defer the costs to the future periods benefited, or possibly avoid the costs altogether.

Recommendation, Management Comments, and Audit Response

We recommend that the Under Secretary of Defense for Acquisition and Technology propose to the Cost Accounting Standards Board a requirement for contractors to capitalize software development projects and acquisitions exceeding $500,000 if the software can be reasonably expected to benefit a period of more than 1 year. Capitalized software costs should be amortized over the benefited periods.

Management Comments. The Director, Defense Procurement, nonconcurred with the recommendation and made the following points.

o Before a rule governing the proper accounting treatment is developed, the CAS board must determine whether contractor internally used software is a tangible or intangible asset.

o The draft audit report provided no empirical data to justify the proposed $500,000 capitalization threshold.

o The CAS Board cannot make a unilateral determination on the proper accounting treatment for a particular cost. The CAS Board must follow a four-step process of public notice and comment by the affected parties. Further, the CAS Board is expected to address the software issue as expeditiously as possible.

In March 1991, the Director, Defense Procurement, asked the CAS Board to consider a CAS change to clarify the accounting treatment to be accorded software. Also, the Director, Defense Procurement, recently commented on the CAS Board's Advanced Notice of Proposed Rulemaking regarding proposed changes to CAS 404 and CAS 409. The CAS Board was asked to clarify its intent as to the applicability of both standards to intangible capital assets. Further comments to the CAS Board at this time would be redundant.

Audit Response. Our findings do not support--and, consequently, our recommendation does not indicate a preference for--defining computer software as either a tangible or intangible asset. We do not believe this is relevant to the issues discussed in this report. We believe that DoD should adopt the position that contractor software costs should be capitalized and amortized over the benefited periods.

We do not believe that the threshold for capitalizing contractor software costs should be less than $500,000 for any single software development project or group of common projects because the benefit of accumulating and amortizing contractor software costs under $500,000 would not justify its cost. Further, small software development projects are more likely to be periodic software maintenance costs and, therefore, are more appropriately expensed as incurred.

We agree that the CAS board cannot make a unilateral determination regarding the accounting treatment. Further, we recognize that the Director, Defense Procurement, has already asked the CAS Board, in March 1991, to "consider a CAS change to clarify the accounting treatment to be accorded software. . . ."

We believe that further DoD comments to the CAS Board regarding the software capitalization issue would be appropriate. However, to eliminate further bureaucratic arguments over a substantial cost issue, we are forwarding our report directly to the CAS Board for consideration. Therefore, additional comments for this recommendation are not required.

Finding B. Defense Logistics Agency Contractor Automatic Data Processing Oversight

DCMC management performed insufficient contractor technical oversight to effectively monitor approximately $5 billion of contractor ADP costs charged annually to DoD contracts. The contractor oversight was insufficient because the DCMC contractor ADP review function was divided under two separate DCMC districts (DCMDs West and Northeast) without central guidance and oversight, and because outdated Federal and DoD regulations limited the DCMC contractor ADP review function to reviewing only ADP leasing costs. As a result, DoD was unnecessarily exposed to potential increased costs from unwarranted contractor ADP acquisition, development, and support activities.

Background

Contractor ADP Review Cognizance. In April 1984, the Under Secretary of Defense for Research and Engineering designated DLA as the agency responsible for performing all contractor ADP reviews for all DLA field offices, for the Army, and for the Navy. The Air Force performed its own ADP reviews until October 1989. The DLA contractor ADP review function was organized under DCMC. The two DCMC contractor ADP review teams report to DCMD West, Los Angeles, California, and DCMD Northeast, Boston, Massachusetts. The Los Angeles and Boston contractor ADP review teams (the Los Angeles team and the Boston team) are responsible for performing all contractor ADP reviews west and east of the Mississippi River, respectively.

Criteria for Performing Reviews. FAR 31.205-2, as supplemented by Defense Federal Acquisition Regulation Supplement (DFARS) subpart 239.73, "Acquisition of Automatic Data Processing Equipment by DoD Contractors," requires the contracting officer to perform an annual review to evaluate the cost of a contractor's leased ADP equipment and leased software. The review requires each contractor to demonstrate that its decisions to lease ADP equipment or software resulted in the least cost to the Government. DCMC states in its "Contractor Documentation Booklet, Automatic Data Processing Technical Review," that the contractor ADP review teams "are responsible for providing this required annual evaluation, when requested by the administrative contracting officer."

Adequacy of DCMC Oversight of Contractor ADP Costs

DCMC did not give its contractor ADP review function adequate priority consistent with the DCMC scope of responsibility. Although DCMC described the ADP review function as being limited to reviews of only leased ADP equipment and software, DCMC procedures in the "Contractor Documentation Booklet, Automatic Data Processing Technical Review" essentially tasks the ADP review teams to review all aspects of contractor ADP activity, including computer hardware purchases and internal software development activities.

Differences of DCMC Contractor ADP Review Team Data Management. The Los Angeles and the Boston teams operate independently with no substantial central management; therefore, each team maintained its internal performance data differently.

o The Los Angeles team maintained its results of operations by calendar year, whereas the Boston team used fiscal year.

o The Los Angeles team reported its results by hardware versus software recommendations; however, the Boston team maintained data on only total cost-avoidance dollars.

o The two teams operated under two separate policies for supporting documentation. The Los Angeles team destroyed all documentation after reviews were completed and maintained only exit conference notes and the review report; however, the Boston team maintained its review reports and all supporting documentation for its review.

o For 1990 through 1992 (1993 data was not available at the time of our review), the Los Angeles team reported total cost avoidance dollars of $142 million for hardware and $105 million for software. For FYs 1991 through 1993, the Boston team reported total cost avoidance of $140 million for both hardware and software. According to the chiefs of the two teams, the reported cost avoidance attributed to ADP leasing costs was only a portion of the actual total cost avoidance.

DCMC was not aware of the total value of the two teams' reported cost avoidance because the data were maintained at the district level. According to one DCMC representative, DCMC had considered reducing the amount of resources devoted to the contractor ADP review function because DCMC personnel considered the value of contractor ADP leasing cost reviews to be minimal. Thus, in our opinion, DCMC assigned the contractor ADP review function an inappropriately low priority because DCMC relied on incomplete and inaccurate information about the value of the contractor ADP review teams.

Differences of Contractor ADP Review Team Procedures. The Los Angeles and Boston teams were operating under two different sets of procedural guidance. DCMC developed a "Contractor Documentation Booklet, Automatic Data Processing Technical Review," which essentially incorporated the internal

guidance from the Los Angeles team, to be used for all ADP reviews. However, the Boston team was operating on its own guidance and was not using the DCMC booklet to perform its ADP reviews. The chief of the Boston team stated that, because he considered the DCMC guidance to be inadequate, he refused to incorporate its use by his team, favoring instead his own ADP review guidance.

According to one DCMC representative, DCMC could not mandate the use of uniform procedural guidance for performing contractor ADP reviews because the teams were organizationally placed under their respective DCMDs. Thus, DCMC could only "suggest" the use of its procedural guidance to the two teams or persuade the DCMD commanders to mandate its use.

Contractor ADP Review Team Staffing Levels. Because the DCMC contractor ADP review function is organizationally placed under the DCMDs, the Los Angeles and Boston teams' staffing and training budgets are determined by the DCMD commanders. When the Los Angeles team was cut from 18 to 11 positions, the Los Angeles team was forced to cancel or reschedule 11 of its 52 (21 percent) scheduled ADP reviews in 1991 and 16 of its 41 (39 percent) scheduled reviews in 1992. As a result, we calculate that DCMC did not identify approximately $32.8 million (Appendix B) annually because of the inability of the Los Angeles team to complete scheduled reviews in 1991 and 1992. During the same period, the Boston team's staffing was reduced from 14 to 11 positions; however, we were unable to evaluate the Boston team's canceled or rescheduled ADP reviews because the Boston team maintained records only of the reviews that it completed.

Contractor ADP Review Team Training. The acting chief of the Los Angeles team stated that, in his opinion, the training requirements for team members were not met by the DCMD management. He stated that constant technological changes in the contractor ADP environment required ADP review team members to be familiar with current technology to perform effective ADP reviews; however, team members were permitted to attend only Government-sponsored training courses that, in the Los Angeles team acting chief's opinion, were elementary and outdated. He stated that DCMD West management denied requests for Los Angeles review team members to attend seminars on current ADP technology. Further, Los Angeles team members have no DCMD West or DCMC training-hour requirement.

Limitations of Federal and DoD Regulations

The ADP review teams perform risk assessments based only on amounts spent by contractors on leased ADP equipment. However, the risk assessments are based on outdated Federal and DoD regulations governing contractor disclosure, and contracting officer review and approval, of contractor ADP costs charged indirect to Government contracts. Advances in ADP technology during the past two decades have rendered current Federal and DoD regulations at least partially obsolete.

Adequacy of Existing Regulations. Federal and DoD regulations governing disclosure, review, and approval of contractor ADP costs currently govern only a minor portion of approximately $5 billion of such costs that are absorbed annually by the Government: ADP equipment leasing costs. Federal and DoD regulations do not adequately address contractor software development, acquisition, maintenance, and costs for contractor-purchased ADP equipment.

Contractor Disclosure. FAR 31.205-2 requires DoD contractors to furnish data supporting the initial decision to lease and to obtain approval from the contracting officer for any ADP equipment leasing arrangement for which the cost of leasing "is to be allocated to one or more Government contracts which require negotiating or determining costs." Further, FAR 31.205-2(d) states:

> If the total cost of leasing [ADP equipment] in a single plant, division, or cost center exceeds $500,000 per year and 50 percent or more of the total leasing cost is allocated to Government contracts which require negotiating or determining costs, the contractor shall furnish data supporting the annual justification for retaining or changing existing [ADP equipment] capability and the need to continue leasing shall also be furnished. . . .

Contracting Officer Review and Approval. DFARS subpart 239.73 provides guidance to DoD contracting officers for approving contractor ADP equipment leasing costs pursuant to FAR 31.205-2. DFARS 239.7303, "Review and Approval of Leasing Costs," states that the contracting officer will conduct an annual review of contractor ADP leasing costs subject to the threshold set forth under FAR 31.205-2(d).

DFARS 239.7305, "Contractor Documentation," lists the type of contractor documentation that should be requested, subject to contracting officer discretion, for those contractors selected for review under DFARS 239.7303.

Applicability of Federal and DoD Regulations to Current ADP Technology. Federal and DoD regulations governing contractor ADP costs do not adequately address areas of contract risk that have been created by more than two decades of technological advances. The regulations have remained essentially unchanged for more than 26 years. The current FAR and DFARS provisions first appeared in the Armed Services Procurement Regulation, paragraphs 3-1100 and 15-205, in October 1967.

1960s Technology. In 1967, ADP leasing costs represented the largest ADP cost element and risk to the Government because computer hardware was extremely expensive and because software was a relatively minor cost. For example, the cost for a "small" desk-top computer was approximately $50,000. The chairman of the Armed Services Procurement Regulation subcommittee that developed the then-new Armed Services Procurement Regulation on ADP leasing costs stated that the ADP environment in the 1960s was a "completely different world of keypunch machines," as compared with 1990s information resources management technology.

1990s Technology. The term "automatic data processing" is generally considered to be obsolete. The generally accepted term to describe data-processing activities is "information resources management" (IRM). IRM costs include all costs to process information including computer hardware, software, peripherals, and related maintenance costs. Computer hardware costs have drastically declined since the 1960s; however, during the same period, software development, acquisition, and maintenance costs have increased.

Impact of Obsolete Regulations on DCMC Contractor ADP Reviews. Current regulations governing contractor ADP costs virtually ignore contractor costs for computer software and purchased hardware that are charged to the Government. Consequently, DCMD contractor ADP reviews are hindered because the ADP review teams must assign contractors with large software development and purchased hardware costs an inappropriately low priority if those same contractors choose not to lease large amounts of ADP equipment at high cost. Two of the contractors that we visited were not reviewed by the cognizant DCMD contractor ADP review team because the contractors purchased their computer hardware instead of leasing it. Thus, contractors may avoid or inhibit Government oversight of their IRM costs that are charged to the Government by simply purchasing rather than leasing computer hardware.

DLA Position on Regulations. DLA requested in 1987, through Defense Acquisition Regulations Council Case 87-51, "Treatment of Automatic Data Processing (ADP) Business Software Costs," that the proper accounting treatment for ADP software costs and disclosure, review, and approval of such costs be addressed through regulations or guidance. As noted in Finding A, the Director, Defense Procurement, deferred decision on the software accounting treatment issue in 1991 and requested the CAS Board to address the issue. Subsequently, the Defense Acquisition Regulations Council closed Case 87-51 in 1991. However, the issue of disclosure, review, and approval of contractor software costs was never resolved by the Defense Acquisition Regulations Council.

Conclusion

ADP systems are playing an ever-increasing role in Government contractor performance of DoD contracts. Therefore, DoD is at an ever-increasing risk of inefficiencies and irregularities for contractor information systems costs that are charged under DoD contracts. However, DCMC has not given its contractor ADP review function adequate priority consistent with the risk to the Government from contractor ADP charges. We calculated that DoD absorbs approximately $5 billion annually of costs relating to contractor internal ADP systems, not including costs incurred for deliverable ADP components or software.

DCMC placed the contractor ADP review function at the district level, which resulted in inconsistent review procedures and contractor ADP review team staffing cuts; and, consequently, approximately $32.8 million of annual cost

avoidance was not identified by DCMD West during 1991 and 1992. We calculate that DoD can reduce costs by approximately $164 million during FYs 1995 through 1999 through improved technical oversight of contractor ADP activities. We could not calculate cost avoidance amounts not identified because of inadequate ADP review team training.

Federal and DoD regulations governing contractor disclosure and Government review and approval of ADP costs are outdated and do not address current technology. Even the term, "automatic data processing," is outdated. Furthermore, current regulations do not address contractor software and purchased hardware costs that are charged to the Government through indirect rates.

DCMC bases its contractor risk assessments for developing contractor ADP review team requirements on the outdated assumption that contractor ADP leasing costs pose the greatest risk to the Government. Although contractor ADP review teams examine contractor software costs during the course of their reviews, the review requirements ignore the costs incurred by contractors for software development and purchased ADP components.

By centralizing the DCMC contractor ADP review function, DoD can be assured that adequate contractor ADP reviews are performed in a timely, consistent, and efficient manner. Revising Federal and DoD regulations to reflect current technology would further empower the DCMC contractor ADP review teams to perform contractor ADP reviews in an efficient manner and at a level commensurate with relative risk.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Director, Defense Logistics Agency:

a. Remove the contractor automatic data processing review function from the Defense Contract Management Districts and place the function organizationally under central management at the Defense Contract Management Command or directly under the Defense Logistics Agency.

b. Redefine the contractor automatic data processing review team function as being responsible for reviewing all contractor information resources management costs that are charged to DoD, including purchased and leased information resources management components, and contractor software development and acquisition activities. Accordingly, revise contractor automatic data processing review team staffing and training considerations, and revise procedures for selecting contractors for review.

Management Comments. DLA nonconcurred with the finding, stating that reviews are scheduled and performed in accordance with regulatory thresholds

and within assigned staffing levels. DLA stated that delays of reviews were caused by competing priorities. DLA questioned the reported cost avoidance amount lost as a result of cancellation of scheduled reviews because the amounts were "based on high risk contractors."

DLA partially concurred with the recommendation, stating that DCMC is establishing an Overhead Center of Excellence (OCE), which would begin operations on September 1, 1994, and stated that reviews of special cost items in ADP EQUIPMENT will be directed by the Chief, OCE. DLA further commented that the computer specialists would remain with their assigned offices, but the Chief, OCE, at DCMC would provide overall direction and procedural guidance. However, DLA stated that outside training for ADP review team members would continue to be approved by the local commanders according to need and availability of funds. Additionally, DLA added that ADP review team functions and review areas could not be changed without appropriate FAR changes.

Audit Response. We do not agree with DLA comments regarding the finding. We acknowledge that our $32.8 million calculation of annual cost avoidance not identified by DCMD West during 1991 and 1992 (Appendix B) is not based on a statistically projectable methodology. However the calculation illustrates the potential impact of DCMD West's inability to complete its scheduled ADP reviews. We maintain that DCMC failed to provide a level of contractor ADP reviews consistent with relative DoD risk because the DCMC contractor ADP review function was managed separately under two DCMDs.

We consider the DLA comments to be nonresponsive to the recommendation. The comments did not spell out specifically the Chief, OCE, scope of control over the DCMC contractor ADP review teams.

Because the comments stated that the reorganization would be completed by September 1, 1994, we contacted the two ADP review team chiefs on September 9, 1994 to determine whether, or to what extent, they were reorganized under DCMC. The chief of the Boston team stated that his team was downgraded from the DCMD Northeast level and placed under organizational control at the Defense Contract Management Area Operations level. He also stated that, other than hearing miscellaneous "rumors," he was never informed that the team would be reorganized in any way under DCMC. The chief of the Los Angeles team also stated that no reorganization had occurred.

Based on the DLA comments and our subsequent inquiries, it appears that the OCE does not represent any substantial reorganization with respect to the DCMC contractor ADP review function. Additionally, in our opinion, ADP review team training should be funded and controlled through the same organization that plans, directs, and controls the activities and responsibilities of the DCMC contractor ADP review function. We request that DLA reconsider its reply and provide additional comments on the recommendation. The additional comments should specifically state how the DCMC contractor ADP review function is to be organized and managed.

2. We recommend that the Under Secretary of Defense for Acquisition and Technology:

a. Propose a change to the Federal Acquisition Regulation part 31, "Contract Cost Principles and Procedures," to:

(1) Replace the term, "automatic data processing equipment" with "information resources management" at all references. This more current term should be defined as all computer hardware, software, and related resources used by the contractor for all purposes including communications, engineering, manufacturing, accounting, and systems intended to provide integrated information flow throughout the organization.

(2) Revise Federal Acquisition Regulation 31.205-2, "Automatic Data Processing Equipment Leasing Costs," to eliminate references to leased equipment and to expand coverage to include all contractor information resources management costs.

b. Direct the Defense Acquisition Regulations Council to revise the Defense Federal Acquisition Regulation Supplement subpart 239.73, "Acquisition of Automatic Data Processing Equipment by DoD Contractors," to expand contracting officer review and approval provisions to include all contractor information resources management costs.

Management Comments. The Director, Defense Procurement, nonconcurred with the recommendation stating that the definition of information resources management proposed in the recommendation may not be appropriate. The comments questioned whether "robotics" should be included in the definition and stated that the definition should consider the current use of the term "Federal information processing resources" as derived from the Brooks Act. The comments concluded that DFARS subpart 239.73 should not be revised to expand the scope of contracting officer review and approval until an appropriate definition of "information resources management" is decided.

The Director, Defense Procurement, further stated,

> We do not agree with revising FAR 31.205-2. . . . Without further knowledge of the extent to which the Government leases supercomputers, we do not know if it is appropriate to retain the current cost principle, establish separate cost principles for hardware and software costs, or if a cost principle is even necessary.

Audit Response. The Director, Defense Procurement, comments are nonresponsive to the recommendation. We obtained the definition of "information resources management" from DLA experts. However, upon receipt of the Director, Defense Procurement, comments, we consulted with another DLA expert and our Inspector General, DoD, in-house consultant on software engineering matters. Based on their comments, we have deleted the term, "robotics" from our recommendation. The term, "Federal information processing resources" refers to the Federal Government's acquisition and management of data processing equipment and software, not Government

contractor data processing equipment and software. We believe that to properly address contractor information resources management costs, the definition of such costs should reflect current technology in the private sector. Thus, we maintain that the term "information resources management" should replace "automatic data processing" at all references in the FAR and DFARS.

We agree that any revision to DFARS subpart 239.73 that would expand the scope of contractor review and approval of contractor information resources management costs is predicated on the assumption that a uniform definition of such costs exists.

With regard to comments on the recommendation that FAR 31.205-2 be revised, we do not understand how the cost principle is affected by the Government's leasing of supercomputers. We do not believe this is relevant to the issues discussed. We believe that this is a $5 billion cost issue that the Under Secretary of Defense for Acquisition and Technology needs to reconsider and provide additional comments on the revised recommendation.

Part III - Additional Information

Appendix A. Defense Contract Management Command Contractor Automatic Data Processing Review Summaries

The contractor ADP review teams of DCMDs Northeast and West conducted reviews of 13 of the contractors that we visited during the audit. The ADP reviews that contained information relevant to our audit objectives are summarized below.

General Electric Aircraft Engines. The 1992 ADP review report states that a contractor policy had been in place for several years to capitalize purchased software packages costing $100,000 or more. On January 1, 1991, General Electric Company entered into an advance agreement with the Government that required the contractor to capitalize internally developed software projects costing more than $500,000. The report indicates that the contractor did not comply with the intent of the advance agreement because "the total costs involved in making the entire package a working production system should be capitalized, not just the cost of the basic package." The report also cautions, "In view of the decreasing proportion of Government sales at [General Electric Aircraft Engines], it appears that the Government may be paying a disproportionate share of the costs of implementing software it may never benefit from."

General Electric Aircraft Engines. The 1993 ADP review report states that purchased software costing more than $100,000 should be capitalized, and the costs of modifications required to adapt the purchased programs for production use at General Electric Aircraft Engines should be accumulated and capitalized. General Electric Aircraft Engines considers these costs to be exempt by the agreement. The report also states that the contractor may not be capturing all costs until the applications were truly ready for production, but may cut off before that point, while significant modification may be required to provide production programs. In addition, the ADP review team expressed concern over the accounting for costs already incurred for some projects that had qualified for capitalization but that have since been put on hold or canceled. The report also notes that DCAA performed an in-depth audit of software development costs in late 1991 and challenged several of the cost figures provided by the contractor, changing the amount to be capitalized from $8.2 million to $14.2 million. The DCAA audit further challenged General Electric Aircraft Engines' recording of certain software development project costs to the General & Administrative pool instead of the manufacturing overhead pools.

Lockheed Fort Worth Company. The 1993 ADP review report states that the divisional administrative contracting officer should request that the contractor enter into an advance agreement that would cover all major software projects so that the divisional administrative contracting officer can eliminate Government funding of unproductive projects.

Lockheed Missiles & Space Company. The 1991 ADP review report states that the divisional administrative contracting officer should request that the contractor enter into advance agreements for software projects of more than $500,000 or software projects with the potential of exceeding the threshold.

Martin Marietta Information Systems. The 1992 review report states that Martin Marietta Information Systems was also suffering as a result of decreased Defense spending. The report notes that, as part of the contractor's efforts to efficiently downsize and remain competitive, the contractor was moving from a centralized mainframe computer environment to a tiered ADP environment. The report further states that Martin Marietta Corporation was aggressively pursuing new business and transferring existing technology from Defense to other uses. The report predicts that, within the next few years, the traditional business mix will have changed from 75 percent Defense sales to 75 percent commercial and non-Defense. Further, Martin Marietta Corporation also had a myriad of ongoing software projects relating to all aspects of business. The report concluded, "Drastic defense business reductions are causing drastic changes . . ." and recommended that the Government "[a]nticipate reduced mainframe processing, with accompanying reductions in personnel, software and hardware costs."

Martin Marietta Data Systems. The 1991 report states that Martin Marietta Data Systems incorporates computer aided software engineering tools and that from the early stages of production definition, design, and program coding, Martin Marietta Data Systems is at the leading edge of standardizing its software development cycle.

United Technologies Corporation, Pratt & Whitney-Florida Operations, Government Engines and Space Propulsion Division. The 1992 review report states that the contractor had improved its software development techniques. Software applications were being developed and implemented faster with fewer changes required. The report points out certain internal control strengths over software development expenditures. For example, the contractor tracked budgeted versus actual costs. If a project exceeded 10 percent of its budget, an internal audit was performed, and the additional costs required approval by the original sponsor of the project. The report states that all of the completed projects that DCMC reviewed cost less than the original projection.

Rockwell International, Defense Electronics Division. The 1991 ADP review report states that "[a]n advance agreement should be considered for business software developments and/or acquisitions with initial estimated costs in excess of 500,000 [dollars]."

Vought Aircraft Company. The 1993 ADP review report states that the divisional administrative contracting officer should request Vought Aircraft Company to consider software to be a "tangible asset" and, therefore, to be capitalized. At a minimum, the initial license fee for the software should be capitalized. The report also states that the divisional administrative contracting officer should request that Vought Aircraft Company enter into an advance agreement with the Government for all major software project developments and acquisitions.

Westinghouse Electric Corporation, Electronics Systems Group. The 1991 ADP review report states that the contractor implemented a cost/benefit analysis process that measures and monitors the progress of major business application developments. The ADP review team requested the contractor to provide for the ADP review team's future reviews a worksheet composed of milestones complete with dates, resources, and projected costs for each major development project. The report states that, because the contractor's software development projects involve high costs and benefit future periods, the software packages should be treated as assets, and the costs should be capitalized and amortized over the expected useful life of the software. The report also recommended that the contracting officer consider entering into advance agreements with contractors governing the accounting treatment and allowability of software costs and that the contracting officer should negotiate ceilings for these costs. Further, the report recommended that computer software costs be capitalized and amortized when the projects have beneficial lives of several years.

Appendix B. Defense Logistics Agency Contractor Automatic Data Processing Review Cost Avoidance

We calculated the average potential annual cost avoidance dollars that DCMC did not identify during 1991 and 1992, as a result of its failure to perform 27 of the 93 contractor ADP reviews scheduled during this period.

DCMC Contractor ADP Review Cost Avoidance

	Amount of Cost Avoidance (millions)	Number of Reviews Scheduled	Number of Reviews Completed
1991	$ 28.8	52	41
1992	132.1	41	25
Total	$160.9	93	66

Average Scheduled Reviews Completed (66÷93)	71 percent
Calculated Total 1991 and 1992 Cost Avoidance With 100 Percent Completion of Scheduled Reviews ($160.9 million÷71 percent)	$226.6 million
Less Actual 1991 and 1992 Cost Avoidance	(160.9)
Total 1991 and 1992 Cost Avoidance Not Identified by DLA	$ 65.7
Annualized ($65.7 million÷2 years)	$ 32.8 million

Appendix C. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
A.	Internal Controls. Prevents contractors from charging current contracts for software costs intended to benefit future periods.	Undeterminable.[1]
B.1.a.	Economy and Efficiency. Allows potential cost avoidance to be maximized through centralized contractor ADP review management.	Undeterminable.[2]
B.1.b.	Economy and Efficiency. Redefines the contractor ADP review team function to maximize potential cost avoidance through adequate staffing and training of review teams and through improved review site selection procedures.	Undeterminable.[3]
B.2.	Internal Controls. Requires full contractor disclosure, Government review, and Government approval of all costs associated with contractor ADP activities and updates Federal regulation ADP terminology.	Undeterminable.[4]

[1]Quantifying the future cost avoidance associated with requiring contractors to capitalize software costs is not possible.
[2]Quantifying the future cost avoidance associated with centralized contractor ADP review management is not possible.
[3]Quantifying the future cost avoidance associated with adequate staffing and training of ADP review teams is not possible.
[4]Quantifying the future cost avoidance associated with full coverage of all costs associated with contractor ADP activities is not possible.

Appendix D. Organizations Visited or Contacted

Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics), Washington, DC
Defense Acquisition Regulations Council, Washington, DC

Department of the Army

Assistant Secretary of the Army (Research, Development, and Acquisition), Washington, DC
Inspector General, Department of the Army, Washington, DC

Department of the Navy

Assistant Secretary of the Navy (Financial Management), Washington, DC
Supervisor of Shipbuilding, Conversion, and Repair, Pascagoula, MS

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller), Washington, DC

Other Defense Organizations

Defense Contract Audit Agency, Alexandria, VA
- Central Region, Chicago, IL
  - Resident Office, General Dynamics, Fort Worth Division, Fort Worth, TX
  - Resident Office, Hughes Missile Systems, Tucson, AZ
  - Resident Office, LTV Corporation, Dallas, TX
  - Resident Office, Martin Marietta Astronautics Group, Denver, CO
  - Resident Office, Texas Instruments, Incorporated, Dallas, TX
- Eastern Region, Smyrna, GA
  - Resident Office, General Electric Company, Cincinnati, OH
  - Resident Office, Harris Corporation, Palm Bay, FL
  - Resident Office, Martin Marietta Aerospace, Orlando, FL
  - Resident Office, Ingalls Shipbuilding, Incorporated, Pascagoula, MS
  - Resident Office, United Technologies, West Palm Beach, FL
- Mid-Atlantic Region, Philadelphia, PA
  - Resident Office, IBM, Germantown, MD
  - Resident Office, Westinghouse Electric Corporation, Baltimore, MD
- Northeastern Region, Lexington, MA

Other Defense Organizations (cont'd)

Resident Office, Paramax Systems Corporation, Great Neck, NY
Resident Office, Raytheon Missile Systems, Andover, MA
Resident Office, UTC Sikorsky Aircraft Division, Stratford, CT
Western Region, La Mirada, CA
La Jolla Branch Office, San Diego, CA
Suboffice, Science Applications International Corporation, San Diego, CA
Resident Office, Lockheed Missiles & Space Company, Sunnyvale, CA
Resident Office, Rockwell International, Anaheim, CA
Salt Lake Valley Branch Office, Salt Lake City, UT
Suboffice, Hercules Aerospace Company, Magna, UT
South County Branch Office, San Diego, CA
Suboffice, General Dynamics, San Diego, CA
Technical Services Center, Memphis, TN
Defense Logistics Agency, Alexandria, VA
Defense Contract Management Command, Alexandria, VA
Defense Contract Management District Northeast
Defense Contract Management District West
Defense Contract Management Office, General Dynamics, San Diego, CA
Defense Contract Management Office, IBM, Gaithersburg, MD
Defense Plant Representative Office, General Dynamics, Fort Worth Division, Fort Worth, TX
Defense Plant Representative Office, General Electric Aircraft Engines, Cincinnati, OH
Defense Plant Representative Office, Lockheed Missiles & Space Company, Sunnyvale, CA
Defense Plant Representative Office, LTV Aerospace and Defense, Dallas, TX
Defense Plant Representative Offices, Martin Marietta, Orlando, FL, and Denver, CO
Defense Plant Representative Office, Paramax, Great Neck, NY
Defense Plant Representative Office, Pratt & Whitney, West Palm Beach, FL
Defense Plant Representative Office, Raytheon, Burlington, MA
Defense Plant Representative Office, Rockwell, Anaheim, CA
Defense Plant Representative Office, Sikorsky Aircraft, Stratford, CT
Defense Plant Representative Office, Texas Instruments, Dallas, TX
Defense Plant Representative Office, Westinghouse, Baltimore, MD

Non-Defense Organizations

General Dynamics Corporation, Space Systems Division, San Diego, CA
General Electric Aircraft Engines, Cincinnati, OH
IBM Federal Systems Company, Gaithersburg, MD
Ingalls Shipbuilding, Incorporated, Pascagoula, MS
Lockheed Fort Worth Company, Fort Worth, TX
Lockheed Missiles & Space Company, Sunnyvale, CA
Martin Marietta Astronautics Group, Denver, Co
Martin Marietta Information Systems, Orlando, FL
Paramax Systems Corporation, Great Neck, NY
Paramax Systems Corporation, McLean, VA

Non-Defense Organizations (cont'd)

United Technologies Corporation, Pratt & Whitney-Florida Operations, Government Engines and Space Propulsion Division, West Palm Beach, FL
Raytheon Missile Systems Division, Andover, MA
Rockwell International, Defense Electronics Division, Anaheim, CA
Texas Instruments, Incorporated, Defense Systems & Electronics Group, Dallas, TX
Vought Aircraft Company, Dallas, TX
Westinghouse Electric Corporation, Baltimore, MD

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
Comptroller of the Department of Defense
Assistant to the Secretary of Defense (Public Affairs)
Director, Defense Procurement

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Auditor General, Department of the Navy

Department of the Air Force

Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
  Commander, Defense Contract Management Command
    Commander, Defense Contract Management District Northeast
    Commander, Defense Contract Management District West
Director, National Security Agency
Inspector General, Central Imagery Office
Inspector General, Defense Intelligence Agency
Inspector General, National Security Agency
Director, Defense Logistics Studies Information Exchange

Non-Defense Federal Organizations

Office of Management and Budget
  Office of Federal Procurement Policy
Technical Information Center, National Security and
  International Affairs Division, General Accounting Office

Non-Defense Federal Organizations (cont'd)

Chairman and Ranking Minority Member of Each of the Following Congressional Committees and Subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security, Committee on Government Operations

Part IV - Management Comments

Under Secretary of Defense for Acquisition and Technology Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

AUG 2 2 1994

ACQUISITION AND TECHNOLOGY

DP/CPF

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING, DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report on Contractor Software Charges (Project No. 3CA-0045)

As requested in your Director of Contract Management's memorandum of June 24, 1994, we have carefully reviewed the subject draft audit report and wish to offer the following comments on those recommendations addressed to the Under Secretary of Defense for Acquisition and Technology (Recommendations A. and B.2.).

DoDIG Recommendation A.: We recommend that the Under Secretary of Defense for Acquisition and Technology propose to the Cost Accounting Standards Board a requirement for contractors to capitalize software development projects and acquisitions exceeding $500,000 if the software can be reasonably expected to benefit a period of more than 1 year. Capitalized software costs should be amortized over the benefited periods.

DoD Comment: Nonconcur. This recommendation is inappropriate for several reasons. First, prior to promulgating a rule governing proper cost accounting treatment of software developed or purchased for internal use, the CAS Board must determine if such software applications are tangible or intangible assets. If they are deemed to be tangible, 48 CFR 9904.404, Capitalization of Tangible Assets, would apply; if deemed intangible, the Board would either promulgate appropriate standards or opt to modify 48 CFR 9904.404 and 48 CFR 9904.409, Depreciation of Tangible Capital Assets, to accommodate both tangible and intangible assets.

Second, the draft report provided no empirical data to justify the proposed $500,000 capitalization threshold. As you know, 48 CFR 9904.404 prescribes $1,500 as the threshold applicable to tangible assets. Consequently, if the CAS Board determined that software is a tangible asset, there would be no reason to accord it special capitalization treatment, absent an objective basis for doing so.

Third, the Board has no authority to make a unilateral determination regarding the accounting treatment accorded a particular cost. Under 41 USC 422, Section 26(g), Requirements for Standards, the Board must follow a four-step process of public notice and comment by affected parties prior to promulgating a rule, regulation, standard, or modification thereof in final form. Accordingly, the Board would be unable to impose the requirement suggested in the draft report. We do, however, expect the Board will address the software issue as expeditiously as possible in accordance with its statutorily prescribed promulgation process.

Fourth, as the draft report correctly noted, in March 1991 this office asked the Board to consider a CAS change to clarify the accounting treatment to be accorded software, i.e., as either a tangible or intangible capital asset. We recently also commented on the Board's Advance Notice of Proposed Rulemaking, "Treatment of Gains or Losses Subsequent to Mergers or Business Combinations by Government Contractors," which proposes certain changes to 48 CFR 9904.404 and 9904.409. Our remarks emphasized that business combinations involve revaluations of intangible as well as tangible capital assets, and that the Board should clarify its intent as to the applicability of both standards to intangible capital assets. For that reason, further comment on the subject at this time would be redundant.

In summary, we share the DoDIG's concern that software costs be accounted for properly, and we have twice apprised the Board of the need to clarify its intent with respect to such costs. We believe, however, the draft report recommendation is inappropriate. The CAS Board lacks the authority to adopt accounting rules that have not been subjected to the statutorily mandated promulgation process. In addition, we are unaware of any empirical data to suggest that software applications intended for internal use, whether they are deemed to be tangible or intangible assets, warrant special capitalization treatment. Consequently, we do not concur in the recommendation.

DoDIG Recommendation B.2.: We recommend that the Under Secretary of Defense for Acquisition and Technology:

a. Propose a change to the Federal Acquisition Regulation Part 31, "Contract Cost Principles and Procedures," to:

(1) Replace the term "automatic data processing equipment" with "information resources management" at all

references. This more current term should be defined as all computer hardware, software, and related resources used by the contractor for all purposes including communications, engineering, manufacturing, robotics, accounting, and systems intended to provide integrated information flow throughout the organization.

(2) Revise Federal Acquisition Regulation 31.205-2, "Automatic Data Processing Equipment Leasing Costs," to eliminate references to leased equipment and to expand coverage to include all contractor information resources management costs.

b. Direct the Defense Acquisition Regulations Council to revise the Defense Federal Acquisition Regulation Supplement Subpart 239.73, "Acquisition of Automatic Data Processing Equipment by DoD Contractors," to expand contracting officer review and approval provisions to include all contractor information resources management costs.

DoD Comment: Nonconcur. We do not agree with replacing the term "automatic data processing equipment" (ADPE) with "information resources management" at all references because we are not convinced that the definition proposed by the DoDIG is appropriate. For example, we question whether it is appropriate to classify costs associated with "robotics" as "information resources management" costs. We believe that any redefinition of ADPE in Part 31 should take into consideration the current use of the term "Federal information processing (FIP) resources" as it relates to ADPE under FAR/DFARS Part 39, Acquisition of Information Resources. The terminology "FIP resources," as used in the Federal Information Resources Management Regulation at 201-39.201, while much broader than the definition at FAR 31.001, is derived from the Brooks Act definition of ADPE.

We do not agree with revising FAR 31.205-2 to eliminate all references to "leased equipment" and to expand coverage to include all contractor information resources management costs. Without further knowledge of the extent to which the Government continues to lease supercomputers, we do not know if it is appropriate to retain the current cost principle, establish separate cost principles for hardware and software costs, or if a cost principle is even necessary.

We do not agree with revising DFARS Subpart 239.73 to expand contracting officer review and approval provisions to include all contractor information resources management costs because we must first agree on what constitutes "ADPE"

or "information resources management." Once we determine what these terms mean, we can determine what further situations will need expanded review and approval provisions.

Eleanor R. Spector
Director, Defense Procurement

Defense Logistics Agency Comments

DEFENSE LOGISTICS AGENCY
HEADQUARTERS
CAMERON STATION
ALEXANDRIA, VIRGINIA 22304-6100

IN REPLY REFER TO DDAI

31 AUG 1994

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING, DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report, Contractor Software Charges, 24 Jun 94, (Project No. 3CA-0045)

This is response to your 24 Jun 1994 request.

2 Enclosures

JACQUELINE G. BRYANT
Chief, Internal Review Office

cc:
AQCBA
AQCOH
FOE

TYPE OF REPORT: Audit

PURPOSE OF INPUT: Initial Position

AUDIT TITLE & NO: Draft Audit on Contractor Software Charges (Project No. 3CA-0045)

FINDING B: Defense Logistics Agency Contractor Automatic Data Processing Oversight. DCMC management performed insufficient contractor technical oversight to effectively monitor approximately $5 billion of contractor ADP costs charged annually on DoD contracts. The contractor oversight was insufficient because the DCMC contractor ADP review function was divided under two separate DCMC districts (DCMDs Northeast and South) without central guidance and oversight and because outdated Federal and DoD regulations limited the DCMC contractor ADP review function to reviewing only ADP leasing costs. As a result, DCMC (specifically, DCMD West) did not identify an estimated $32.8 million annually in cost avoidance during 1991 and 1992 and DoD was unnecessarily exposed to potential increased costs from contractor mismanagement and inefficiencies in ADP acquisition, development and support activities.

DLA COMMENTS: Nonconcur. Reviews are scheduled and performed in accordance with regulatory thresholds and within assigned staffing levels. Risk assessments are performed to select the priorities for selected reviews, with the highest risk contractors being reviewed first. Also, Administrative Contracting Officers do request special reviews where circumstances merit. Delays are attributed to management of competing priorities. In our view it is inappropriate to project cost avoidance amounts based on high risk contractors to a total universe or to presume such avoidances would be lost if the review was performed in a later time period.

DISPOSITION:
( ) Action is Ongoing. Estimated Completion Date:
(x) Action is Considered Complete

INTERNAL MANAGEMENT CONTROL WEAKNESSES:
(x) Nonconcur
( ) Concur; however weakness is not considered material
( ) Concur; weakness is material and will be reported in the DLA Annual Statement of Assurance

1

ACTION OFFICER: R. E. Kern, AQCOH, x44411
PSE REVIEW/APPROVAL: ROBERT P. SCOTT, Exec Dir, Contract Mgmt, 22 Aug 94
COORDINATION: FRANK WOJTASZEK JR, AQCOH, x44411
CHARLES D. BARTLETT, COL, USA, Actg Asst Exec Dir AQCO
D. Stumpf, DDAI, 24 Aug 94
Bryant, DDRI, 24 Aug 94

DLA APPROVAL

2 ? AUG 1994

LAWRENCE P. FARRELL, JR.
Major General, USAF
Principal Deputy Director

TYPE OF REPORT: Audit

PURPOSE OF INPUT: Initial Position

AUDIT TITLE & NO: Contractor Software Charges
(Project No. 3CA-0045)

RECOMMENDATION B.1: Recommend that the Director, Defense Logistics Agency: (a) Remove the contractor automatic data processing review function from the DCMD's and place the function organizationally under central management at the Defense Contract Management Command or directly under the Defense Logistics Agency, and (b) Redefine the contractor automatic data processing review team function as being responsible for reviewing all contractor information resources management costs that are charged to DoD, including purchased and leased information resources management components and contractor software development and acquisition activities. Accordingly, revised contractor automatic data processing review team staffing and training considerations and revise procedures for selecting contractors for review.

DLA COMMENTS: Partially concur. Headquarters DCMC is establishing an Overhead Center of Excellence (OCE), which will begin operations 1 September 1994. Corporate-wide priorities and reviews of special cost items in ADPE will be directed by the Chief, OCE. The computer specialists will remain with their assigned Defense Contract Management Area Operations (DCMAOs) for their normal activities. However, overall direction and procedural guidance will be established by the Chief, OCE, at Headquarters, DCMC. Local commanders approve outside training when justified and funds are available. Team functions and review areas cannot be changed until appropriate regulatory changes are incorporated into the FAR.

DISPOSITION:
(x) Action is Ongoing. Estimated completion Date: 1 Sep 94.
( ) Action is Considered Complete.

INTERNAL MANAGEMENT CONTROL WEAKNESSES:
( ) Nonconcur
(x) Concur; however weakness is not considered material
( ) Concur; weakness is material and will be reported in the DLA Annual Statement of Assurance

MONETARY BENEFITS: NA
DLA COMMENTS: NA
ESTIMATED REALIZATION DATE: NA
AMOUNT REALIZED: NA
DATE BENEFITS REALIZED NA

3

ACTION OFFICER: R. E. Kern, AQCOH, x44411
PSE REVIEW/APPROVAL: ROBERT P. SCOTT, Exec Dir, Contract Mgmt, 22 Aug 94
COORDINATION: FRANK WOJTASZEK JR, AQCOH, x44411
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DLA APPROVAL

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4

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