

GAO

Report to the Chairman, Committee on  
Government Operations, House of  
Representatives

November 1992

# AIR FORCE ADP

## Lax Contract Oversight Led to Waste and Reduced Competition



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United States  
General Accounting Office  
Washington, D.C. 20548

**Information Management and  
Technology Division**

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November 19, 1992

The Honorable John Conyers, Jr.  
Chairman, Committee on Government  
Operations  
House of Representatives

Dear Mr. Chairman:

This report responds to your July 17, 1991, request and subsequent discussions with your office where you asked that we review contracting practices at the Air Force Standard Systems Center, Gunter Air Force Base, Alabama. The report chronicles a long-standing pattern of contract mismanagement and waste at the Center.

As requested, we did not obtain written comments from the Department of Defense on this report. However, we discussed its contents with Air Force officials and have incorporated their views as appropriate. We conducted our review between September 1991 and September 1992, in accordance with generally accepted government auditing standards.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the date of this letter. We will then send copies to the appropriate House and Senate committees; the Secretaries of Defense and the Air Force; and the Director, Office of Management and Budget. Copies will also be made available to others upon request.

This report was prepared under the direction of Samuel W. Bowlin, Director, Defense and Security Information Systems, who can be reached at (202) 512-6240. Other major contributors are listed in the appendix.

Sincerely yours,

Ralph V. Carlone  
Assistant Comptroller General

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# Executive Summary

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## Purpose

The Standard Systems Center (ssc), Gunter Air Force Base, Alabama, is responsible for awarding and administering base-level contracts to meet the data processing needs of the Air Force's more than 120 bases worldwide. As of June 1992, the total value of ssc-administered contracts was more than \$8.6 billion. Concerned with allegations of waste and mismanagement, the House Committee on Government Operations asked GAO to review contracting practices at ssc, focusing on two key contracts—the Phase IV contract and the Standard Base Level Computing (SBLC) follow-on contract—valued at over \$1.5 billion. Our objectives were to determine if these contracts were administered properly and complied with competition requirements as specified in federal regulations and statutes.

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## Background

Each Air Force base requires data processing systems to support administrative functions such as supply, maintenance, personnel, and finance. ssc awards and administers contracts that provide for the design, development, acquisition, and life-cycle support of each base's administrative systems. Over the years, the Air Force has relied on two key contracts—Phase IV and the SBLC follow-on—to provide most of the hardware and software support for its base-level automation program. The Phase IV contract, awarded to Sperry Corporation (now UNISYS) in 1983 for an estimated cost of \$476 million, was, at that time, the largest administrative data processing contract ever awarded. According to the Air Force, Phase IV was intended to be a 20-year commitment to a single vendor—UNISYS—structured as an 8-year implementation contract and two follow-on contracts for 6-year periods, to be negotiated later. Initially, to support their data processing requirements, Air Force bases were required to order equipment and services such as mainframe computers, peripheral equipment, system software, and maintenance through ssc. The contract was subsequently modified to permit the Air Force commands and other ordering authorities to order directly from the contract. By 1991, the end of the first 8-year period, the contract had been modified over 100 times and costs had grown to about \$950 million. In response to the Competition in Contracting Act (CICA) of 1984—a law intended to increase competition for government contracts—the Air Force determined that the first 6-year follow-on contract could not be awarded as if it were an option.<sup>1</sup> To comply with CICA, the Air Force was required either to compete the follow-on contract or justify it as a sole-source procurement. The Air Force awarded the \$612 million SBLC follow-on contract to UNISYS in June

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<sup>1</sup>Options must be definite and subject to unilateral exercise by the agency without negotiation of material terms, such as price.

1991 on a sole-source basis and, in effect, exercised the second phase of its planned 20-year commitment to UNISYS.

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## Results in Brief

The Air Force's ssc has demonstrated a pattern of mismanagement and inappropriate actions that have resulted in the purchase of millions of dollars in unneeded equipment and services. ssc could not control the nearly \$1 billion Phase IV contract because it did not establish an effective means to account for orders, deliveries, and payments. Additionally, ssc inappropriately limited competition by purchasing equipment and services that were not within the scope of the contract and should have been competed. ssc wasted millions of dollars by purchasing equipment that was not justified by valid user requirements or convincing cost/benefit analyses. ssc's Office of the Judge Advocate General advised against these actions, but ssc officials proceeded nonetheless.

The Air Force further limited competition in awarding the \$612 million SBLC follow-on contract. It improperly aggregated sole-source and competitive requirements and awarded a sole-source contract to UNISYS for products that in some cases could have been procured competitively. Further, ssc will probably be forced to award another sole-source contract to UNISYS when the SBLC contract ends in 1997 unless it takes prompt action to create a competitive environment.

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## Principal Findings

### SSC Did Not Effectively Control the Phase IV Contract

Contrary to federal and Defense regulations, as well as good management practice, ssc granted authority to Air Force bases to order directly from the Phase IV contract without an effective means to account for orders, deliveries, and payments. As a result, the Air Force does not know precisely how much has been spent, and cannot determine if the limits of its Delegation of Procurement Authority were exceeded.

In 1985, ssc decentralized ordering authority and delegated it to Air Force bases without establishing effective mechanisms to oversee and control the orders. In an attempt to correct this, in 1987, ssc implemented an automated inventory system at ssc. Bases were to input ordering, inventory, and cost information. However, the bases did not always provide accurate, complete, and timely information. Therefore, ssc could

not effectively track orders, deliveries, and payments. Further, it could not keep track of its inventory of computer equipment, and did not have reliable information on maintenance costs and services.

Although the Air Force estimates that total expenditures on the Phase IV contract exceeded \$950 million, there is no way to be certain since there is no accurate accounting for goods and services delivered or payments made. In addition, the Air Force has been unable to determine the status of about 1,400 outstanding delivery orders valued at over \$44 million for the period of 1985 to 1991.

### SSC Spent Millions on Questionable Contract Modifications

ssc modified the Phase IV contract over 100 times from 1983 to 1991. In some cases, these modifications resulted in the acquisition of products that were outside the scope of the contract, did not satisfy documented or validated user requirements, and, if needed, could have been procured competitively. For example, ssc procured a license for an automated software development tool called MAPPER in December 1988 for \$7.2 million, even though software development and associated tools were specifically excluded from the Phase IV contract by the Delegation of Procurement Authority.

In another instance, over 120 new mainframe computers costing about \$20 million were purchased to replace existing computers, late in 1990, just before the Phase IV contract ended. The Air Force claimed the new computers provided additional data processing capacity and future maintenance cost savings. However, the computers provided little additional capacity and the cost savings projections were unconvincing because they were not supported by reliable maintenance cost data. In fact, these computers are already being replaced by larger ones as the Air Force begins to set up regional data processing centers. Finally, ssc's Office of the Judge Advocate General stated that the procurement was not within the scope of the contract.

ssc's Office of the Judge Advocate General legal reviews often questioned whether some of the more than 100 modifications, including the MAPPER and the mainframe purchase, were within the scope of the Phase IV contract. In some cases, the Office of the Judge Advocate General suggested alternative procurement strategies such as full and open competition or sole-source justification. Despite this advice, the Air Force continued to use the Phase IV contract to procure these items.

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## SSC Did Not Award the SBLC Follow-on Contract Competitively

The Air Force did not effectively solicit full and open competition for the SBLC follow-on contract. The first solicitation for bids improperly aggregated sole-source and competitive requirements. The second solicitation was structured in a way which discouraged competition, and, as a result, UNISYS was the only bidder. The Air Force Communication Command's Competition Advocate did not support the approach and proposed a more competitive strategy, but AFCC and Air Force headquarters proceeded to award a sole-source contract to UNISYS. The Air Force contends that the single vendor arrangement was a good business decision because it reduced the administrative burden SSC would have had in managing several contracts and integrating third-party products and services. However, the Air Force has not provided any data supporting its contention. According to CICA, administrative convenience is not sufficient justification for a sole-source award.

Because the SBLC follow-on contract was awarded sole-source, GSA required the Air Force to report its progress on how it is positioning itself to compete base-level contracts in the future. The Air Force's plans call for increasing competition by moving from a UNISYS proprietary environment to an open systems environment. This involves converting and redesigning millions of lines of software. The Air Force has made little progress in moving to an open system, and does not expect to complete its software conversion and redesign before 2005. As a result, unless the Air Force takes prompt action, it will not be in a position to compete the next base-level contract. In fact, the Air Force plans to award another sole-source contract to UNISYS when the current SBLC contract ends in 1997.

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## Recommendations

GAO recommends that the Secretary of Defense direct the Secretary of the Air Force to (1) improve accounting and control procedures over the SBLC contract to ensure that the Air Force can effectively manage its expenditures, deliveries, inventories, and services; (2) improve contract management practices to ensure that only modifications that are within the contract scope and supported by validated user requirements and convincing business analysis are executed; and (3) ensure that SSC gives top priority to its programs to create a more competitive environment in 1997. Chapter 4 provides additional details on these recommendations.

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## Agency Comments

As requested, we did not obtain written agency comments on a draft of this report. However, we discussed its contents with Defense officials and

**incorporated their comments as appropriate. Defense officials generally agreed that they had failed to control the Phase IV contract and that they need to institute greater control over the SBLC follow-on contract. They disagreed, however, with our statements that some modifications to the Phase IV contract were outside the contract's scope or that the Air Force unnecessarily restricted competition for the follow-on contract. Additional information on Defense's positions on these issues is provided in chapter 4.**





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## Abbreviations

AFCC	Air Force Communications Command
CICA	Competition in Contracting Act
DPA	Delegation of Procurement Authority
GAO	General Accounting Office
GSA	General Services Administration
IMTEC	Information Management and Technology Division
IPMS	Information Processing Management System
SBLC	Standard Base Level Computing contract
SSC	Standard Systems Center



# Introduction

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## Background

Within the Air Force, base-level contracts are used to provide for the design, development, acquisition, maintenance, and life-cycle support of computer systems used at more than 120 Air Force bases around the world. These systems perform standard functions such as supply, maintenance, finance and personnel, and other administrative applications. The Air Force's Standard Systems Center (SSC), located at Gunter Air Force Base, Montgomery, Alabama, awards and administers contracts to meet base-level automation requirements.

Air Force contracting offices are required to follow specific guidance, regulations, and laws. These are defined in such documents as the Federal Acquisition Regulation, the Federal Information Resource Management Regulation, Office of Management and Budget Circulars, and Air Force regulations. According to federal and Air Force regulations, the Air Force must maintain accountability and accurate cost information to identify fraud, waste, abuse, and mismanagement; manage inventories to avoid shortage or excess; consider costs for replacements or upgrades; and evaluate procurement alternatives or budget requests. In February 1990, GAO reported that the Air Force did not have accurate cost or inventory data.<sup>1</sup> Consequently, the Air Force could not account for its expenditures or for billions of dollars of resources.

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## History of the Phase IV and SBLC Follow-on Contracts

The Phase IV contract, which provided base-level hardware and system software support from 1983 to 1991, was awarded to Sperry Corporation (now UNISYS Corporation) in January 1983. This contract was an indefinite delivery, indefinite quantity contract for new mainframe computers, associated peripheral equipment, system software support, and maintenance to meet base-level automation requirements.<sup>2</sup> Under the contract, UNISYS was also responsible for converting applications software from old equipment to the new computers and meeting contract requirements for 95-percent availability. The General Services Administration's (GSA) Delegation of Procurement Authority (DPA) for the Phase IV contract specifically excluded new applications software development. Software development is provided through other base-level automation contracts.

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<sup>1</sup>Financial Audit: Air Force Does Not Effectively Account for Billions of Dollars of Resources (GAO/AFMD-90-23, Feb. 23, 1990).

<sup>2</sup>An indefinite delivery, indefinite quantity contract is used when government agencies anticipate recurring requirements, but can only predetermine the minimum quantity to be ordered. The government's obligation is limited to the minimum quantity.

Originally the Phase IV contract was to include an 8-year implementation period to upgrade and replace older computer equipment and transition to the new computers, and two additional 6-year periods, to be negotiated later, for base-level hardware and software support. The Air Force's strategy was, and continues to be, a 20-year commitment to UNISYS, even though only the initial 8-year period was contractually binding. When awarded in 1983, Phase IV was the largest administrative data processing contract ever let by the government. In granting a Delegation of Procurement Authority to the Air Force for the Phase IV contract, the General Services Administration placed limits on total contract spending and the numbers of mainframe computer systems that could be purchased. The original DPA provided authority for \$455 million and 157 systems.<sup>3</sup>

GSA required an amended DPA for any substantial increases to those limits during the contract period. Defense regulations required the Air Force to seek an amendment to the DPA whenever its requirements exceeded DPA limits by 25 percent. The Phase IV contract was modified over 100 times from award through 1991, and the DPA was amended five times to accommodate equipment, cost, and schedule changes. The contract modifications included changes in software, hardware, and maintenance requirements, and involved additions, substitutions, and technology upgrades. By 1988, the Air Force estimated the cost of the contract had increased from \$476 million to approximately \$982 million and DPA limits had increased from \$455 million to \$750 million. By 1991, DPA limits had increased to \$835 million. The Air Force now estimates, however, that actual costs were about \$950 million.

Passage of the 1984 Competition in Contracting Act (CICA)—a law intended to increase competition in government procurements—and a 1986 GAO report discussing CICA prompted the Air Force to cancel plans to negotiate the first 6-year option with UNISYS.<sup>4</sup> Instead, the Air Force decided to award a new contract called the Standard Base Level Computing contract (SBLC). However, the methods used to solicit competition for this new contract discouraged competition, and the Air Force awarded a sole-source follow-on contract to UNISYS in June 1991.

The SBLC follow-on contract, valued at \$612 million, is a 6-year contract to maintain existing base-level equipment and systems, upgrade equipment,

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<sup>3</sup>A system was defined as two central processing units, primary storage, associated secondary storage, peripherals, printers, and terminals.

<sup>4</sup>Procurement: The Use of Unpriced Options and Other Practices Needs Revision (GAO/NSIAD-86-59, Apr. 23, 1986).

and provide software tools to allow the Air Force to redesign applications software for use in an open systems environment. Air Force documents indicate it is planning a final 6-year maintenance-only contract with UNISYS beginning in 1997. The Air Force is also using the follow-on contract to acquire hardware and software that would consolidate data processing support for nearly 120 Air Force bases into five locations.

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## Objectives, Scope, and Methodology

Because of the allegations surrounding unusual computer deliveries, questionable funding arrangements, and follow-on contract competition issues, the Chairman, House Committee on Government Operations, asked us to review contracting practices at SSC, focusing on two key contracts—the Phase IV contract and the SBLC follow-on contract—valued at over \$1.5 billion. Our objectives were to determine if these contracts were administered properly and whether they complied with competition requirements as specified in federal regulations and statutes.

To accomplish our objectives, we reviewed (1) Air Force compliance with contract terms and conditions for the Phase IV contract and (2) Air Force actions to promote competition prior to the sole-source award for the SBLC follow-on contract. Specifically, we evaluated whether contracting actions were made in accordance with laws and procurement regulations. We reviewed SSC contract documents, including contract modification files, delivery orders, and task orders. We discussed contract management and procurement issues with contracting, program, and legal officials at SSC and the Pentagon. We also discussed base-level system development and life-cycle management with SSC Phase IV program managers. We focused on Phase IV contract modifications which were questioned by the Office of the Judge Advocate General at both SSC and the Air Force Communications Command, or were accomplished under special contract clauses, such as technology refreshment and substitutions and additions.

To assess overall Phase IV and SBLC follow-on contract management, we reviewed the Air Force's cost and inventory tracking mechanisms, requirements process, competitive procedures, and plans for reducing dependence on the incumbent contractor.

Our Office of Special Investigations also investigated allegations of misconduct and potential conflict of interest by government employees associated with contracting at SSC. The results of this investigation provided corroboration and additional support for many of the findings discussed in this report.

We also requested access to UNISYS employees to obtain information and discuss contract administration, technical, financial, and marketing issues related to the Phase IV and SBLC follow-on contracts. However, counsel for a UNISYS employee and, later, counsel for UNISYS expressed reservations about recommending that employees participate in interviews. We were unable to resolve their concerns and conduct employee interviews prior to completing our audit work. Therefore, we did not interview UNISYS employees or discuss the results of our work with them.

We performed our work primarily at the Standard Systems Center, Gunter Air Force Base, and Air Force headquarters at the Pentagon, Arlington, Virginia. We conducted our review from September 1991 through September 1992, in accordance with generally accepted government auditing standards. As requested, we did not obtain written agency comments from the Department of Defense on a draft of this report. However, we discussed the report's contents with Air Force officials including the Deputy Chief of Staff for Command, Control, Communications, and Computers, and officials from the Air Force's Standard Systems Center and Air Force Communications Command, and have incorporated their views as appropriate.

# SSC Wasted Millions Through Phase IV Mismanagement and Inappropriate Actions

ssc failed to manage the nearly billion-dollar Phase IV contract properly. Contract costs, equipment inventories, and support services were not tracked throughout the 8-year contract. Accordingly, the Air Force does not know how much was spent, what goods were received and what payments were made, and cannot reconcile financial records and equipment inventories at its more than 120 bases.

The Air Force also executed contract modifications to purchase equipment and software which were beyond the scope of the contract, and wasted millions by purchasing equipment and services that were not needed. Although legal staff in the ssc's Office of the Judge Advocate General advised contracting officials that these actions were inappropriate, their advice was not heeded.

## SSC Did Not Effectively Control the Phase IV Contract

ssc did not collect essential information necessary to manage and control the Phase IV contract as required by federal, defense, and Air Force regulations. When the contract was awarded in 1983, ordering authority was centralized at ssc. Contract cost and equipment inventory information sent from the Air Force bases was maintained at ssc. However, two contract modifications, which were intended to reduce ssc's administrative burden, essentially eliminated ssc's ability to manage the contract effectively. These modifications authorized the Air Force bases to order Phase IV equipment and services independently. However, ssc did not have procedures to oversee these purchases and did not know what the bases were buying, how much was being spent, or whether the bases were buying more than they were authorized. To regain control of the Phase IV contract, ssc implemented an automated system to collect order, inventory, and expenditure information. However, the system was ineffective. As a result, ssc did not have an effective means to track contract costs or determine whether GSA's Delegation of Procurement Authority limits were exceeded.

## Two Contract Modifications Contributed to SSC's Inability to Control the Phase IV Contract

According to ssc's Vice Commander, the Air Force did not plan to maintain centralized ordering authority for the entire contract period. Therefore, two contract modifications were implemented to reduce ssc's involvement in the ordering process and its administrative burden. However, these two contract modifications were implemented without establishing adequate control over the decentralized ordering process.



A September 1985 contract modification decentralized ordering authority and delegated it to the Air Force bases. This modification reduced ssc's control by allowing the bases to order computer hardware, peripheral equipment, maintenance, and support services directly from UNISYS. At that time, ssc continued to receive copies of equipment orders, invoices, and payments but did not use the information to manage the contract by keeping track of all orders and payment totals. The current contracting officer and the Phase IV system manager both agreed that decentralizing ordering authority in 1985 contributed to the contracting office's inability to track obligation, cost, and expenditure information. This occurred despite Air Force requirements to maintain records of equipment and services obtained and total costs incurred under the contract.

A second modification, in September 1989, was intended to reduce ssc's administrative work load further by eliminating the requirement that bases send ssc duplicate copies of orders and payments. As a result, ssc was unable to review these orders, and, therefore, was unable to stop bases from exceeding their specific limits on ordering. Each base was delegated specific limits and, prior to the second modification, ssc monitored orders to ensure limits were not exceeded. For example, the Air Force Academy was limited to ordering only maintenance services from the contract. However, after the second modification, the Academy exceeded this limit and ordered equipment upgrades from the Phase IV contract.

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### **SSC's Attempts to Control Phase IV Failed**

In 1987, ssc implemented a centralized inventory system called the Information Processing Management System (IPMS) to store and track order, inventory, and cost information provided by the bases. However, according to a 1991 Air Force Audit Agency Report, the system did not help ssc get financial and inventory control because the data in the system were not accurate, complete, or current.<sup>1</sup> ssc did not establish procedures for bases to report information consistently and completely. Further, Air Force personnel at the bases did not input correct data, and the system did not have effective edit and error control features. As a result, IPMS did not help ssc track orders, deliveries, and payments; keep track of excess equipment or equipment transfers; or track maintenance costs and services provided.

For example, ssc could not use IPMS to determine what maintenance was provided or if accurate payments were made. UNISYS provided hardware

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<sup>1</sup>Air Force Audit Agency, Review of the Air Force Information Processing Management System (IPMS), (Project No. 91054022), Dec. 27, 1991.

and software maintenance and billed bases for the actual maintenance provided. However, individual bases paid for maintenance differently. Some bases paid UNISYS based on the actual bills received. Other bases paid UNISYS the pre-set amounts for maintenance contained in the delivery orders without reconciling the actual maintenance provided with the pre-set amount. According to SSC officials, the Air Force does not know if they overpaid or underpaid for maintenance.

In addition, since SSC did not know the number or type of items in its inventory, nor what maintenance services were provided, it did not have a sound basis to estimate its maintenance budget. Instead, its budget requests were based on assumed hardware and software configurations at Air Force bases worldwide. Contrary to Air Force regulations, which require actual cost experience for budget requests, the annual request did not reflect the actual cost of maintenance incurred. Using actual costs is important to ensure that the Congress has an adequate basis for authorizing and appropriating resources.

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**Total Contract Cost  
Unknown, but DPA May  
Have Been Exceeded**

Although the Air Force does not know precisely how much has been spent on the Phase IV contract, Delegation of Procurement Authority limits may have been exceeded. Current estimates for expenditures under Phase IV exceed \$950 million. To date, the Air Force has been unable to determine the validity of approximately 1,400 outstanding delivery orders valued at over \$44 million for the period 1985 to 1991. In response to our request, the Air Force stated that cost information by fiscal year, contract line item, contract modification, or by major categories such as hardware, software, maintenance, and services could not be provided because of the lack of accurate accounting records. Air Force officials at SSC told us that inventory information was available for the Phase IV contract; however, as of September 1992, they had not provided such information to us.

The Phase IV Delegation of Procurement Authority GSA issued in 1980 stipulated that the Air Force's procurement authority was limited to 157 systems and \$408 million. GSA required the Air Force to obtain a DPA amendment if there was a significant change to its requirements. Defense regulations required the Air Force to seek an amendment when its requirements exceeded the DPA by 25 percent. These limits were intended to control contract costs and equipment purchases. Over the years, DPA modifications approved during the Phase IV contract raised the number of allowable systems and costs. An April 2, 1990, modification raised allowable systems to 190 and set total costs at \$810 million. The last

Phase IV DPA modification, approved March 29, 1991, raised DPA cost limits to \$834 million. However, the contracting officer could not ensure that DPA limits were not exceeded because SSC did not have accurate, complete, and timely data needed to monitor contract costs effectively.

No one monitored DPA limits or knew whether the Air Force had spent more than the DPA allowed. The contracting officer said he relied on SSC program managers' assurances that DPA limits were not exceeded. On the other hand, the Deputy Chief of Staff for System Support at SSC told us that monitoring DPA limits is the contracting officer's responsibility. An April 1990 Air Force Audit Agency report also concluded that Air Force procedures for monitoring and controlling expenditures were inadequate.<sup>2</sup>

In July 1985, an Air Force Communications Command legal opinion warned that if DPA limits were exceeded, GSA could terminate the DPA. A January 1986 letter from GSA reiterated that failure to comply with delegation requirements would void the DPA. In June 1988, SSC's legal office attempted to reconcile expenditures with DPA limits. Although the information was incomplete and, according to legal officials, constantly changing, they estimated total expenditures had reached \$982 million, more than 25 percent beyond the then DPA limit of \$750 million. At the completion of our review, in September 1992, SSC's Technical Director told us that the DPA limits were not exceeded because they had not actually spent \$982 million. However, all agree that accurate delivery and expenditure information is still not available to confirm exactly what was spent or whether the DPA limits were exceeded.

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## **SSC Spent Millions on Questionable Contract Modifications**

During the Phase IV contract, the Air Force spent millions of dollars unnecessarily. For example, SSC accepted a software product that it later found did not meet contract requirements. Instead of enforcing contract provisions, SSC paid an additional \$1.5 million to correct the problem. SSC procured software products totalling \$8 million that were beyond the scope of the contract. SSC also accepted UNISYS' unsolicited proposal to purchase new computers for \$20 million—computers that were not needed or adequately cost-justified, and which limited the competitive options available for the SBLC follow-on contract.

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<sup>2</sup>Air Force Audit Agency, Report of Audit 905-0-8, Systems 1100/60 Hardware Upgrade, Standard Systems Center (SSC), Apr. 2, 1990.

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**Software Product Did Not Meet Requirements**

The Phase IV contract required UNISYS to deliver a software utility to reorganize databases. Although regulations require a contracting officer to ensure that a contractor's products meet specifications and reject those that do not, SSC did not enforce those provisions for the software database utility UNISYS provided. In 1988, when a new database was added, SSC realized that the contractor's software could not reorganize large databases and thus did not satisfy contract requirements. The contractor agreed that the utility did not meet specifications, and recommended that, to correct the problem, SSC purchase third-party software, through the contract, for \$1.5 million. Although the contractor's original product did not meet specifications, SSC's legal office questioned whether, given the time delay, UNISYS could be required to provide a software product that met the terms of the contract. SSC decided not to pursue the issue legally, modified the contract, and purchased the new software UNISYS recommended. As a result, the Air Force paid twice, once for the original software product and again for the additional software required to make the product meet contract specifications.

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**Air Force Procured Out-Of-Scope Products**

The Air Force procured out-of-scope products that should have been competed if they were needed. The Air Force purchased a product called MAPPER.<sup>3</sup> An April 1985 SSC legal opinion and a 1987 Air Staff legal opinion both stated that neither the contract nor the DPA allowed the procurement of new application development software. Since the DPA precludes software development, MAPPER, a software development product, was beyond the scope of the Phase IV contract.

A site license for MAPPER was procured in 1989, based on an unsolicited UNISYS proposal. The proposal was presented as a time-sensitive "one-time offer." UNISYS offered the Air Force \$6.44 million in "free maintenance" on unrelated hardware items to help pay the \$7.2 million cost for MAPPER. Early in 1989, the Air Force Communications Command reviewed the requirement for the Air Force-wide site license. The Command expressed concern that equivalent products might be available from other vendors and said the procurement should be competed. Instead, SSC dismissed this concern and used \$6.4 million in maintenance funds and an additional \$800,000 in procurement funds to pay the \$7.2 million purchase price. The Air Force has also paid an additional \$300,000 annually to maintain MAPPER.

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<sup>3</sup>UNISYS' MAPPER is a tool for application development and report generation. It can also be described as a Computer Assisted Software Engineering/Fourth Generation Language (CASE/4GL) tool.

Similarly, another software development product called PACBASE was purchased for \$800,000, through the Phase IV contract, even though three legal opinions from ssc's Office of the Judge Advocate General indicated that it was beyond the scope of the Phase IV contract.<sup>4</sup> The first opinion concluded that using the contract to purchase PACBASE would be inappropriate because software development was out-of-scope and PACBASE was a software development tool. The opinion went on to recommend that ssc use other sources for the procurement, such as competing for a similar product, or using a sole-source justification to buy it directly from the third-party vendor. The second opinion indicated that the purchase exceeded the contracting officer's authority and would be an unauthorized commitment if not acquired competitively. The final opinion concluded that PACBASE might be found out-of-scope if a protest were submitted, and stated that restricting the procurement to PACBASE inappropriately precluded competition.

A Defense Contract Administration Service's review also recommended purchasing PACBASE directly from its vendor, using a sole-source justification. The Service determined that purchasing PACBASE directly from its vendor rather than through the Phase IV contract would save nearly \$166,000. In response, ssc's Director of Contracting stated that advantages gained by having UNISYS furnish, install, integrate, and maintain all equipment and software justified the additional cost. However, the Director did not provide any supporting data for this claim.

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## **Millions Spent for Unnecessary Computers**

In December 1989, the Air Force modified the Phase IV contract to replace all UNISYS 1100/60 mainframe computers with newer 2200/400 computers at a cost of \$20 million. These computers were not needed, were justified using unverifiable cost savings projections, are being replaced by larger computers, and restricted the competitive options available to the Air Force for the follow-on contract.

Following a March 1988 meeting between the Vice Commander, Air Force Communications Command, and a UNISYS vice president for Air Force programs, the Vice Commander directed that UNISYS' new mainframe processor—the 2200/400—be added to the Phase IV contract. The Vice Commander directed ssc to develop a technical and cost assessment to justify a procurement in which all existing UNISYS 1100/60 mainframes would be replaced with the new 2200/400. Later in 1988, the

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<sup>4</sup>PACBASE is a commercially available software design tool intended to support the development and life-cycle maintenance of application software.

Vice Commander also directed ssc to negotiate with UNISYS for the replacement.

In June 1988, concerns arose regarding whether the mainframe replacement (1) was within the scope of the Phase IV contract and (2) would have an impact on the follow-on contract. At the same time, even before ssc received a proposal from UNISYS to replace the existing equipment with the 2200/400s, the contracting officer issued a statement indicating that the "soon-to-be-announced" 2200/400 was within the scope of the Phase IV contract. Contrary to this statement, ssc's Office of the Judge Advocate found that there was not enough information to reach a scope determination. As a result, the contracting officer continued to seek legal advice from the Office of the Judge Advocate frequently throughout negotiations for this modification. One of these legal opinions indicated that the addition of the 2200/400s exceeded the scope of the Phase IV contract by allowing an equipment replacement and capacity increase that was anticipated for the follow-on contract period. The Phase IV contract was intended to meet work loads through 1989 only.

SSC, as directed by AFCC's Vice Commander, attempted to justify the replacement by citing expected increases in work load. However, an April 1990 Air Force Audit Agency report on the replacement concluded that workload statistics did not demonstrate a need for an Air Force-wide replacement.<sup>5</sup> Following this report, the Air Force modified its position and claimed that the replacement was justified by cost savings in maintenance. However, the Air Force used inadequate data to support this assertion. ssc's cost analyses were revised several times, but each version was flawed. ssc's November and December 1989 cost analyses documents indicated that the cost to procure and maintain 2200/400 computers would be \$49 million less than maintaining the existing 1100/60 computers over 5 years, but these figures were incomplete and misleading. The analysis did not include the \$6.4 million cost for 7 of the 120 systems, but did include savings for all 120 systems. Further, the projected operations and maintenance cost savings were based on unverifiable information. The Air Force did not have accurate information on the number of systems being maintained, actual maintenance costs, or operations costs. Therefore, the Air Force had no valid basis for purchasing the 2200/400 computers under the Phase IV contract.

Officials from the Air Force's Command, Control, Communications, and Computers Directorate told us that this procurement was advantageous to

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<sup>5</sup>Report of Audit 905-0-8, Systems 1100/60 Hardware Upgrade, Apr. 2, 1990.

both the Air Force and UNISYS. The Air Force got newer technology equipment and reduced operations and maintenance costs. These officials stated that the contractor benefitted by liquidating its inventory of equipment, recording a sale, and eliminating the requirement to maintain obsolescent equipment.

In fact, the procurement was not advantageous to the Air Force. First, the computers were not needed. Since insufficient funds were available when the Air Force finally agreed to the 2200/400s replacement, UNISYS offered to deliver the equipment with no obligation to the Air Force. UNISYS also agreed to take back the 2200/400s if funding did not become available or if the Air Force decided not to purchase them. According to Air Force officials, the equipment was delivered and stored—not installed or used—until funding became available between June and September 1990, nearly 2 years after the original proposal. During that time, the existing equipment was more than adequate to meet the Air Force's needs. Clearly, there was no pressing requirement for the new equipment. A contracting officer's memorandum noted his belief that such actions were arranged to benefit the fiscal year-end financial position of the contractor.

Second, the 2200/400 computers are already being replaced by larger ones. The Air Force is moving away from base-level computing where each base located in the United States has a computer center. Instead, it plans to implement five regional data processing centers by 1993. Beginning in Fall 1991, the Air Force began to install larger mainframe computers at the first regional center. This installation began just 1 year after funding was approved for the 2200/400 replacement. In fact, plans for regional centers were known in June 1990 when the Air Force began to get funding for the 2200/400s.

Finally, by replacing the older UNISYS equipment in the last year of the Phase IV contract, the Air Force limited competition for the SBLC follow-on contract. ssc's Deputy Chief of Staff for Systems Support acknowledged that the replacement limited competition for the follow-on contract because the 2200/400 replacement insured that only UNISYS could provide maintenance and upgrades for the follow-on contract. Other sources were available to maintain the older equipment.

# Air Force Actions Discouraged Competition

In pursuing its strategy to continue with a single vendor for base-level hardware and software support, the Air Force discouraged competition for the SBLC follow-on contract. Specifically, the Air Force improperly combined competitive and sole-source requirements in its initial advertising for prospective bidders, structured its procurement to discourage competition in subsequent advertising, and used a flawed cost study to justify its sole-source strategy. The Air Force Communications Command's Competition Advocate recommended a more competitive strategy, but his advice was disregarded. As a result, the SBLC follow-on contract includes items that should have been procured competitively or justified separately for sole-source awards. Furthermore, the Air Force may be forced to continue its exclusive relationship with UNISYS as delays in modernizing software make competition unlikely when the SBLC follow-on contract ends in 1997.

## Acquisition Strategy Discouraged Competition

Despite CICA requirements for full and open competition, the Air Force failed to develop a strategy to obtain full and open competition for the follow-on contract. The Air Force decided to award the follow-on contract to UNISYS before advertising for bidders for the contract and before completing a cost study to identify the most cost-effective acquisition strategy. An April 1988 memorandum from SSC's follow-on contract program manager to AFCC stated that to meet SSC's primary Phase IV objective—a 20-year commitment to UNISYS—SSC did not plan to award a competitive contract and that documents justifying a sole-source award had already been drafted. These actions indicate that 4 years after CICA mandated competition and 3 years before the Phase IV contract ended, the Air Force was developing a strategy to award a sole-source contract.

## First Advertising Restricted Competition by Improperly Aggregating Requirements

The Air Force's first Commerce Business Daily synopsis,<sup>1</sup> published April 20, 1988, defined the Air Force's intent to award a contract to provide (1) maintenance of currently installed hardware and operating system software, (2) hardware and software upgrades to support work load and technology, (3) automated software development tools, and (4) technical support such as training. The synopsis required offerors to demonstrate access to UNISYS proprietary information and to obtain permission from UNISYS to enhance system software. Fourteen vendors requested further information about the solicitation but, since UNISYS was the only source

<sup>1</sup>Government agencies are required to announce requests for contract proposals in a publication called the Commerce Business Daily.



with access to its proprietary data, only UNISYS could meet this requirement.

Contrary to CICA requirements, the Air Force issued an announcement that precluded competition for all aspects of the procurement. The Air Force knew that no offerors could obtain access to UNISYS proprietary data. UNISYS had advised the Air Force that it would not release proprietary data to third parties or to the Air Force. Even with this knowledge, the Air Force required vendors to demonstrate access to proprietary information and aggregated follow-on contract requirements so that offerors had to bid on an all-or-nothing basis. It is true that for some of the requirements, such as those involving system software, UNISYS proprietary information was essential. However, no proprietary information was needed to provide automated software development tools or technical support such as training. Because the requirements were aggregated, however, only UNISYS responded that it could meet all the requirements.

In a June 1988 memorandum to AFCC, the Air Force's Competition Advocate General suggested that requirements be broken into segments that could be competed separately rather than considering only offers that satisfied all the requirements. This approach was intended to enhance competition.

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### Subsequent Advertising Discouraged Competition

In response to concerns from the Competition Advocate, on August 15, 1988, the Air Force advertised again in the Commerce Business Daily. This time the Air Force specified that bidders could respond on individual segments and required access to proprietary information only where it was essential. These segments included system software maintenance and upgrades and technical support, hardware maintenance and upgrades, and software development tools. Again, only UNISYS bid. We spoke to several vendors who were potentially qualified to perform work on the segment requiring software development tools. They told us that only UNISYS was qualified for most of the tasks. Therefore, they concluded that including competitive requirements in the same Commerce Business Daily advertising was a ploy to entice vendors to respond when only UNISYS could win. These vendors also said that they knew that the Air Force was planning a separate Defense-wide procurement for these tools. One vendor said that it was unlikely that any development tools would be purchased from the contract. Another vendor said that ssc

officials persuaded him not to bid on the SBLC contract, but to wait and bid on the Defense-wide contract for software development tools.

### Flawed Cost Study Used to Justify Sole-Source Strategy

The Air Force hired a contractor to perform a cost study of alternative acquisition strategies for the follow-on contract. According to the follow-on program manager, the cost study was expected to show that awarding a sole-source contract was the most cost effective strategy. The study examined the following alternative strategies:

- other than full and open competition without capital replacement—a strategy to continue the contract with UNISYS;
- full and open competition without capital replacement—a strategy to award a contract to a new prime contractor to provide integration and support services and continue with UNISYS for system software and hardware replacements and upgrades; and
- full and open competition with capital replacement—a strategy to award a competitive contract to replace the existing hardware and rewrite the system software, as necessary. The first and second strategy covered 11 years—1991 to 2002. The third strategy covered a 20-year period—1991 to 2010.

For a cost study to be valid, each strategy should include identical assumptions and comparable cost data. The study director recognized this and asked that SSC provide Phase IV cost information and allow him to include the costs of capital replacement and the same time periods for each alternative. However, SSC could not provide Phase IV cost information because Phase IV costs were not known. SSC also would not allow the director to include the cost of a capital replacement—the 2200/400 replacement—in the strategy to continue with UNISYS. As a result, the analysis was not valid. It compared 20-year costs for the fully competitive strategy with 11-year costs for the other alternatives, and only the 20-year strategy included a capital replacement. Despite the fact that the study director believed the study was flawed, SSC used the study to support its decision to award the follow-on contract to UNISYS without full and open competition.

### Competition Advocate Recommended a Competitive Strategy

The Competition Advocate at AFCC refused to sign the sole-source justification and authorization document. He recommended a strategy that would eventually eliminate reliance on UNISYS. He was concerned that a sole-source award would perpetuate the Air Force's exclusive relationship

with UNISYS. Furthermore, the Advocate said the justification confused maintaining existing hardware with upgrading it and that continued upgrades would further dependence on UNISYS.

The Competition Advocate's plan included limiting upgrades of hardware to support immediate requirements. Under this plan, UNISYS would be required to help the Air Force transition away from proprietary software, and requirements for software development and long-term hardware upgrades would not be included under the sole-source contract. The SSC and AFCC Commanders disagreed with the plan and proceeded with the sole-source award to UNISYS for the follow-on contract, including hardware and software upgrades and software development.

Air Force officials at SSC and the Pentagon told us in September 1992 that they agree that software development products should be competed. They plan to award a Defense-wide competitive contract for software development tools and do not plan to purchase these products from the follow-on contract.

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## **Sole-Source Relationship Continues and Competition in 1997 Is Unlikely**

The Air Force does not plan to alter its sole-source relationship with UNISYS. Air Force officials stated that they prefer that a single vendor provide all base-level hardware and software support and be responsible for the entire system. According to the Commander at AFCC and other senior Air Force officials, awarding a sole-source follow-on contract and continuing the dependent relationship was a good business decision; however, they provided no analysis to support this decision. In a letter to an interested third-party vendor, the Air Force said it refuses to manage numerous contracts, integrate components manufactured by different vendors, and ensure system effectiveness. A second letter states that the Air Force has chosen not to compete individual items because costs in procurement, management oversight, and integration would increase dramatically. According to the letter, cost savings from competition would have to be compelling for the Air Force to change reliance on UNISYS.

Our review indicates that the Air Force has not performed any analysis to demonstrate what costs and potential savings might accrue from competition for procurements under the SBLC contract. Further, administrative convenience is not an adequate justification for a sole-source award.

The DPA for the SBLC follow-on contract requires the Air Force to report annually to GSA regarding its progress toward achieving competition by 1997, when the follow-on contract ends. The latest report details the Air Force's attempts to become less dependent on UNISYS through its software modernization project. This project is designed to develop software that will operate in an open systems environment.<sup>2</sup>

According to Air Force headquarters officials, three pilot projects are underway to assess the effectiveness of various modernization approaches. They reported that each project is behind schedule and that the entire project will not be completed until 2005. Therefore, according to Air Force officials at SSC and the Pentagon, maintaining UNISYS system software and hardware will be necessary until software modernization is complete. Consequently, SSC plans to award another sole-source, 6-year contract to UNISYS in 1997.

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<sup>2</sup>An open system is one whose interfaces conform with vendor-independent standards and can, therefore, accept add-ons produced by third-party suppliers.

# Conclusions and Recommendations

**Our review of two key base-level contracts—Phase IV and SBLC valued at over \$1.5 billion—has revealed a pattern of mismanagement and inappropriate actions at the Air Force’s Standard Systems Center. This pattern has discouraged competition and resulted in the purchase of millions of dollars in unneeded equipment.**

**First, ssc did not establish effective mechanisms and procedures to track orders, deliveries, and payments on the Phase IV contract. As a result, it lost control of the nearly \$1 billion contract and is still unable to reconcile expenditures, even though the contract ended in June 1991. Since the information system used to track orders and inventory is ineffective and since ssc has been unable to enforce its use, these contract control problems are likely to continue on the SBLC follow-on contract.**

**Second, ssc inappropriately used the Phase IV contract to purchase equipment and services that were not within the scope of the contract, did not satisfy documented or validated user requirements, and were not properly cost justified. These actions precluded competition and in some cases resulted in the procurement of equipment that was not needed. Furthermore, they were taken despite legal cautions from ssc’s Office of the Judge Advocate General. The conditions that allowed ssc to inappropriately use the Phase IV contract to purchase out-of-scope and unneeded equipment still exist for the SBLC contract.**

**Finally, despite CICA, the Air Force is continuing its commitment to a single vendor for all its base-level computing needs. This commitment discouraged competition and resulted in a sole-source award for the SBLC follow-on contract. Unless ssc takes aggressive actions to reduce its dependence on UNISYS by the time the SBLC contract ends in 1997, it will award another sole-source contract to UNISYS.**

## Recommendations to the Secretary of Defense

**We recommend that the Secretary of Defense direct the Secretary of the Air Force to take actions to institute greater controls over the SBLC contract and promote a more competitive environment for meeting base-level data processing needs. Specifically, these actions should include the following:**

- **Improve accounting and control procedures over the SBLC follow-on contract to ensure effective management of expenditures, equipment deliveries, and services. In addition, the Information Processing Management System should be improved to assure proper tracking and**

accounting for contract costs and equipment inventories, and monitoring of contract and DPA limits.

- Improve SBLC contract management practices to ensure that only modifications are executed that are (1) within the scope of the contract and (2) supported by validated user requirements and convincing cost/benefit analyses.
- Develop a strategy, consistent with the provisions of CICA and implementing regulations, to promote a more competitive environment for meeting base-level data processing requirements. Such a strategy should, as a minimum, (1) limit orders under the SBLC follow-on contract to maintaining existing base-level systems and equipment, and competitively acquiring software development products and services; and (2) ensure that SSC establishes and gives top priority to initiatives which will allow greater competition for base-level computing needs by the time the SBLC follow-on contract ends in 1997.

## **Agency Comments and Our Evaluation**

As requested, we did not provide a draft of this report to the Air Force for its review and comment. However, we discussed the report's contents with the Air Force's Deputy Chief of Staff for Command, Control, Communications, and Computers and senior Air Force officials at SSC, AFCC, and the Pentagon. We have included their comments as appropriate. Air Force officials agreed that Phase IV cost and expenditure information was inadequately tracked and that the contract was not properly controlled. These officials disagreed that some Phase IV modifications were out of the contract's scope and legal opinions regarding these modifications were not heeded. They also disagreed that competition was unnecessarily restricted for the follow-on contract.

Regarding contract modifications, according to contracting and command officials, legal opinions were given due consideration and were factored into modification decisions. Legal officials also stated that their opinions are advisory and that the contracting officer should continue to make scope decisions and approve modifications. Our analysis indicates that modifications exceeded the contract scope and that legal advice, while considered, was inappropriately disregarded.

Air Force officials disagreed that the 2200/400 computer replacement was not justified. They stated that the new computers provided maintenance cost savings, greater capabilities, and movement toward a more vendor-independent environment. We believe that the cost savings were exaggerated and, because of the lack of accurate data, could not be

validated. Further, the computer replacement provided little additional capacity, and limited competition for the follow-on contract because only UNISYS could provide maintenance.

Finally, Air Force officials disagreed that the sole-source approach under the follow-on contract is inappropriate. They stated that, in addition to supplying system software and hardware for base-level computing needs, UNISYS provides valuable system integration services and reduces the Air Force's administrative burden by making one contractor responsible for total system performance. The Air Force provided no data supporting its claims that its administrative burden would have been significantly increased, or that contracting exclusively with UNISYS was a cost-effective approach to reducing it. We believe the Air Force's approach to rely exclusively on UNISYS has cost millions of dollars in the procurement of equipment and software that in some cases was not needed, and in other cases might have been less costly if procured competitively.

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