



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

JULY 18, 1984

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RELEASED

The Honorable Jack Brooks
Chairman, Committee on Government
Operations
House of Representatives

Dear Mr. Chairman:

Subject: Navy Did Not Adhere to Procurement Regulations
In Acquiring a Computer for Its Ships Parts
Control Center (GAO/IMTEC-84-16)

In your September 15, 1983, letter (see encl. II), you asked us to evaluate the U.S. Navy's acquisition and use of an International Business Machines (IBM) 3032 computer installed at the Ships Parts Control Center in Mechanicsburg, Pennsylvania. In 1979, the U.S. Army Corps of Engineers leased this computer under the foreign military sales program to support the Saudi Arabian Naval Expansion Program. Later, the Navy acquired the IBM 3032 for its Weapons Systems File Download project.

You asked us to evaluate the legality of the Navy's actions in acquiring and using the IBM 3032, focusing on (1) the procurement policies and procedures that governed the acquisition of the IBM 3032; (2) the roles and responsibilities of, and funding arrangements between, the U.S. and Saudi navies; (3) the Saudi Navy's requirement and what was actually developed during the project; and (4) how the U.S. Navy used the computer for the Saudi project and for its own project. We also evaluated the Army Corps of Engineers' compliance with applicable foreign military sales and computer procurement laws, rules, and regulations in leasing the IBM 3032.

On November 2 and December 6, 1983, we briefed your office on the progress of our work. This is our report on the matter. Our overall assessment is that the

--Army Corps of Engineers followed established laws, rules, and regulations in leasing the IBM 3032 for the Saudi Naval Expansion Program;



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- Navy did not follow applicable laws, rules, and regulations in acquiring the IBM 3032--prompting the unnecessary expenditure of about \$831,000 for a sole-source lease of the IBM 3032 and the acquisition of a computer that exceeded project needs; and
- Navy used the IBM 3032 for its own project while the computer was being leased with Saudi foreign military sales funds.

The Navy knew that it had not followed proper procedures in acquiring the IBM 3032. Even though the Naval Data Automation Command approved the Weapons Systems File Download project, it stated that the approval should not be viewed as a precedent for future actions or a relief from following the requirements in Navy regulations. We agree and believe that proper implementation of existing Navy regulations will promote competitive computer acquisitions to best fulfill the Navy's missions.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to answer the questions in your September 15, 1983, letter. Except as noted below, our review was made in accordance with generally accepted government auditing standards. From October 1983 to April 1984, we performed our work at the Naval Supply Systems Command, Naval Sea Systems Command, Naval Data Automation Command, Ships Parts Control Center, Fleet Material Support Office, and General Services Administration. We examined records and held discussions with representatives of organizations that acquired and used the IBM 3032 for both the Saudi and U.S. Navy projects. We did not obtain official agency comments on this report.

We were limited in our audit because detailed documents on the Saudi and U.S. Navy projects and on the use of the IBM 3032 either were not created or were not retained. Many staff changes have occurred since the IBM 3032 was leased for the Saudis in 1979 and then later by the U.S. Navy in 1981. Officials responsible for the IBM 3032 acquisition have transferred to other jobs. Further, the individual who was the manager of the Download project when the Navy acquired the IBM 3032 is no longer with the agency, and available project files are incomplete.

HISTORY OF THE IBM 3032 ACQUISITION

Since 1972, the U.S. Government, under a Memorandum of Understanding with the Saudi Arabian Government, has been involved in a program to assist the Royal Saudi Naval Forces in establishing a modern naval force to protect Saudi interests. This is a joint U.S. Navy and Army Corps of Engineers effort, referred to as the Saudi Naval Expansion Program. The program's principal elements are to construct two deep-water ports and provide the Saudis with support facilities and ships, as well as related training,

services, materials, and munitions. The computer component of the program involves the acquisition and transfer of automatic data processing systems to the Royal Saudi Naval Forces, and aid in planning their operation, maintenance, and support.

The Arms Export Control Act of 1976, (22 U.S.C. 2715 et seq.) authorizes the President to sell defense articles and services to foreign countries at no cost to the U.S. Government. Defense normally requires foreign customers to make cash-in-advance progress payments. The payments are supposed to be paid quarterly and are based on estimated requirements to cover all costs associated with a sales agreement. These advance payments are held in trust to protect the interests of the United States. Defense then uses these moneys to pay for goods and services it buys for foreign customers and to cover Defense costs.

Accounting and financial management activities of the foreign military sales program involve more than 40 Defense organizations. The Security Assistance Accounting Center in Denver, Colorado, established in November 1976, is Defense's central foreign military sales billing and collecting organization. The Center is responsible for providing to foreign customers an accounting of their deposits to and disbursements from the trust fund. The Center also prepares foreign customers' bills and reimburses the individual military departments' appropriations for expenses incurred. The military departments are responsible for detailed accounting and for paying contractors.

The Army Corps of Engineers originally leased the IBM 3032 in November 1979 for the Saudi program because project funds for constructing computer centers in Saudi Arabia included funds for computers. According to Corps documents, the Saudi selection of the IBM 3032 was based on a Navy analysis of Saudi requirements for an automated supply system.

There have been many changes in the Navy's development of an automatic data processing system for the Saudis. For example, the IBM 3032, used initially to develop the automated supply system, has been replaced by an IBM 4341 computer. In March 1981, the Saudis decided to replace the IBM 3032 because (1) of delays in constructing computer centers in Saudi Arabia and (2) the IBM 4341 did not require chilled water for cooling and could operate outside of a computer center; the IBM 3032 required chilled water for cooling. The Navy then began to modify the Saudi supply system, designed for the IBM 3032, to operate on the IBM 4341. The Navy leased the IBM 3032 for the Saudi program through September 1981 so that these modifications to the supply system computer programs could be made. The Navy also began to use the IBM 3032 for its own project in August 1981.

The lease of the IBM 3032 for the Saudi program ended in September 1981, and in October 1981, the Navy leased the computer for its Weapons Systems File Download project. The Navy subsequently purchased the IBM 3032 in April 1982, using credits to

reduce the purchase price. The credits were accrued while the computer was being leased for the Saudi program. (Encl. I traces the chronology of the IBM 3032 acquisition and use.)

The Navy's involvement in the Saudi program is ongoing. Navy efforts include training Saudi personnel to operate and use the IBM 4341 and developing additional segments and features for the Saudi supply system.

INITIAL COMPUTER ACQUISITION WAS PROPER;
SUBSEQUENT NAVY ACTIONS WERE NOT

Our review showed that the Army Corps of Engineers complied with applicable procurement laws and regulations in leasing the IBM 3032 for the Saudi program. However, in acquiring the computer for its own use, the Navy did not follow prescribed procurement laws and regulations. Further, the Navy used the IBM 3032 for its own project while the computer was being leased for the Saudi program.

Initial acquisition was proper

The Army Corps of Engineers' sole-source acquisition of the IBM 3032 for the Saudi program was proper. In its justification, the Corps stated that, according to established laws and regulations,¹ the IBM 3032 could be obtained by a negotiated contract without formal advertising. The law states the conditions under which obtaining competition is not practical. The implementing Defense Acquisition Regulations state that the policy of obtaining competition by formal advertising need not be followed

"when the contemplated procurement is to be reimbursed by a foreign country, which requires that the product be obtained from a particular firm as specified in the Letter of Agreement or other written direction by the Military Sales Organization"

In identifying their computer requirements, the Saudis directed that computers for their naval expansion program be compatible with other IBM computers used by the Saudi Ministry of Defense and Aviation. A U.S. Navy study of the Saudi computer requirements identified the IBM 3032 as meeting this requirement. On the basis of this study, the Saudi Navy directed the IBM 3032 acquisition. This direction formed the basis for the Corps' sole-source justification.

¹10 U.S.C. 2304(a)(10), as implemented by Defense Acquisition Regulations, par. 3-210.2 (xviii).

Subsequent Navy actions did not follow applicable regulations

In acquiring the IBM 3032 for its Weapons Systems File Download project, the Navy did not follow internal or General Services Administration regulations. As a result, the Navy

- leased the computer before it had authority to do so;
- used the IBM 3032 while it was being leased with Saudi funds;
- did not identify users or their requirements before starting the Download project;
- unnecessarily spent about \$831,000 on a sole-source lease of a computer; and
- acquired a computer that exceeded project needs.

Navy did not have authority to lease computer

The acquisition of the IBM 3032 for the Navy's Download project was subject to (1) Public Law 89-306, 40 U.S.C. 759, et seq., commonly referred to as the Brooks Act; (2) General Services Administration regulations (41 C.F.R. 1-4.11, et seq.); and (3) Navy directives and regulations governing the procurement of automatic data processing equipment.

We found that the Navy's October 1981 lease of the IBM 3032 was improper because the Navy did not request a Delegation of Procurement Authority as required by General Services Administration regulations. Therefore, the Navy did not have the authority to lease or acquire the IBM 3032. This problem appeared to be mitigated when, in December 1981, on the basis of an urgent requirement, the Navy requested, and the General Services Administration granted, an interim Delegation of Procurement Authority for a 6-month, sole-source lease of the IBM 3032, pending a competitive procurement. However, the Navy applied the sole-source lease authority retroactively to cover the October 1981 through December 1981 period. Because the Navy did not anticipate purchasing the IBM 3032 until April or May 1982, it requested and was granted a 2-month extension to the sole-source lease authority to cover these months.

The Naval Data Automation Command--the Navy's central computer policy and approval office--knew that the Download project, used to justify the IBM 3032 acquisition, was already started and that the computer was being leased before necessary Navy approvals were granted for the acquisition and the Download project. Attempting to make the best of this situation, the Command changed the proposed Navy approach to acquiring the IBM 3032 from a sole-source purchase to an interim sole-source lease while a request for

proposals was developed and advertised. The Command made this change because it determined, on the basis of a market analysis, that cost reductions were possible.

The Command's assessment was correct. IBM was aware of the upcoming termination of the 3032 lease for the Saudi program, and in July 1981, it offered the IBM 3032 (including the \$1 million Saudi lease credits) to the Navy at a cost of about \$1.4 million. After the Navy solicited bids in February 1982, IBM, in April 1982, lowered the offered price of the IBM 3032 and related equipment to \$726,000--a 50-percent price reduction.

With the computer already in place and programs developed, the Naval Data Automation Command approved the Download project. The Command cautioned that the sequence of events associated with approval of this project should not be viewed as either a precedent for future actions or a relief from following the requirements in Navy regulations. Command documents supporting the approval state that the Download project should not have gotten as far as it did, but a delay in the approval would not erase what had been done.

Navy used the IBM 3032 while it was being leased for the Saudi program

The Navy used the IBM 3032 from November 1979 through September 1981 to develop the Saudi supply system. Navy officials said that because the Saudi project was considered a research and development effort, the Navy did not keep logs on computer usage.

In March 1981, the Saudis had directed that the IBM 3032 lease be terminated by September 1981 and that the Navy modify the automated supply system to operate on the IBM 4341. The Navy used the IBM 3032, which was still being leased with Saudi funds, to make these modifications. However, during the Saudi project modification, in August 1981, the Navy also began using the IBM 3032 for its own project. Records we obtained do not show whether the Saudis knew about this use. The Navy did not use its own funds to lease the IBM 3032 until October 1981.

Navy obtained the IBM 3032 before determining its needs

Citing longstanding concerns about the timeliness, accuracy, and accessibility of weapons system data, the Navy used the urgency of the Download project to justify the sole-source lease and acquisition of the IBM 3032. The Download project involved taking weapons system data off one Navy computer and placing it on the IBM 3032 so that users could access data via computer terminals; existing Navy computers could not accommodate the additional terminals. Accordingly, the Navy, in October 1981, made a sole-source lease of the IBM 3032 for the project. The lease covered the period from October 1981 to April 1982 and cost approximately \$831,000.

We do not believe the Navy was in a position, in October 1981, to decide on a computer to satisfy its needs because the Navy had not identified users or their requirements. Furthermore, had the acquisition been properly approached--users identified and their requirements established before deciding on the type of computer needed--the Navy could have avoided the \$831,000 lease without unduly delaying the project.

General Services Administration regulations require agencies to identify users and their requirements before procuring computers. This is an essential step in developing a cost-effective computer system that meets user needs. By performing this step, an organization can identify the functional requirements needed to acquire a properly sized computer, develop the necessary computer programs, and ascertain the urgency of the users' needs and options for satisfying them in a timely manner. We have reported on the problems that can arise if user requirements are not adequately defined before a project begins. A prior report² showed that of 57 failures in the design and development of data processing systems, 32 were attributed, at least in part, to problems of insufficient or ineffective management and user involvement.

In the case of the Download project, user requirements were not fully identified before the Navy acquired the IBM 3032. Instead, the Navy's approach called for concurrently (1) identifying users and their needs and (2) developing computer programs on the IBM 3032 that would provide users access to weapons system data. The Navy planned to complete these activities by March 1982.

Both activities were delayed considerably. Because the Navy did not have complete information on user needs before starting the project, and thus had to continually change project scope and user requirements, computer programs were not completed until September 1983. Furthermore, the programs developed were based on the requirements of two known user organizations. A Navy survey of 15 organizations to identify other potential users was not started until September 1983 and was not completed until February 1984.

Our analysis of the time the Navy needed to perform essential acquisition steps showed that the sole-source lease could have been avoided and the \$831,000 could have been saved without unduly delaying the project. Steps the Navy ultimately performed in the acquisition process took over 10 months. Users were surveyed over a 6-month period--from September 1983 through February 1984. Four months elapsed between the time the Navy initially requested a Delegation of Procurement Authority in December 1981 and the time it signed a purchase contract in April 1982. Therefore, if the

²"Government-Wide Guidelines And Management Assistance Center Needed to Improve ADP Systems Development" (AFMD-81-20, Feb. 20, 1981).

Navy had followed proper procedures in October 1981--identifying user requirements and acquiring a computer to meet them--it would have acquired a computer by about July 1982. However, this acquisition delay would have been offset by the avoidance of the Navy's project delays that resulted from beginning the Download project before identifying user requirements. Moreover, the Navy would have saved the \$831,000 spent on its sole-source lease of the IBM 3032.

Credits accrued during the Navy's sole-source lease of the IBM 3032 helped lower the computer's purchase price. However, because the Navy had not determined its user requirements before establishing what its computer needs were, it lost the opportunity to acquire a much smaller computer at a lower price.

IBM 3032 exceeded project needs

Because the Navy did not analyze user requirements for the Weapons Systems File Download project, it acquired a computer with processing capacity that exceeded its needs. The Navy knew about this excess capacity before it acquired the IBM 3032; when planning the Download project, the project manager indicated in a memorandum that the computer could be used for other projects. Later, the Navy identified other possible applications for using the computer. It also hired a contractor to evaluate the computer's use. The contractor's analysis of the IBM 3032 confirmed that the computer processing capacity exceeded the Navy's needs for the Download project. On the basis of the contractor's analysis, the Navy expanded its use of the IBM 3032 to cover the other identified computer applications, requiring a doubling of the computer memory.

A subsequent internal study, directed by the Senior Navy Steering Board, prompted a second doubling of the IBM 3032 memory in 1983--to about four times its original capacity. The study had led to the establishment of a 5-year Navy project to improve ship maintenance, thus requiring additional data on the IBM 3032. The added computer memory and associated equipment cost more than \$1 million. The Navy estimated that an additional \$5.5 million would be needed to write programs for the computer and generate data elements for new computer applications.

Although we did not evaluate the applications subsequently placed on the IBM 3032 by the Navy, it appears that other needs existed that were satisfied by the IBM 3032. However, the Navy's approach, acquiring a computer and then identifying applications to use it, can potentially lead to the development of projects that would not have been justified unless the excess computer capacity existed. For this reason, General Services Administration regulations require agencies to monitor their data processing requirements and develop plans to meet future needs at the lowest overall cost.

NAVY ACTIONS

In December 1983, we discussed our concerns about the IBM 3032 acquisition with the special assistant for data automation in the Office of the Assistant Secretary of the Navy (Financial Management). This office is the Navy's approval authority for computer acquisitions. We were told that the Navy was aware of the circumstances surrounding the IBM 3032 acquisition. On the basis of concerns raised during our meeting, the Assistant Secretary requested a Naval Audit Service investigation of the IBM 3032 acquisition. Service auditors told us that the Service has concerns similar to ours.

CONCLUSIONS AND RECOMMENDATION

The initial acquisition of the IBM 3032 by the Army Corps of Engineers for the Saudi Naval Expansion Program followed established laws, rules, and regulations. The Navy's subsequent acquisition of the IBM 3032, however, was improper because the Navy did not follow applicable regulations and did not identify user requirements. As a result, the Navy acquired a computer that exceeded project needs, and it unnecessarily spent about \$831,000 on a sole-source lease of the IBM 3032.

The Naval Data Automation Command stated that its approval of the Weapons Systems File Download project should not be viewed as a precedent for future actions or a relief from following the requirements in Navy regulations. We agree and believe that continued advance planning and definition of needs by the Navy commands are essential, particularly for new and longstanding improvement requirements. Proper implementation of existing Navy regulations will promote competitive computer acquisitions to best fulfill the Navy's missions.

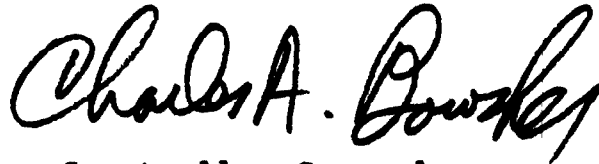
We do not know whether the Saudis are aware that while the IBM 3032 was still being leased with Saudi trust funds, the Navy used the computer for 2 months to develop its Download project. We recommend that the Secretary of the Navy assure that the Saudis are advised of the Navy's use of the IBM 3032 while it was being leased with Saudi funds.

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We did not obtain official comments from the Navy on this report. However, we discussed the contents of the report with program officials and included their comments where appropriate.

Unless you release its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will send copies to the Chairmen, House and Senate Committees on Appropriations and on Armed Services; the Director, Office of Management and Budget; the Secretaries of Defense and the Navy; and the Acting Administrator of General Services.

Sincerely yours,

A handwritten signature in black ink, reading "Charles A. Bowsher". The signature is written in a cursive style with a large, prominent initial "C".

Comptroller General
of the United States

Enclosures - 2

CHRONOLOGY OF EVENTS SURROUNDING IBM 3032ACQUISITION AND USE

<u>Event</u>	<u>Date</u>
Corps of Engineers leases IBM 3032 for the Saudi program	Nov. 1979
IBM 3032 is installed at the Navy's Ships Parts Control Center	Nov. 1979
Work begins on Saudi supply system using the IBM 3032	Nov. 1979
Administration of the IBM 3032 lease is transferred from the Corps of Engineers to the Navy	Dec. 1, 1979
Saudis direct the Navy to terminate IBM 3032 lease and convert supply system to IBM 4341	Mar. 2, 1981
IBM offers 3032, including Saudi lease credits, to the Navy	July 21, 1981
Navy begins to develop programs for the Weapons Systems File Download project using the IBM 3032	Aug. 1981
Navy terminates lease and use of IBM 3032 for the Saudi program	Sept. 30, 1981
Navy begins sole-source lease of the IBM 3032 for the Download project	Oct. 1, 1981
Navy requests a Delegation of Procurement Authority for a 6-month, sole-source lease and purchase of an IBM 3032	Dec. 2, 1981
General Services Administration grants the Navy a Delegation of Procurement Authority	Dec. 17, 1981
Navy requests bids for an IBM 3032 computer	Feb. 1, 1982
Navy requests a 2-month extension of its Delegation of Procurement Authority for the IBM 3032	Feb. 3, 1982
General Services Administration grants the Navy an extension of its Delegation of Procurement Authority	Feb. 16, 1982
Navy awards a purchase contract for the IBM 3032	April 23, 1982
Senior Navy Steering Board report recommends adding data to the IBM 3032	June 20, 1983
Navy begins a survey of potential Download users	Sept. 1983
Navy completes programming for the Download project	Oct. 1983
Navy completes its survey of potential Download users	Feb. 1984

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NINETY-EIGHTH CONGRESS

Congress of the United States
House of Representatives

COMMITTEE ON GOVERNMENT OPERATIONS

2157 RAYBURN HOUSE OFFICE BUILDING
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September 15, 1983

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The Honorable Charles A. Bowsher
 Comptroller General
 General Accounting Office
 441 G Street, N.W.
 Washington, D.C. 20548

Dear General:

The Committee is currently investigating the Navy Supply Systems Command's attempts to replace computer systems under a program called the Inventory Control Points (ICP) Resolicitation Project. One of the systems scheduled for replacement is an IBM 3032 currently installed at the Ships Parts Control Center, Mechanicsburg, Pennsylvania. It is my understanding it was installed to support a Saudi Arabian project under the foreign military sales program, and thus was not originally acquired in accordance with Federal procurement laws and procedures.

I am therefore requesting that you undertake a review to determine the legality of the Navy's actions in acquiring and using this system. You should focus your efforts on the (1) procurement policies and procedures which governed the system's acquisition; (2) roles and responsibilities, including funding arrangements between the U.S. and Saudi Navies; (3) Saudi Navy's requirement and what was actually developed during the project; and (4) U.S. Navy's utilization of the system, both during the Saudi development and after its termination. To facilitate completion of the Committee's investigation, an oral report of your findings, conclusions, and recommendations would be appreciated within 30 days.

With best wishes, I am

Sincerely,

 JACK BROOKS
 Chairman