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18 September 1981

MEMORANDUM FOR: Chief, ADP&EB/PD/OL

THROUGH : Deputy Director for Processing, ODP

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FROM [redacted]
Chief, SEB/ED/P/ODP

SUBJECT : ODP Computer System Procurements for FY-82

INTRODUCTION

This memorandum describes ODP's requirements for new computer systems in FY-82 and the systems and vendors capable of meeting these requirements. It also provides a brief summary of the plan developed by ODP to meet all of its FY-82 computer-related requirements and the new system installation schedule that must be met to implement this plan.

ODP FY-82 REQUIREMENTS

Two entirely new services will be initiated by ODP starting in FY-82; 4C (Community-wide Computer-assisted Compartmentation Control System) and CAMS II Development. Both of these services will require dedicated computer configurations, 4C because it will be accessed remotely by non-Agency personnel and CAMS II because it will be housed in the development contractor's facility. In addition to these new services, increased computer resources will be needed to meet the expanding requirements of the VM and GIMS Production services in the Ruffing Center.

During this period the two year lease agreement for the Amdahl 470V/8 computer in the Ruffing Center will expire (April 1982). This is the only major computer system in the ODP inventory that is either not owned by the Agency or in the process of being purchased. Because the Office plan for FY-82 and beyond calls for the current Ruffing Center services (VM and MVS) to be run on processors larger than the 470V/8, releasing this machine when its lease expires and replacing it with a newer more powerful computer will save the Agency the cost of continued rental. The replacement machine, should cost no more than the current rental price of the 470V/8, will have a much longer systems life, and will be needed at this time to meet the anticipated growth in VM requirements.

POTENTIAL VENDORS FOR FY-82 REQUIREMENTS

ODP must meet its on-going Ruffing and Special Center commitments for expanded computing resources within a relatively fixed amount of computer-grade floor space. To accomplish this, the Office replaces older,

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less powerful computer systems with newer, more capable machines. The older systems are then typically used to meet less demanding requirements in other Agency locations.

Only three manufacturers currently market or have announced IBM-compatible systems powerful enough to meet ODP's FY-82 processing requirements. Complete IBM compatibility is a mandatory requirement because of the network of existing hardware the new equipment must be integrated into, and because of the Agency's enormous investment in IBM software. The three IBM-compatible companies are; the IBM Corporation with its 3081, the Amdahl Corporation with its 5860 and the National Advanced Systems Corporation with its AS 9000 series of computers.

The National Advanced Systems Corporation's AS 9000 Series machines do not meet ODP's requirement for domestic manufacture because they are fabricated primarily in Japan. Only the IBM 3081 and Amdahl 5860, therefore, are viable competitors for ODP's FY-82 business. The concluding section of this memorandum briefly outlines ODP's FY-82 computer system plan and the delivery schedule which must be met by potential vendors if the Office is to honor its commitments in a timely fashion.

THE ODP FY-82 COMPUTER SYSTEM PLAN

The ODP computer system plan for FY-82 calls for the installation of three new computer systems. (The third machine will actually be procured near the end of the fiscal year with payments not begining until FY-83.) Each of these systems must be in the performance range of the previously mentioned IBM 3081, Amdahl 5860 or AS 9000 at a minimum. Maintenance must be provided by the original equipment manufacturer.

The first new system to be installed will be used to free the 370/158 UP and the 370/168-2 in the Ruffing Center for the 4C and CAMS II Development services respectively. Since the 4C computer must be available by January 1982, the new system must be installed by no later than November 1981 to provide sufficient acceptance testing and system integration time. Of the two machines capable of meeting this requirement (the 3081 or the 5860), only the IBM 3081 will be available for delivery at this time.

The second computer system installation should be scheduled to allow for the release of the Amdahl 470V/8 when its lease expires in April 1982. In approximately this time frame (the second quarter of FY-82) the current primary VM processor, the 3033 MP, will become saturated. Preliminary benchmark results indicate that the use of the second new processor (also an IBM 3081 because of the 5860 delivery schedule) would help alleviate this problem at least through FY-82. Anticipated improvements to the 3081 system, accelerated processor speeds and expanded memory capability along with software enhancements, should considerably extend this machine's capacity to handle our growing VM workload. Another consideration dictating the choice of the 3081 for VM is the fact that at least three byte multiplexor channels are required for all large VM processors to provide sufficient telecommunications capacity. The Amdahl 5860, as currently announced, will only have two byte multiplexor channels.

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The final FY-82 computer system, needed to meet Ruffing Center MVS requirements in FY-83, can be either an IBM 3081 or an Amdahl 5860. By the time negotiations for this procurement are initiated, in the second half of FY-82, the Amdahl Corporation should be able provide the Agency with access to a 5860 for evaluation purposes.

This plan and its schedule, when implemented, will allow ODP to meet its critical processing requirements in a timely fashion while realizing the advantages of competitive procurement whenever it is feasible. Because of the expected changes to both the capabilities and pricing characteristics of the IBM and Amdahl machines during the next few years, it is recommended that at least the first machine be procured on a relatively short lease basis (two years).

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[redacted]

Chief, SEB/ED/P/ODP

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APPROVE [redacted]

Deputy Director for Processing, ODP

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AH: [redacted] except on AS/9000

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NATIONAL ADVANCED SYSTEMS CORP

Advanced Systems (AS) Series Overview

HISTORY

National Advanced Systems (NAS) is a wholly owned subsidiary of National Semiconductor. Until October 1979, National Semiconductor supplied Itel with the low- and middle-range mainframe lines: AS/3, AS/4, and AS/5. When Itel encountered serious financial difficulties in 1979, National Semiconductor acquired the Itel Data Products Group and formed National Advanced Systems.

PERFORMANCE AND COMPETITIVE POSITION

Ending the fiscal year as one of the top plug-compatible mainframe (PCM) contenders, the National Advanced Systems outlook is bright. Having survived the doomsday mood that prevailed after Itel fell as a result of the IBM 4300 announcement in early 1979, NAS now holds a comfortable Number Two position behind Amdahl.

NAS announcements of the AS/5000E, AS/5000N, and AS/9000 computers connote aggressive moves to compete with other PCM vendors as well as with IBM. The Hitachi-built AS/9000, for example, boasts a power that exceeds the Amdahl 470/V8 and is about twice the power of the IBM 3033. The AS/5000E and AS/5000N, both aimed at the IBM higher-end 4341 computers, directly compete with the Magnuson M80/42 and 43, future Cambex CPUs in the 4331-2 and higher range, the Nanodata QMX 6330s, and the IPL higher-powered 4443 and 4446.

National Advanced System's main rival, though, is IBM, its very lifeline. Throughout the increasingly aggressive IBM strategies against the PCM industry, NAS has responded quickly and decisively. The California-based company recognizes the importance of software for its systems and plans to expand its already wide-ranging IBM operating system support. Future plans call for production of 4300, DOS-type compatibility. In addition, NAS supports a number of IBM peripherals, including 3370 fixed block and 3375 and 3380 count-key data disks, on all its AS/5000 Series computers. Finally, NAS has improved their serviceability plans by offering enhanced maintenance packages for both hardware and software.

OVERVIEW

The National Advanced Systems (NAS) AS/3000, AS/5000, AS/7000, and AS/9000 Series are IBM plug-compatible mainframes aimed at the IBM 4300, System/370, and 303x processor lines. National Semiconductor manufactures the AS/3000 and AS/5000 Series, while the AS/7000 and AS/9000 Series are manufactured by Hitachi of Japan.

The AS/3000 Series consists of two models: the AS/3000N, the initial model of the AS family, and the AS/3000, a computer that serves as an upgrade model to the AS/5000 Series and larger computers. Both systems are compatible with the IBM 4341-1, but only the AS/3000 system provides equivalent performance to the IBM System/370 Model 158-3 and 4341-1.

Succeeding the Itel AS/3 and AS/4 models, the AS/3000N was designed for customers who need a reliable, high-performance computer at a nominal entry price. In addition to its compatibility with the IBM 4341 computer, the AS/3000N can be easily upgraded to the AS/3000 for an additional 20 to 30 percent performance improvement.

As a redesign of the AS/5 Series, the small- to medium-scale AS/3000 represents an attractive growth path for System/360 and 370 users, in addition to providing two times the main memory of the IBM 4341-1.

The AS/3000N and AS/3000 are suitable for a crowded computer room or as development machines for the larger user. In addition, both AS/3000 Series machines use advanced component and packaging technology for increased reliability.

Operating system support for both systems includes DOS, DOS/VS, DOS/VSE, VM/370 (370 mode), VM/370, OS/VS1, OS/VS2 (SVS) virtual operating systems and MFT, MVT, and ACP (Airline Control Program) non-virtual operating systems. The AS/3000 Series processors support OS/VS2 (MVS) and OS/VS2 (MVS/SE with EXTEND) virtual operating systems.

See Table 1 for AS/3000 specifications.

The AS/5000 Series consists of three medium-scale processors: the AS/5000N, AS/5000E, and AS/5000. As fully IBM-compatible and field-upgradable systems, the AS/5000 models provide excellent growth paths for current users of System/360 and 370 Models 145 and 148.

HEADQUARTERS

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Automatic Data Processing
Equipment and Services
Certification and Procurement Checklist

This form with attachments as required must accompany all Agency procurement requests for Data Processing equipment and services in excess of $25,000.00.

Request number 6508820096 Date 30 September 1981

1. A systems study or a revalidation of a previous study has been prepared in accordance with Federal Management Circular 74-5. All alternatives have been examined including those required under OMB Cirular A-76. Supporting documentation is on file in 2D00 Hqs. .

2. The equipment covered by this requirement XXXX (cannot) be obtained from agency excess or Government-wide (GSA) excess lists.

3. The service(s) covered by this requirement (XXX) (cannot) be obtained from other Government ADP units.

4. The equipment (XXX) (cannot) be procured under a Mandatory Requirements Contract or Mandatory Federal Supply Schedules. If the equipment cannot be procured under the forgoing; reason as to why the mandatory equipment is unacceptable is attached.

5. The equipment/services XXXX (cannot) be procured competitively. If the equipment or service is to be procured from a single source, a sole source justification must be attached. Specifically, this justification must address:

(a) The intended use or application of the equipment;
(b) The critical installation schedule(s) or unique features and/or mandatory requirements, dictated by the intended use, that limit the acquisition to a single source of supply or a specific make and model. (The overriding necessity of these competition-limiting requirements shall be clearly identified.);
(c) The fact that no other known or probable source of supply exists for the required equipment, if a sole source procurement is contemplated. (The justification also shall elaborate on the steps taken which led to this conclusion.);
(d) The existence of patent, copyright, or other limitations; and
(e) The practical factors which preclude the development of specifications.

6. Applicable requirements of the Privacy Act 1974 have been complied with.

X. A bidders list of suggested sources is attached.

X. Proper specifications have been transmitted with this request describing:
Performance and Design Requirements
Support
Documentation
Training
Maintenance
Environmental
Systems Life
Desirables
Delivery Periods

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All applicable provisions of the Federal Informations Processing Standards Publications (FIPSPUBS) have been considered in the preparation of these specifications.

X. A Work statement is attached describing:

- Applicable Specifications
- Schedules
- Plans
- GFE Requirements
- Data Item Descriptions
- Tasking and Work Breakdown Structure
- Deliverables
- Data and Documentation

NOTE: A Work Statement is require for all development procurements.

X. Proper evaluation criteria has been prepared.

If Desirable Features are included in the RFP, relative weights expressed in dollar values or points shall be assigned.

All factors upon which the offer will be evaluated and the relative degree of importance of each must be described.

If numerical ratings will be used, the evaluation criteria must show the broad scheme of scoring to be used.

Preparation of a detailed evaluation plan prior to receipt or proposals.

X. If the equipment is available in the Third Party Market, what is the mandatory installation date, systems life, principal period of maintenance? Are any special payment plans desired? Are provisions for liquidated damages required? If liquidated damages are required, a determination and cost estimate of probable actual damages must be attached. Third Party availability not known. Third party source for IBM 3081 must meet conditions of memo (attached) and equal or exceed IBM contract provisions.

12. Comments: Attach a separate sheet.

Please contact Procurement Division, ADP & Engineering Branch, if you have any questions regarding this for

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Initiated By: Name

Title: Chief, Configuration And Environmental Management Branch, ED/ODP

Organization: DDA/ODP

Date:

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Reviewed and Concurred: Nam

Title: Chief, P&PG/MS/ODP

Organization: DDA/ODP

Date: 2 Oct 1981

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ODP-81-437
21 April 1981

MEMORANDUM FOR: Chief, Procurement Division, Office of Logistics

25X1 FROM : [redacted]
Chief, Management Staff, ODP

SUBJECT : Automatic Data Processing Equipment Procurement Policy (U)

1. Automatic data processing equipment (ADPE) manufactured in a foreign country is becoming more and more common in the American marketplace and, hence, senior ODP managers are becoming increasingly concerned, for security reasons, about the possible introduction of foreign made ADPE into Central Intelligence Agency facilities. Two primary reasons for these concerns are physical security considerations and the potential requirement for visits to Central Intelligence Agency facilities by representatives of foreign vendors such as manufacturing engineers. New equipment will use technology that will make
25X1 detection [redacted] very difficult and thus increase the possibility of a successful penetration of our security safeguards. When difficult, complex engineering problems are encountered with ADPE manufactured in U. S., it usually is possible and sometimes necessary to bring design engineers to Headquarters to resolve the problems. However, it would not seem prudent to bring design engineers of foreign manufactured equipment into Agency buildings. Our security concerns, then include:

25X1

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- Difficulty in access to engineering/manufacturing personnel.

- Possibility of having to utilize foreign national engineering/manufacturing specialists for maintenance of hardware/software. (C)

2. Therefore, for security reasons, and with the concurrence of the Chief, Information Systems Security Group, Office of Security, we propose to establish the following policy regarding the procurement of ADPE for use in Office of Data Processing computing facilities.

> "It is the policy of the Office of Data Processing that automatic data processing equipment which is substantially of foreign manufacture will not be procured for use in Office of Data Processing computer networks." (U)

3. Do you have any suggestions, for procurement reasons, that would strengthen this policy? (U)

[redacted] 25X1

cc: D/ODP
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C/ISSG/OS
DD/A/ODP
DD/P/ODP
C/ED/ODP
C/P&PG/ODP
SO/ODP
C/ADP&EB/PD/OL

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