United States General Accounting Office 132109

GAO

Testimony

For Release
Expected at
10:00 a.m. EST
Friday
February 6, 1987

Computer Support for Tax Processing Needs Continuing IRS Attention

Statement of
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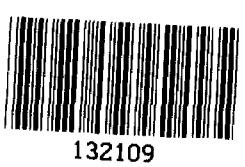
Before the
Subcommittee on Oversight
Committee on Ways and Means
House of Representatives



Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to provide information on the Internal Revenue Service's (IRS') computer systems. These systems are critical to processing tax returns, answering taxpayer inquiries, and issuing refunds. The computer issues we will discuss are the focus of two recent GAO reports to this Subcommittee.[1] In these reports we made recommendations to IRS that we believe are essential to ensuring that computer resources adequately support the successful processing of tax returns in this filing season and in the future. I will briefly summarize these reports and, on the basis of some limited follow-up work, provide you with the current status of these issues and IRS' actions on our recommendations. I will also discuss how well IRS' computers have supported tax return processing during the first month of the 1987 filing season and comment on the objectives and status of the Tax System Redesign project.

IRS is highly dependent on computers to support its mission. The proper management of these resources is crucial for the timely processing of about 180 million tax returns annually and for ensuring that the nation's tax laws are administered efficiently and effectively.

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[1]Details of the issues discussed in this testimony can be found in the following two reports entitled DATA COMMUNICATIONS: Thorough Testing and Workload Analyses Needed For IRS Processors (GAO-IMTEC-87-3BR), October 14, 1986, and COMPUTER CAPACITY: IRS Must Better Estimate Its Computer Resource Needs (GAO-IMTEC-87-5BR), November 3, 1986.

The first critical component of the tax processing system that we want to discuss is the front-end processor. IRS employees require access to information on the large mainframe computers to correct errors in tax returns and to answer taxpayer inquiries. They gain this access by using terminals which connect to the front-end processors. IRS' current front-end processors and some of the computer terminals are old and susceptible to reliability and capacity problems. To correct these problems, in February 1986, IRS awarded a contract for about $150 million to replace this equipment under a procurement referred to as the Communications Replacement System. (See Exhibit 1 for a chronology of events associated with the contract.)

We found that the new front-end processors selected by IRS have a history of being highly reliable and should be able to process IRS' short-term workload requirements. However, we were not certain about their ability to meet IRS' longer-term needs, primarily because IRS' projections of future workload, used by the contractor for sizing the processors, were outdated and could not be relied upon. We recommended that IRS reassess its future data processing workloads to ensure that its computer resources can fulfill its mission.

We also reported to you that the contractor responsible for installing the new front-end processors was experiencing problems

and significant delays in making them work properly with the mainframe computers and terminals. Because of these problems and because IRS had planned originally to install the new front-end processors during the 1987 filing season, our report emphasized that IRS must thoroughly test the processors and supporting software before installing them in the service centers. If it does not do so, it could very likely experience significant disruptions to the 1987 filing season.

Although we and IRS believed that the existing front-end processors should be able to meet the agency's needs until their planned replacement in 1987, we cautioned that a significant delay in replacing them or a significant increase in workload would increase the chances that they would not perform satisfactorily. Accordingly, we recommended that formal contingency plans be established at each IRS service center to provide adequate backup support for the existing outdated, capacity-limited processors. We were and still are concerned that the longer IRS must depend upon these processors the greater the chances it will experience disruptive reliability or capacity problems. IRS agreed with the need to better define its workload, to thoroughly test the new system, and to develop contingency plans.

After we provided you with our report, some significant events have occurred that increase the importance and

significance of our conclusions and recommendations dealing with the testing and installation of the new front-end processors. In November 1986, shortly after our report was issued, IRS found that the system developed by its contractor failed an acceptance test. Specifically, the system could not process the volume of transactions called for under the test. While we have not independently assessed the causes of the system's failure, IRS told us that it has found serious problems with some of the hardware and software needed for the new system.

Within the last few weeks IRS told us progress has been made toward solving the hardware problem and that it has agreed with the prime contractor that a major redesign of the software is necessary. This redesign is estimated to further delay acceptance testing of the system at IRS until June 1987. As a result, IRS does not expect to have the new processors installed in all service centers until September 1988 or about one year after the original scheduled date. (See Exhibit 2 for information on slippage in the installation schedule.) Consequently, all service centers will have to rely upon the existing processors for the current filing season and all but two will also have to rely on them during the 1988 season.

We believe this delay reinforces the need for IRS to have formal, workable contingency plans specifying actions IRS will take in the event that the existing processors and terminals

experience extended periods of downtime or are unable to reasonably handle their workloads prior to replacement. We recently reviewed IRS' initial efforts to develop formal contingency plans at each service center and believe that more needs to be done to ensure a reasonable and swift continuity of data processing support. IRS agrees and is currently in the process of developing a more thorough contingency plan.

The delay in replacing the existing processors also has both productivity and cost implications for IRS' operations. For example, the existing processors prevent IRS from expanding the number of computer terminals at its larger service centers, which already have the maximum number of terminals connected to the old system. IRS has determined that it needs the additional terminals to improve the efficiency and productivity of critical IRS functions such as returns processing, taxpayer services, collections, examinations, and criminal investigations.

Computer terminal maintenance costs are also likely to increase as a result of the delay. The front-end processor procurement includes the replacement of about 4,100 old computer terminals installed in the early 1970s. The cost to maintain these old terminals is higher than the cost to maintain the new ones. These increased costs could range up to $1 million dollars a month. However, IRS is attempting to mitigate these costs by replacing the most costly terminals to maintain before the new processors are installed.

Now, I would like to turn to the mainframe computers. The large mainframe computers at the agency's 10 service centers are the backbone of the tax processing system. These computers are used, among other things, to (1) check tax returns for mathematical accuracy and completeness, (2) generate notices to taxpayers informing them of errors or requesting additional information, and (3) maintain information to resolve collection and examination cases and to respond to taxpayer inquiries.

Between March and June 1986 we reviewed the capacity of IRS' mainframe computers and concluded, as did IRS, that it did not need to spend $186 million for a planned upgrade or replacement of these computers by 1989. According to our analysis, they have sufficient capacity to handle IRS' needs to mid-1991. This was 6 months short of when the planned Tax System Redesign would provide new computers and redesigned software. While our analysis showed that the current mainframes could last until mid-1991, it also showed that IRS must carry out several planned efficiency improvement initiatives to extend their useful lives. Otherwise, capacity could run out as early as mid-1988. These initiatives include: realigning workloads among service centers; constraining workload growth to a rate of 8-10 percent per year; and further improving the efficiency of computer software programs.

We believed the initiative which calls for constraining IRS' workload growth to 8-10 percent is the most critical to maintaining the useful life of the mainframes but also the most difficult to achieve for several reasons. For example, IRS plans to install new faster front-end processors and it plans to expand the terminal network. Furthermore, the Tax Reform Act and other planned applications may also affect IRS' ability to constrain growth. All these factors have the potential to generate a larger workload.

On the basis of our analysis, we concluded that it was essential for IRS to make a more reliable prediction of its computer needs and make more efficient use of the existing mainframes. To accomplish this we recommended that IRS (1) develop and maintain comprehensive workload data for current and planned requirements; (2) monitor the performance of the currently installed systems; and (3) analyze the impact of the various workloads on the installed systems. We believed then and still do, that such action would improve IRS' management of its computer resources as well as its planning for future computer resource needs. IRS agreed with our findings, conclusions, and recommendations.

Recent events serve to underscore the importance of our recommendations to IRS. We have been told by IRS officials that

the chances for on-time delivery of IRS' planned Tax System Redesign project beginning in 1992 are now remote because of recent changes in IRS' strategy for this project. Because of these changes, the implementation of this project could slip to 1993/1994, thus creating at least a 2 1/2 year gap between our projection of the useful life of the current mainframes and the availability of the new system. Nonetheless, IRS officials believe that planned efficiency improvement initiatives can extend the useful life of the current mainframe computers through 1993. However, in our opinion IRS has not done the necessary analysis to support this position.

The uncertainty over the expected useful life of the mainframes reinforces the need for IRS to better define its workload needs, and in particular, monitor the performance of the mainframes. We believe that without this workload analysis, as well as a continuing analysis of current system utilization, IRS will not have adequate information to determine whether its initiatives are working and could find itself short of computer capacity earlier than planned and without enough warning to take corrective action.

After we issued our report in November 1986, IRS has taken some initial steps to implement our recommendations. IRS told us that it plans to begin full monitoring of computer performance by June 30, 1987. In addition, IRS also plans to convene an

executive task force that will oversee the implementation of all but one of the initiatives. The task force is charged with developing a plan by March 31, 1987, that will identify 1) the actions necessary to accomplish the initiatives, 2) the organizations responsible for implementing them, and 3) target dates for completing them. However, the executive task force has yet to convene.

The one initiative the task force will not oversee is the realignment of workloads among the service centers. IRS has decided to defer this initiative until 1989 and 1990; the agency believes that it needs to devote its full attention in 1988 to implementing the Tax Reform Act.

You also asked us to comment on the Tax System Redesign. Although we have not evaluated it, we can provide you with information on its objectives and status.

In August 1982, a project office was established to redesign the tax processing system for the 1990s and beyond. Management attention for the project was elevated in October 1984 when IRS established an Assistant Commissioner for Tax System Redesign. Since that time two IRS executives have been named to that position with the first serving for only 6 months and the other assuming the office just this past November. On January 15, 1987, IRS extended the responsibilities of this office and

designated it the focal point for introducing new technology and for ensuring compatibility among existing and future systems.

While the strategy for accomplishing system redesign has been fluid, the objectives have generally remained the same: (1) to introduce state-of-the-art computer and telecommunications technology; (2) to provide faster access to all taxpayer information; (3) to better link related information on taxpayers; and (4) to automate manual and paper-intensive processes. To accomplish these objectives, IRS envisions Tax System Redesign as an evolutionary process. We understand that a key element of this approach will be the development of IRS-wide databases that will include all the commonly used information for tax administration throughout IRS. The service is taking the first step of this evolutionary process by developing a preliminary design concept, an acquisition strategy, a transition plan, and a management plan. These products are planned for completion in February 1988.

Because of the importance of this effort we will be reviewing the progress of the project and reporting to you and IRS on matters that we feel need your attention.

Finally, Mr. Chairman, you asked us to discuss how well IRS' computers have supported tax return processing during the 1987 filing season. During the first month, the existing front-end

processors and mainframe computers have experienced short periods of downtime and the service centers have encountered some operational problems, but these instances have not significantly affected IRS' operations. In addition, the service centers have also been completing their weekend processing on time, which had been a major problem during the 1985 tax filing season. Nevertheless, this filing season has just begun and IRS has yet to receive and process the vast majority of tax returns.

This concludes my prepared statement. We will be pleased to respond to any questions.

EXHIBIT1

COMMUNICATIONS REPLACEMENT SYSTEM
CHRONOLOGY OF EVENTS

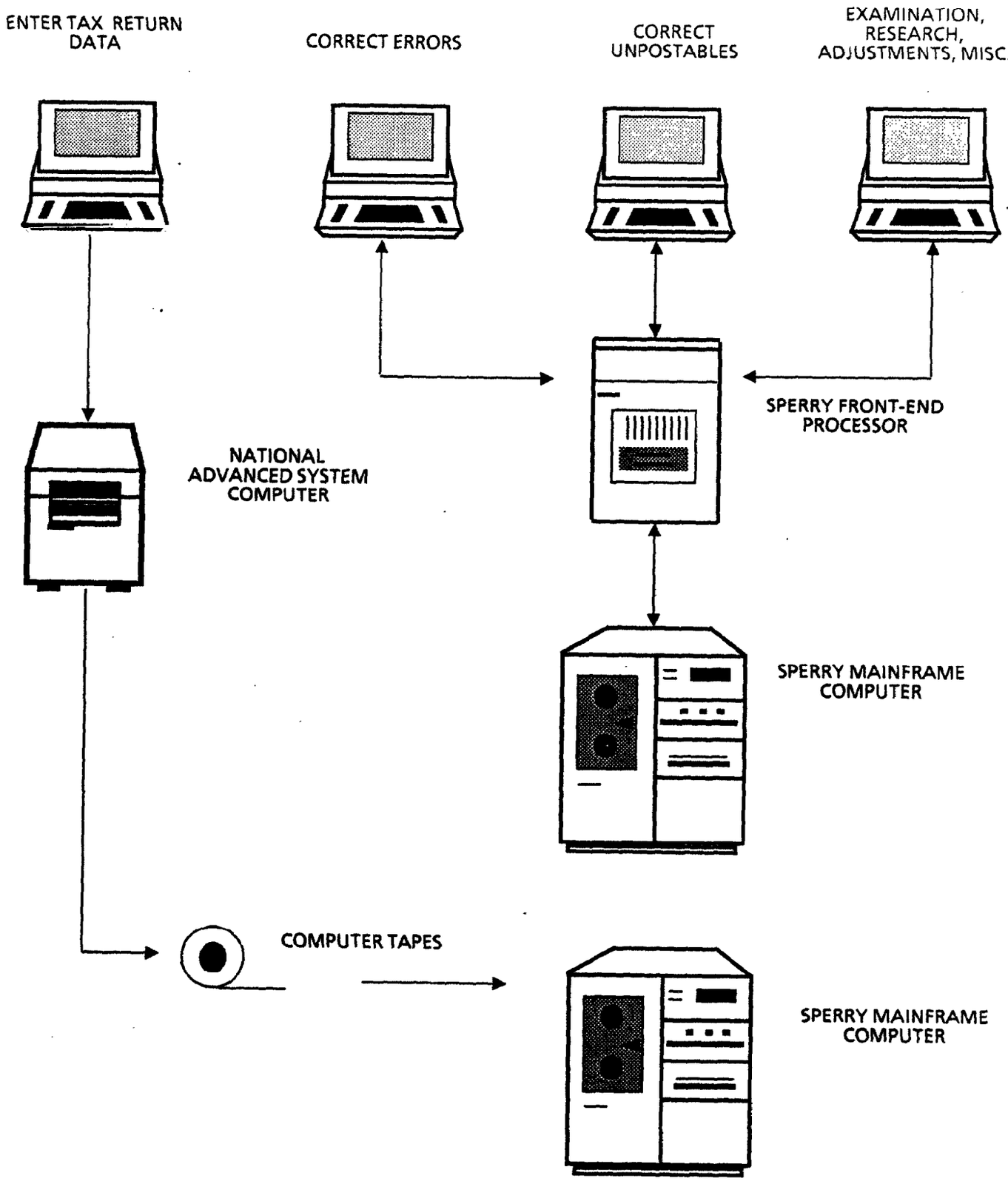
Nov. '82	IRS' feasibility study concludes upgraded equipment needed
Dec. '83	IRS distributes draft Request For Proposal (RFP) for industry review
Aug. '84	IRS issues Request For Proposal
Oct. '85	IRS awards contract to Computer Systems and Resources, Inc. (CS&R)
Jan. '86	Because CS&R does not meet the technical requirements in the RFP the General Services Administration's Board of Contract Appeals orders IRS to terminate CS&R contract and to either recompete or award contract to Sysorex Information Systems, Inc. (Sysorex)
Feb. '86	IRS awards contract to Sysorex
July '86	Sysorex is unable to begin system testing at IRS' National Computer Centers; IRS institutes $5,000 per day liquidated damages penalty
Oct/Nov '86	System testing conducted at the IRS National Computer Center; system fails test
Nov. '86	IRS notifies Sysorex that the contract may be terminated for default and requests a cure to the deficiencies
Dec. '86	Sysorex responds to the IRS, requesting 6 months to redesign software (and correct other system deficiencies)
Jan. '87	IRS accepts the Sysorex cure and revises its installation schedule allowing Sysorex to redesign the system's software by June 1987 and to install new terminals beginning in March 1987

EXHIBIT 2

COMMUNICATIONS REPLACEMENT SYSTEM INSTALLATION SCHEDULE

ACTION	MILESTONES AS OF JUNE 27, 1986	MILESTONES AS OF FEBRUARY 6, 1987	SLIPPAGE IN MONTHS
Install Hardware at National Computer Center (NCC)	07/01/86	07/01/86	----
Conduct NCC system acceptance tests	07/24/86	06/15/87	11
Conduct systems acceptance tests at first service center	11/03/86	09/15/87	10
Completion date for installation at all service centers	10/09/87	09/28/88	12

IRS SERVICE CENTER TAX PROCESSING SYSTEM OVERVIEW



IRS Mainframe Computer Capacity