GAO

Testimony

Computer Support for Tax
Processing Needs Continuing IRS
Attention

Statement of
James R. Watts, Associate Director
Information Management and
Technology Division
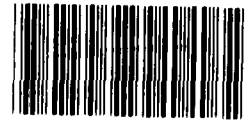
Before the
Subcommittee on Oversight
Committee on Ways and Means
House of Representatives

087866

746268/087866

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss the ability of IRS' computer systems to handle this filing season's workload, its progress in installing new communications processors and redesigning its automated tax processing systems, and its actions to ensure adequate computer capacity for future filing seasons. Based on our on-going work we found that

-- computer resources should be sufficient for this filing season;

-- acceptance testing of the communications processors is progressing satisfactorily and nationwide installation is expected by January 1989;

-- the redesign project is progressing but critical tasks remain to be done; and

-- a computer capacity gap could occur during 1992, but IRS is developing contingency plans for this eventuality.

COMPUTER SYSTEMS SHOULD BE
SUFFICIENT FOR 1988

In general, we found that IRS has modified and tested the software necessary to accommodate the Tax Reform Act revisions that go into effect this filing season. To date, the service centers

have not reported any major software problems affecting the processing of 1987 tax returns.

We believe IRS should have sufficient computer capacity to support the 1988 filing season if this year's workload does not increase by more than 10 percent over last year's -- IRS' goal for ensuring sufficient capacity. This looks realistic based on last year's growth of about 6 percent. However, whether tax reform will significantly alter the mix or level of the 1988 workload is unknown at this time.

With respect to automation and the filing season, the use of electronic filing is expanding this year. Electronic filing -- now in its third year -- allows taxpayers to submit their tax returns electronically through professional taxpreparers rather than in paper form. As of February 12, over 96,000 individual tax returns had already been transmitted electronically and processed by IRS; last year only 78,000 returns were processed electronically for the entire tax year. IRS expects to process up to a million returns from individuals electronically this year.

COMMUNICATIONS REPLACEMENT SYSTEM

The communications processors are the computers through which IRS employees, using computer terminals, access information on large mainframe computers to correct errors in tax returns and answer taxpayers inquiries. The existing processors are old, have experienced periods of downtime, and are operating at or near

2

capacity. To correct this situation, IRS awarded a $150 million contract in February 1986 to have these processors replaced with new processors which are more reliable and have greater capacity (referred to as the Communications Replacement System). The new processors are installed in the Fresno Service Center and are undergoing final acceptance testing in a production environment. Based on our on-site observations in January 1988 the system was working well and encountering only a few problems. The "acid" test will occur later this year when the workload going through the new processors is normally the highest. The new system is also being installed at the Austin Service Center and is to be completed by March. Installation in all service centers is to be completed by January 1989.

Because the new system has not yet completed acceptance testing, IRS will have to continue using the old communications processors to carry it through the 1988 processing year. They should be able to perform satisfactorily based on our analysis of their performance during 1987. Even though the processors experienced short periods of downtime in 1987, these instances did not significantly affect IRS operations. The downtime was not extensive because IRS and the vendor responsible for the processors gave increased attention to the maintenance of the old equipment.

TAX SYSTEM REDESIGN

IRS initiated the Tax System Redesign program in 1982 and encountered a number of delays in the early years of the project.

The early efforts suffered because the approach for developing a redesign strategy changed several times and the initial strategies were challenged as not being a redesign and not tied clearly to the mission needs of IRS.

IRS has taken action in two general areas to avoid a recurrence of these delays. First, it has brought increased top management attention and better accountability to the redesign effort. Management attention increased in October 1984, when day-to-day management of the project was elevated to a newly established Assistant Commissioner for Tax System Redesign. Later, in January 1987, IRS made this office the focal point for introducing new technology and for ensuring compatibility among existing and future systems. Responsibility and accountability above the Assistant Commissioner level was improved as a result of an August 1987 IRS-wide reorganization which established a new Deputy Commissioner for Planning and Resources. Among other things, he has senior management responsibility for all of IRS' technology programs.

Secondly, over the last year IRS has been taking steps to better define the preliminary design concept of the system and a general strategy for getting there. From a design standpoint, IRS is proceeding to describe its automation requirements at three levels. These include (1) large corporate data bases of information needed generally by most functional areas throughout IRS, (2) departmental data bases needed generally by only one functional area such as collections or examinations, and (3)

systems to provide automated support for specific local office needs.

From a strategy standpoint, IRS has decided to implement these levels of automation incrementally using a two-phased approach. The first phase, generally referred to as the interim architecture, is scheduled to be completed by 1993-1994. The second phase, generally called the target architecture, is expected to be completed by 1998. Primary initiatives for the interim architecture are increased electronic filing, on-line inquiry directly into the master files for selected taxpayer information, and prototyping and development of departmental systems. Primary initiatives for the target architecture include installation of a telecommunication network and redesign of the masterfiles to provide not only on-line inquiry but also update of taxpayer information.

IRS has documented this preliminary design concept and strategy in a management plan and is developing an acquisition strategy. The management plan is being reviewed by senior IRS officials; decisions on approving major sections of the plan are expected by the end of this month.

While IRS is making progress, it must complete many other key actions to validate its preliminary design concept before selecting a design to implement. These include finishing its requirements analysis, completing a project plan for integrating departmental systems and corporate data bases, identifying alternative

architectures, analyzing the cost/benefits of each alternative, and completing its acquisition strategy. Completion of these critical tasks should provide a basis for assessing the total costs, time requirements, and technical viability of IRS' preliminary design concept and its strategies for carrying out the redesign program. IRS expects to complete these efforts in 1988 and 1989.

THE CAPACITY GAP

In February 1987 we testified before you[1] that IRS should have sufficient computer capacity to handle its needs through mid-1991 if it carried out several initiatives for extending the useful lives of its mainframe computers. This was about a year or two short of when the Tax System Redesign was planned to provide new computers and redesigned software; hence, the term "capacity gap." These initiatives included holding workload growth to 10 percent a year, improving the efficiency of software used for processing taxpayer information, and spreading the workload more evenly among IRS' 10 service centers. The preliminary results of our updated analysis of computer capacity at the three largest service centers suggest that the mainframes will begin to experience capacity limitations sometime in 1992, assuming that IRS' capacity improvement initiatives achieve their intended results.

---

[1]Statement of James Watts, Associate Director, to the Subcommittee on Oversight, House Committee on Ways and Means (GAO/T-IMTEC-87-1, February 6, 1987)

IRS has made progress on some of these initiatives, but not on others. Last year's workload grew at about 6 percent rather than 10 percent. Also, according to IRS statistics, the software improvement initiative has resulted in a reduction in the amount of time needed for weekend processing, which has been a critical bottleneck in the past.

IRS intends to redistribute workload among the service centers beginning in 1989 and completing the project by 1991. IRS has scheduled a small scale redistribution for 1989. This will not affect two of the larger centers, which could benefit the most from this initiative. Our analysis shows that the useful life of the mainframes at the large centers can be extended about a year or so if workload is redistributed. IRS is currently formalizing its plans for making redistributions among the service centers in 1990 and 1991.

While our analysis suggests that the mainframes could be extended into 1992, IRS believes they can last through 1994. This difference can be attributed almost entirely to IRS' assumption that certain workload now processed on the week-ends can be offloaded and processed on the mainframes during the week. We did not adopt this assumption because IRS has not yet identified the extent to which such workload can be offloaded and processed during the week. IRS has agreed to make such an analysis and we will review it as part of our on-going evaluation of IRS' utilization of the mainframe computers.

To ensure IRS has sufficient capacity in the early 1990's, IRS officials advised us that they are also planning, as part of the Tax System Redesign program, to install additional computers in the service centers 1 to 2 years earlier than previously planned. These will be used to support not only some redesign initiatives but also some of the workload now processed on the current mainframes. IRS plans to complete its requirement analysis for these new service center computers in a few months.

In summary, Mr. Chairman, in the near term IRS' computer resources are prepared for the 1988 filing season and progress is being made in testing and installing the new Communications Replacement System. For the longer term, progress is also being made on the Tax System Redesign project, but considerable additional analysis of requirements and evaluation of detailed design alternatives are necessary to validate the preliminary design concept and the redesign strategy. In the meantime, IRS has made some progress in extending the useful lives of its mainframes, but a potential capacity gap still exists for the early 1990s or sooner if IRS does not implement all of its improvement initiatives. Even though IRS does not believe capacity will be a problem until 1994, it is developing a contingency plan to provide additional computer capacity earlier if it is needed.

In our opinion IRS faces a major challenge in maintaining its old data processing systems to accommodate tax law changes and serve the public while also undertaking the monumental task of redesigning its tax processing system to take advantage of state-

of-the-art technology. Meeting this challenge successfully will take continued top management commitment and involvement together with well thought out plans and strategies.

—   —   —   —   —

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