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**SOCIAL SECURITY
ADMINISTRATION**

**Information Technology
Challenges Facing the
Commissioner**

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Messrs. Chairmen and Members of the Subcommittees:

We are pleased to be here today to discuss the information technology challenges facing the Social Security Administration (SSA) and its recently appointed Commissioner. As with every other organization, both public and private, successfully crossing the threshold into the next century is the top information technology priority. My testimony today will update our report of last fall on where SSA stands in this area.¹

Beyond ensuring readiness for the millennium, another large challenge for SSA is successfully implementing its Intelligent Workstation/Local Area Network (IWS/LAN) initiative.² SSA expects this new capability, which my testimony will also address, to play a major role in its redesigned work processes and in better serving an increasing beneficiary population.

Today we will also discuss our recent report assessing SSA's actions to improve its software development processes.³ Finally, we will update our testimony of last year on SSA's experiences with making personal earnings and benefits information available to individuals via the Internet.⁴

Year 2000: Cited Risks Being Addressed

For the past several decades, computer systems have typically used two digits to represent the year, such as "98" for 1998, in order to conserve electronic data storage and reduce operating costs. In this format, however, 2000 is indistinguishable from 1900 because both are represented as "00." As a result, if not modified, systems or applications that use dates or perform date- or time-sensitive calculations may generate incorrect results beyond 1999.

SSA has been anticipating the change of century since 1989, initiating an early response to the potential crisis. It made significant early progress in

¹Social Security Administration: Significant Progress Made in Year 2000 Effort, But Key Risks Remain (GAO/AIMD-98-6, Oct. 22, 1997).

²In June 1996, SSA awarded a national IWS/LAN contract to modernize and standardize the distributed processing environment in its headquarters and field components and in state Disability Determination Services (DDS) offices. This initiative is intended to provide distributed processing—intelligent workstations (personal computers) on employee desktops, connected to each other and to SSA's mainframe computers by local and wide area networks. Phase I of the initiative is set to provide 56,500 workstations, 1,742 local area networks, and 2,500 notebook computers to SSA and DDS offices nationwide between December 1996 and June 1999.

³Social Security Administration: Software Development Process Improvements Started But Work Remains (GAO/AIMD-98-39, Jan. 28, 1998).

⁴Social Security Administration: Internet Access to Personal Earnings and Benefits Information (GAO/T-AIMD/HEHS-97-123, May 6, 1997).

assessing and renovating mission-critical mainframe systems—those necessary to prevent the disruption of benefits —and has been a leader among federal agencies. Yet as our report of last October indicated, three key risks remained, mainly stemming from the large degree to which SSA interfaces with other entities in the sharing of information.

One major risk concerned Year 2000 compliance of the 54 state Disability Determination Services (DDS)⁵ that provide vital support to the agency in administering SSA’s disability programs. The second major risk concerned data exchanges, ensuring that information obtained from outside sources—such as other federal agencies, state agencies, and private businesses—was not “corrupted” by data being passed from systems that were not Year 2000 compliant. SSA exchanges data with thousands of such sources. Third, such risks were compounded by the lack of contingency plans to ensure business continuity in the event of systems failure.

Our report made several specific recommendations to mitigate these risks. These included (1) expeditious completion of the assessment of mission-critical systems at state DDS offices and the use of those results to establish specific plans of action, (2) stronger oversight by SSA of DDS Year 2000 activities, (3) discussion of the status of DDS Year 2000 activities in SSA’s quarterly reports to the Office of Management and Budget (OMB), (4) expeditious completion of SSA’s Year 2000 compliance coordination with all data exchange partners, and (5) development of specific contingency plans that articulate clear strategies for ensuring the continuity of core business functions.

SSA agreed with all of our recommendations, and actions to complete them are underway. We understand that the states are in various stages of addressing the Year 2000 problem, but note that SSA has begun to monitor these activities; among other things, it is requiring biweekly status reports from the DDSS. Further, as of this week, the agency planned to have a contingency plan available at the end of the month.

Ongoing Issues Concerning IWS/LAN Implementation

The resources that SSA plans to invest in acquiring IWS/LAN are enormous: Over 7 years the agency plans to spend about \$1 billion during phase I to replace its present computer terminals with “intelligent” workstations and local area networks. As of March 1, SSA had completed installation of

⁵One for each state plus the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. A federal DDS serves as a backup and model office for testing new technologies and work processes.

about 30,000 IWSS and 800 LANS, generally meeting or exceeding its phase I schedule.

The basic intelligent workstation that SSA is procuring includes a (1) 15-inch color display monitor, (2) 100-megahertz Pentium workstation with 32 megabytes (MB) of random access memory, (3) 1.2-gigabyte hard (fixed) disk drive, and (4) 16-bit network card with adaptation cable. Preliminary testing has indicated that the IWS/LAN workstation random access memory will need to be upgraded from 32 MB to at least 64 MB.

Last year SSA's contractor, Unisys Corporation, submitted a proposal to upgrade to a processing speed higher than 100 megahertz at additional cost. Unisys noted that it was having difficulty in obtaining 100-megahertz workstations. Although personal computers available in today's market are about three times this speed, SSA stated that the 100-megahertz processing speed does meet its current needs. The agency is, however, continuing to discuss this issue with Unisys.

As the expected time period for implementation of IWS/LAN will span the change of century, it is obviously important that all components be Year 2000 compliant. SSA's contract with Unisys does not, however, contain such a requirement. Moreover, SSA has acknowledged, and we have validated, that some of the earlier workstations that it acquired are not Year 2000 compliant.⁶ However, SSA maintains—and we have confirmed—that the operating system it has selected for IWS/LAN, Windows NT, corrects the particular Year 2000-related problem. SSA has also said that it is now testing all new hardware and software, including equipment substitutions proposed by Unisys, to ensure Year 2000 compliance before site installation.

Phase II is intended to build upon acquisition of the initial IWS/LAN infrastructure, adding new hardware and software—such as database engines, scanners, and bar code readers—to support future process redesign initiatives. Contract award for phase II is planned for fiscal year 1999, with site installations between fiscal years 1999 and 2001.

We have not identified any significant problems in SSA's installation of IWS/LAN equipment at its field offices to date, and the agency has taken steps to minimize adverse impact on service to the public while installation takes place. Some state DDSS, however, have recently raised

⁶These workstations failed to advance the date from December 31, 1999, to January 1, 2000, without user intervention.

concerns about lack of control over their networks and inadequate response time on IWS/LAN service calls, resulting in some disruption to their operations. SSA currently maintains central control. Under this arrangement, problems with local equipment must be handled by SSA's contractor, even though many DDSS feel they have sufficient technical staff to do the job. Because of this issue, states have said that they want SSA to pilot test IWS/LAN in one or more DDS offices to evaluate options that would allow states more flexibility in managing their networks. Florida, in fact, refused to accept more IWS/LAN terminals until this issue is resolved. SSA is now working with the DDSS to identify alternatives for providing the states with some degree of management control.

Turning to managing the acquisition of information technology resources as an investment, SSA has—consistent with the Clinger-Cohen Act of 1996 and OMB guidance—followed several essential practices with IWS/LAN. This includes assessing costs, benefits, and risks, along with monitoring progress against competing priorities, projected costs, schedules, and resource availability.

What SSA has not established, however, are critical practices for measuring IWS/LAN's contribution toward improving mission performance. While it does have baseline data and measures that could be used to assess the project's impact on performance, it lacks specific target goals and a process by which overall IWS/LAN impact on program performance can be gauged. Further, while OMB guidelines call for post-implementation evaluations to be completed, SSA does not plan to do this.

In a September 1994 report, we noted that SSA had initiated action to identify cost and performance goals for IWS/LAN.⁷ SSA identified six categories of performance measures that could be used to track the impact of IWS/LAN technology on service delivery goals, and had planned to establish target productivity gains for each measure upon award of the IWS/LAN contract.

At the conclusion of our review, however, SSA had not established targeted goals or a process for using performance measures to assess IWS/LAN's impact on agency productivity improvements. According to officials, the agency has no plans to use these measures in this way because it believes the results of earlier pilots sufficiently demonstrated that savings will be achieved with each IWS/LAN installation, and because the measures had

⁷Social Security Administration: Risks Associated With Information Technology Investment Continue (GAO/AIMD-94-143, Sept. 19, 1994).

been developed in response to a General Services Administration (GSA) procurement requirement. Since GSA no longer performs this role, SSA sees these actions as no longer necessary. Yet without specific goals, processes, and performance measurements, it will be difficult to assess whether IWS/LAN improves service to the public. Further, the Clinger-Cohen Act requires agencies to develop performance measures to assess how well information technology supports their programs.

Knowing how well such technology improvements are actually working will be critical, given the expected jump in SSA's workload into the next century. The number of disability beneficiaries alone is expected to increase substantially between calendar years 1997 and 2005—from an estimated 6.2 million to over 9.6 million.

Concurrent with phase I installation is development of the first major programmatic software application—the Reengineered Disability System (RDS)—to be installed on the IWS/LAN infrastructure. It is intended to support SSA disability claims processing under a new client/server environment.⁸ Pilot testing of RDS software to evaluate actual costs and benefits of the system and identify IWS/LAN phase II equipment needs began last August. However, performance and technical problems encountered during the RDS pilot have resulted in a planned 9-month delay—to July 1998—in implementing the pilot system in the first state, Virginia. This will likely cause corresponding delays in SSA's schedule for acquiring and implementing IWS/LAN phase II equipment, and further delays in national implementation of RDS.⁹

Software Development: Key Improvements Begun, but Baseline Data, Measurable Goals Still Needed

How software is developed is another critical consideration; whether the modernized processes will function as intended and achieve the desired gains in productivity will depend in large measure on the quality of the software. Yet software development is widely seen as one of the riskiest areas of systems development. SSA has recognized weaknesses in its own capability to develop software, and is improving its processes and methods. This comes at a critical time, since the agency is beginning development of its new generation of software to operate on the IWS/LAN to support the redesigned work processes of a client/server environment.

⁸In a client/server environment, servers and individual workstations are all capable of performing tasks that previously only the mainframe computer could accomplish. This can sometimes result in improvements over mainframe performance.

⁹In September 1996 we reported that software development problems had delayed the scheduled implementation of RDS by more than 2 years. See Social Security Administration: *Effective Leadership Needed to Meet Daunting Challenges* (GAO/HEHS-96-196, Sept. 12, 1996).

Significant actions that SSA has initiated include (1) launching a formal software process improvement program, (2) acquiring assistance from a nationally recognized research and development center in assessing its strengths and weaknesses and in assisting with improvement,¹⁰ and (3) establishing management groups to oversee software process improvement activities.

Key elements of the software improvement program, however, are still lacking—elements without which progress and success cannot be measured. These are: specific, quantifiable goals, and baseline data to use in assessing whether those goals have been attained. Until such features are available, SSA will lack assurance that its improvement efforts will result in the consistent and cost-effective production of high-quality software.

Our report¹¹ recommends that as part of its recently initiated pilot projects, SSA develop and implement plans that articulate a strategy and time frames for developing baseline data, identifying specific goals, and monitoring progress toward achieving those goals. We are encouraged by SSA's response, which included agreement and a description of steps it had begun to carry out these recommendations.

Personal Earnings and Benefit Estimate Statements: Internet Availability on Hold

For over 10 years, SSA has been providing, on request, a Personal Earnings and Benefit Estimate Statement (PEBES). The statement includes a yearly record of earnings, estimates of Social Security taxes paid, and various benefits estimates. Beginning in fiscal year 1995, such statements were sent annually to all eligible U.S. workers aged 60 and over; beginning October 1, 1999, the statements are to be sent to all eligible workers 25 and over—an estimated 123 million people. The public has generally found these to be useful in financial planning.¹²

In an effort to provide “world-class service” and be as responsive as possible to the public, SSA in March 1997 initiated on-line dissemination of PEBES to individuals via the Internet. The agency felt that using the Internet in this way would ensure that client data would be safeguarded and confidentiality preserved. Within a month, however, press reports of

¹⁰The Software Engineering Institute, Carnegie Mellon University, Pittsburgh.

¹¹GAO/AIMD-98-39, Jan. 28, 1998.

¹²See [GAO/T-AIMD/HEHS-97-123](#) and [SSA Benefit Statements: Well Received by the Public but Difficult to Comprehend \(GAO/HEHS-97-19, Dec. 5, 1996\)](#).

privacy concerns circulated, sparking widespread fear that the privacy of this information could not be guaranteed.

SSA plans many initiatives using the Internet to provide electronic service delivery to its clients. As such, our testimony of last May before the Subcommittee on Social Security focused on Internet information security in general, describing its risks and approaches to making it more secure. The relative insecurity of the Internet makes its use as a vehicle for transmitting sensitive information—such as Social Security information—a decision requiring careful consideration. It is a question of balancing greater convenience against increased risk—not only that information would be divulged to those who should not have access to it, but also that the database itself could be compromised.

For most organizations, a prudent approach to information security is three-pronged, including the ability to *protect* against security breaches at an appropriate level, *detect* successful breaches, and *react* quickly in order to track and prosecute offenders. The Internet security issue remains a daunting one, and SSA—like other federal agencies—will have to rely on commercial solutions and expert opinion; this is, however, an area in which there is no clear consensus.

Shortly before our May testimony, the Acting Commissioner suspended on-line PEBES availability, promising a reexamination of the service that would include public forums around the country. After analyzing the results of those forums, the Acting Commissioner announced last September that a modified version of the on-line PEBES system would be available by the end of 1997.

The new Commissioner, however, has placed implementation of the new system on hold. SSA has hired a private contractor to assess the risk of the modified system; we see this as an important, welcome step in determining the vulnerabilities involved in the use of the Internet.

In summary, it is clear that SSA has made progress in dealing with its information technology challenges; it is equally clear, however, that such challenges will continue to face the agency, especially as it transitions to a new processing environment while concurrently dealing with the coming change of century. As a prime face of the government to virtually every American citizen, the stakes in how well the agency meets these continuing challenges are high.

This concludes my statement. I would be happy to respond to any questions that you or other members of the Subcommittees may have at this time.

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