



Accounting and Information
Management Division

B-280537

July 10, 1998

The Honorable Jim Bunning
Chairman, Subcommittee on Social Security
Committee on Ways and Means
House of Representatives

Subject: Social Security Administration: Subcommittee Questions Concerning
Information Technology Challenges Facing the Commissioner

Dear Mr. Chairman:

This letter responds to your June 10, 1998, request that we provide answers to questions relating to our March 12, 1998, testimony.¹ During that testimony, we discussed the challenges that the Social Security Administration (SSA) faces in preparing its information systems for the new century and in implementing technology initiatives such as the Intelligent Workstation/Local Area Network (IWS/LAN). Your questions, along with our responses, follow.

1. *The Commissioner seems confident that Year 2000 readiness will be achieved. What are your views? Will they make it and are they responding to this critical issue with the sense of urgency and commitment needed?*

SSA continues to make good progress in its efforts to become Year 2000 compliant, maintaining its position as a leader among federal agencies in addressing this issue. Since our report last October,² the agency has reported a substantial increase in the number of mission-critical systems that it has renovated, tested, and implemented; and it has taken numerous other actions that demonstrate a sense of urgency and commitment to achieving readiness for the change of century.

¹Social Security Administration: Information Technology Challenges Facing the Commissioner (GAO/T-AIMD-98-109, March 12, 1998).

²Social Security Administration: Significant Progress Made in Year 2000 Effort, But Key Risks Remain (GAO/AIMD-98-6, October 22, 1997).

SSA's work is not yet complete, however, and a number of essential tasks remain. SSA's success in achieving full compliance by the year 2000 will depend heavily on its ability to effectively complete these tasks.

Our report identified, and recommended actions for addressing three key areas of risk in SSA's Year 2000 program. One major risk concerned Year 2000 compliance of the 54 state Disability Determination Services (DDS) that help SSA administer the disability programs. The second major risk concerned data exchanges—ensuring that information obtained from other federal and state agencies and private businesses did not "corrupt" SSA's systems and data. Third, such risks were compounded by the lack of contingency plans to ensure the continuity of major business processes in the event of systems failure. SSA agreed with all of our recommendations and actions to implement them have either been taken or are under way.

Regarding state DDSs, SSA has enhanced its monitoring and oversight by establishing a full-time DDS project team, designating project managers and coordinators, and requesting biweekly status reports. In addition, SSA stated that all DDSs have now submitted plans that identify specific milestones, resources, and schedules for completing their Year 2000 conversion tasks. The agency reported that, as of June 30, 1998, 27 of the state DDS systems had been renovated, tested, and implemented.

Nonetheless, additional tasks must be completed. For example, approximately one-half of the state DDS systems must still be renovated, tested, and certified Year 2000-compliant. SSA has stated that these tasks are scheduled to be completed by December 1998. However, some DDSs are relying on SSA's IWS/LAN to correct Year 2000 deficiencies in their hardware.³ As our recent report on IWS/LAN discussed,⁴ DDSs' concerns about how SSA plans to manage the operation and maintenance of IWS/LAN equipment in their offices threaten to delay this initiative. Any delays in implementing IWS/LAN equipment in the DDS offices could affect these offices' progress in becoming compliant. SSA recently stated that it had identified the equipment that is not Year 2000 compliant in each DDS and was developing a strategy for correcting the deficiencies.

³As of June 15, 1998, SSA reported that 39 states had hardware that was not Year 2000 compliant.

⁴Social Security Administration: Technical and Performance Challenges Threaten Progress of Modernization (GAO/AIMD-98-136, June 19, 1998).

Regarding data exchanges, SSA has now identified its external exchanges and is coordinating with its business partners.⁵ However, SSA reports that about 30 percent of these data exchanges must still be made compliant, and SSA's Assistant Deputy Commissioner for Systems recently stated that the remaining exchanges will likely be the most difficult to address. SSA's success in dealing with its external data exchanges depends heavily on the progress of its business partners in correcting Year 2000 deficiencies in their systems. For example, SSA relies on the Department of the Treasury's Financial Management Service (FMS) to disburse benefits payments each month. SSA stated that it is working closely with Treasury to ensure that these payments will be on time. However, as we testified in May before the House Ways and Means Subcommittee on Oversight, FMS was falling seriously behind schedule in converting some of its systems.⁶

Turning to contingency planning, in accordance with our guidance,⁷ SSA has developed a high-level overall plan for business continuity. This plan presents an effective high-level strategy for mitigating risks associated with the Year 2000. However, it does not include local contingency plans for SSA's core business processes. As discussed in our guide, such plans are critical for documenting the resources, staff roles, timetables, and business resumption procedures to be used in the event that the agency's business processes are disrupted by a Year 2000 failure. These plans should not be limited to the Year 2000-induced failures of SSA's internal systems, but should also consider the potential Year 2000 failures of its business partners and infrastructure service providers. SSA stated that it has begun developing its local contingency plans, and expects to have some of the plans completed by September 1998.

Finally, SSA must complete the critical tasks of testing and certifying its systems for Year 2000 compliance. This includes conducting essential end-to-end testing of multiple systems that have individually been deemed Year 2000

⁵In its Year 2000 monthly report for June 1998, SSA stated that it has approximately 4,800 data exchanges, of which about 2,000 are with external agencies, states, or third parties. Approximately 300 of the external exchanges provide data that updates SSA's master files, generates payments, or otherwise affects payments or benefit eligibility.

⁶Year 2000 Computing Crisis: Continuing Risks of Disruption to Social Security, Medicare, and Treasury Programs (GAO/T-AIMD-98-161, May 7, 1998).

⁷Year 2000 Computing Crisis: Business Continuity and Contingency Planning, Exposure Draft (GAO/AIMD-10.1.19, March 1998).

compliant. As discussed in our recently issued testing guide,⁸ end-to-end testing seeks to ensure that systems collectively supporting a core business function or area operate as intended. Without such testing, systems individually deemed as compliant may not work as expected when linked together in an operational environment. These systems include not only those owned and managed by the agency, but also the external systems with which they interface.

As requested by your Subcommittee and the Senate Special Committee on Aging, we are continuing to monitor SSA's implementation of our recommendations and additional actions that it is taking to achieve Year 2000 compliance. This includes assessing SSA's plans and actions to ensure that its systems are fully tested.

2. Is it commonplace for government contracts which provide for the purchase of computers over a long period of time, [to] not have refreshment clauses--in other words, a clause which requires the agency to obtain current technology as the equipment is rolled out? How did this happen? In your view will 100 megahertz computers be able to run all the software SSA plans to install?

A technology refreshment clause serves to ensure that the scope of a contract, as defined by its specifications, is sufficient to include technology upgrades that an agency may need in the future. Such a clause typically permits (but does not require) the contractor to propose, or the government to solicit, items that are technologically superior to what is called for under the contract, thereby preventing the delivery of obsolete equipment.

Evidence gathered during our review has shown that including technology refreshment clauses in long-term information technology (IT) contracts is common among federal departments and agencies. For example, we are aware of such clauses in contracts awarded by the Department of Defense and the National Aeronautics and Space Administration.

Although SSA did not include a technology refreshment clause for IWS/LAN, the contract does include two other clauses that would allow the agency to replace equipment originally specified in the contract with upgraded technology. First, the contract incorporates a technology substitution clause, allowing the contractor to substitute products for those that may no longer be available (due to the government's requirement for equipment and software deliveries extending over several years, perhaps exceeding the technological life of the

⁸Year 2000 Computing Crisis: A Testing Guide, Exposure Draft (GAO/AIMD-10.1.21, June 1998).

products provided), provided the product substituted (1) meets or exceeds the specifications of the product previously supplied or the mandatory technical requirements of the contract, whichever is greater; and (2) costs no more than the product previously supplied.

Second, in accordance with federal requirements,⁹ the IWS/LAN contract contains the standard "Changes" clause permitting a federal agency to unilaterally change its requirements, provided the change is within the scope of the original contract.

SSA has stated that its 100-megahertz workstations meet its current needs. However, it is uncertain whether these workstations will adequately support all of the software that the agency may acquire in the future. SSA has encountered problems and delays with the first major client/server software application that it is developing and testing to determine future hardware and software requirements for IWS/LAN. Until SSA determines its requirements over the life of the IWS/LAN workstations, it will not know whether the 100-megahertz workstations will meet all its needs.

3. *In your testimony, you mention that the state agencies who make the disability determinations are having some real concerns about the installation of this equipment. Can you provide more detail as to what their concerns are and whether you concur that these concerns are justified?*

Administrators and staff in 10 DDS offices that we visited expressed concern about the effectiveness of SSA's network management and control over IWS/LAN operations in their offices, and dissatisfaction with the service and technical support received from the contractor following the installation of IWS/LAN. For example, DDS representatives in 7 of the 10 offices expressed concern that with SSA managing their networks and operations, DDSs can no longer make changes or fixes to their equipment locally and, instead, must rely on SSA for system changes or network maintenance. In addition, 8 of the 10 DDSs reported that under this arrangement, the IWS/LAN contractor had been untimely in responding to certain of their requests for service, resulting in disruptions to their operations.

In recent discussions with DDS officials, including the President of the National Council of Disability Determination Directors and the Chairperson of the DDS Infrastructure Committee (which is charged with representing DDSs on hardware and network matters), we were informed that while these concerns

⁹See 48 C.F.R. Section 43.205 and the clauses referenced therein.

still exist, SSA is now working closely with the DDSs to resolve them. For example, SSA has proposed an alternative capability to provide DDSs with increased network control. Among other things, the DDSs would be able to customize some areas of network control, such as Login Scripts,¹⁰ while still adhering to SSA's established network architecture and security policies. However, the officials noted that this proposal does not address several other issues that are of concern to the DDSs, such as the need to provide DDSs with centralized print management capabilities. For example, the officials stated that currently, print instructions or commands must be handled separately for each DDS office. However, a centralized capability would allow the instructions or commands to be managed for all offices from a single point of control. In addition, the officials stated that SSA and the DDSs must still test the overall effectiveness of this proposal.

Regarding IWS/LAN equipment maintenance, SSA has been working with the DDSs to streamline the maintenance process and to work out agreements that would allow the DDSs to obtain IWS/LAN maintenance service locally. SSA has already reached such an agreement with the Wisconsin DDS, and the administrator of that office has expressed satisfaction with the arrangement. However, the DDS officials stated that while SSA's Associate Commissioner for the Office of Telecommunications and Systems Operations and his staff continue to work with the DDSs on IWS/LAN maintenance service, more work needs to be done to address this issue throughout the DDS community.

In our view, the DDSs have valid concerns with SSA's network management control and maintenance of the IWS/LAN. If not resolved, these issues could threaten the continued progress and success of the IWS/LAN initiative, and ultimately, SSA's success in modernizing its computer systems and redesigning work processes to better serve an increasing beneficiary population and achieve improvements in productivity.

4. *How concerned should we be about SSA's ability to effectively develop the software that will be needed to support their operations into the next century?*

There should be significant concern about SSA's ability to effectively develop the software that will be needed to support its operations into the next century. Software development is a critical component of the agency's ongoing systems modernization efforts. SSA's plans call for designing and developing a new generation of software to operate on the IWS/LAN to support redesigned work

¹⁰A Login Script is the system or user profile associated with a particular job description that allows the user to access information on the network.

processes in a client/server environment. Yet, as we noted in our January 1998 report,¹¹ SSA had weaknesses in its existing processes for developing and maintaining software. Moreover, as a traditionally mainframe-oriented agency, SSA has lacked experience in developing and using client/server software.

SSA has recognized the shortfalls in its capability and has acted to improve the processes and methods that it uses to develop software. For example, it has (1) launched a formal software process improvement program, (2) acquired assistance from the Software Engineering Institute¹² in assessing its strengths and weaknesses and in assisting with improvements, and (3) established management groups to oversee software process improvement activities.

However, we found that SSA's improvement program lacked specific, quantifiable goals, and meaningful baseline data. As a result, SSA cannot determine whether its improvement efforts are effective or whether its goals are being achieved. We, therefore, recommended that SSA develop and implement plans (1) articulating a strategy and time frames for developing baseline data, (2) identifying specific goals, and (3) monitoring progress toward achieving those goals. The agency agreed with our recommendations and reported that it has begun implementing these steps.

Even as SSA works to improve its software development capability, however, it continues to develop critical software relying on existing weak processes. For example, despite acknowledging weaknesses in its ability to develop client/server software, SSA is, nonetheless, developing the first major client/server software application that it intends to operate on IWS/LAN to support the redesigned disability process. Given the long-term nature of the software process improvement efforts—SSA is not scheduled to complete implementation of its improved processes until June 2000—the Deputy Commissioner for Systems stated that the agency is not likely to incorporate improved processes in its current development of this software.

SSA has now encountered performance problems and delays in developing this software. In particular, the reported productivity of claims representatives in one of SSA's field offices decreased during tests of an early release of the software. In response to the problems, SSA tasked Booz-Allen and Hamilton to

¹¹Social Security Administration: Software Development Process Improvements Started But Work Remains (GAO/AIMD-98-39, January 28, 1998).

¹²The Software Engineering Institute is a nationally recognized, federally funded research and development center established at Carnegie Mellon University in Pittsburgh, Pennsylvania, to address software development issues.

evaluate the software development project and recommend options for corrective action, including terminating the in-house effort and hiring a software development contractor. SSA stated that it expects to receive the recommendations from Booz-Allen and Hamilton by the end of this month.

5. *This subcommittee has asked GAO to monitor SSA's Personal Earnings and Benefit Estimate on-line initiative. Obtaining PEBES through the internet was suspended. What are SSA's plans on this activity today, and what is your assessment in terms of how they are proceeding?*

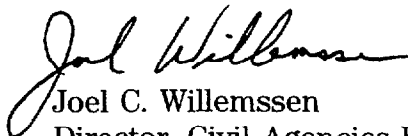
According to the Deputy Commissioner for Systems, implementation of the on-line Personal Earnings and Benefit Estimate Statement (PEBES) system remains suspended and the agency is continuing to evaluate alternatives for protecting the privacy and security of sensitive information that would be transmitted via the Internet. He stated that the Commissioner has not yet determined when a modified on-line PEBES system will be implemented. Because privacy and security are significant issues for the on-line PEBES system, it is vital that SSA identify and implement effective technical safeguards.

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In responding to these questions, we reviewed and analyzed documents describing the status of SSA's Year 2000 compliance and software process improvement efforts. We also reviewed documentation on the IWS/LAN and PEBES initiatives and discussed with the Deputy Commissioner for Systems and his relevant staff, actions that SSA is taking on these initiatives. We conducted our work from June 15 through July 10, 1998, in accordance with generally accepted government auditing standards.

We are sending copies of this letter to the Commissioner of Social Security and other interested parties. Copies will also be made available to others upon request. If you have any questions regarding this letter, please contact me at (202) 512-6253 or Valerie Melvin, Assistant Director, at (202) 512-6304. We can also be reached by e-mail at willemsenj.aimd@gao.gov and melvinv.aimd@gao.gov, respectively.

Sincerely yours,



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