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Update on Year 2000 and Other Key Information Technology Initiatives

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss the Social Security Administration's (SSA) progress in implementing key information technology initiatives critical to its ability to effectively serve the public. Achieving Year 2000 (Y2K) readiness is SSA's top information technology priority. Consistent with our prior reports,[1] SSA continues to make excellent progress on Y2K and has taken important steps to implement our recommendations for mitigating risks. Further, it has initiated a number of governmentwide best practices to help ensure its preparedness for the change of century. Nonetheless, SSA's work is not yet complete; certain tasks integral to ensuring its overall readiness for the year 2000 must still be accomplished.

Another major focus of SSA's information technology activities is implementation of its Intelligent Workstation/Local Area Network (IWS/LAN), which SSA expects will provide the agency with the basic automation infrastructure to support redesigned work processes and improve its service delivery. SSA continues to implement IWS/LAN and reports that it has now installed intelligent workstations and LANs in most of the approximately 2,000 SSA and state Disability Determination Service (DDS) sites included in the initiative. However, it has not yet implemented key processes that are essential to measuring the benefits derived from this investment.

The third initiative that I will discuss today is SSA's development of its Reengineered Disability System (RDS). RDS was intended to support SSA's modernized disability claims process and was to be the first major programmatic software application to operate on IWS/LAN. However, SSA experienced numerous problems and delays in developing this software. Based on a contractor's recent assessment of the initiative, SSA has now decided to terminate the original RDS strategy after 7 years of effort and about $71 million in reported costs. SSA now plans to proceed with a new strategy to address the needs of its disability determination process.

[1] Social Security Administration: Significant Progress Made in Year 2000 Effort, But Key Risks Remain (GAO/AIMD-98-6, October 22, 1997); Year 2000 Computing Crisis: Continuing Risks of Disruption to Social Security, Medicare, and Treasury Programs (GAO/T-AIMD-98-161, May 7, 1998); and Year 2000 Computing Crisis: Update on the Readiness of the Social Security Administration (GAO/T-AIMD-99-90, February 24, 1999).

Year 2000: Continuing Progress, But Critical Tasks Remain

SSA first recognized the potential impact of the Y2K problem in 1989 and, in so doing, was able to launch an early response to this challenge. SSA initiated early awareness activities and made significant progress in assessing and renovating mission-critical mainframe software that enables it to provide Social Security benefits and other assistance to the public. Because of the knowledge and experience gained through its Y2K efforts, SSA has been a recognized federal leader in addressing this issue.

Despite its accomplishments, however, our 1997 report on SSA's Y2K program identified, and recommended actions for addressing three key risk areas:[2]

- SSA had not ensured Y2K compliance of mission-critical systems used by the 54 state DDSs that provide vital support in administering SSA's disability programs. Specifically, SSA had not included these DDS systems in its initial assessment of systems that it considered a priority for correction. Without a complete agencywide assessment that included the DDS systems, SSA could not fully evaluate the extent of its Y2K problem or the level of effort that would be required to correct it. We therefore recommended that SSA strengthen its monitoring and oversight of state DDS Y2K activities, expeditiously complete the assessment of mission-critical systems at DDS offices, and discuss the status of DDS Y2K activities in SSA's quarterly reports to the Office of Management and Budget (OMB).
- SSA had not ensured the compliance of its data exchanges with outside sources, such as other federal agencies, state agencies, and private businesses. Unless SSA can ensure that data received from these organizations are Y2K complaint, program benefits and eligibility computations that are derived from the data provided through these exchanges may be compromised and SSA's databases corrupted. Accordingly, we recommended that SSA quickly complete its Y2K compliance coordination with all data exchange partners.
- SSA lacked contingency plans to ensure business continuity in the event of systems failure. Business continuity and contingency plans are essential to ensuring that agencies will have well-defined responses and sufficient time to develop and test alternatives when unpredicted failures occur. At the time of our October 1997 review, SSA officials acknowledged the importance of contingency planning, but had not

[2]GAO/AIMD-98-6, October 22, 1997.

developed specific plans to address how the agency would continue to support its core business processes if its Y2K conversion activities experienced unforeseen disruptions. We therefore recommended that SSA develop specific contingency plans that articulate clear strategies for ensuring the continuity of core business functions.

SSA agreed with all of our recommendations and efforts to implement them have either been taken or are underway. Regarding state DDSs, SSA enhanced its monitoring and oversight by establishing a full-time project team, designating project managers and coordinators, and requesting biweekly status reports. It also obtained from each DDS a plan identifying the specific milestones, resources, and schedules for completing Y2K conversion tasks. In its most recent (May 1999) quarterly report to OMB, SSA stated that all DDS claims processing software had been renovated, tested, implemented, and certified Y2K compliant by January 31, 1999.

To address data exchanges, SSA identified all of its external data exchanges and coordinated with all of its partners on the schedule and format for making exchanges Y2K compliant. As of June 27, 1999, according to the agency, over 99 percent of SSA's 1,954 reported external data exchanges had been made compliant.

Among SSA's most critical data exchanges are those with the Department of the Treasury's Financial Management Service (FMS) and the Federal Reserve System for the disbursement of Title II (Old Age, Survivors, and Disability Insurance program) and Title XVI (Supplemental Security Income program) benefits checks and direct deposit payments. SSA began working with FMS in March 1998 to ensure the compliance of these exchanges, and reported earlier this year that the joint testing of check payment files and testing from SSA through FMS and the Federal Reserve for direct deposit payments had been successfully completed. Further, SSA stated, it began generating and issuing Title II and Title XVI benefits payments using the Y2K compliant software at SSA and FMS in October 1998.

Regarding its contingency planning, SSA has instituted a number of key elements, in accordance with our business continuity and contingency planning guidance.[3] In addition to developing its overall strategy for Y2K

[3]Year 2000 Computing Crisis: Business Continuity and Contingency Planning (GAO/AIMD-10.1.19, March 1998 [exposure draft], August 1998 [final]).

business continuity, SSA has completed local contingency plans to support its core business operations and has received contingency plans for all state DDSs. Also included among its plans is SSA's Benefits Payment Delivery Y2K Contingency Plan, developed in conjunction with Treasury and the Federal Reserve to ensure the continuation of operations supporting Title II and Title XVI benefits payments.

Another key element of business continuity and contingency planning, as noted in our guide, is the development of a zero-day or day-one risk reduction strategy, and procedures for the period from late December 1999 through early January 2000. SSA, as a recognized leader in addressing Y2K contingency planning issues, has developed such a strategy. For example, the agency plans for select SSA and DDS sites to process late December 1999 data during the first 2 days of January 2000 as a means of testing the accuracy of the systems prior to the start of business on Monday, January 3. Other features of the strategy include implementation of (1) an integrated control center with responsibility for the internal dissemination of critical data and problem management, (2) a timeline detailing the hours during which certain events will occur (such as when workloads will be placed in the queue and backup generators started) during this rollover period, and (3) a personnel strategy and leave policy that includes commitments from key staff to be available during the rollover period. Such a strategy should help SSA manage the risks associated with the actual rollover and better position it to address any disruptions that occur.

SSA has taken other vital steps to help ensure its preparedness for the year 2000. For example, it has used a Y2K test facility to test operating systems, vendor products, and mission-critical systems. SSA's test and certification procedures included (1) baseline testing to establish current-year data for comparison, (2) forward year testing of applications with business and systems dates set in 2000 and beyond, (3) comparisons of aged baseline results with forward year test results, (4) forward date integration testing of entire business functions (i.e., all interrelated applications), and (5) independent reviews of test outputs to certify Y2K compliance.

To ensure the delivery of benefits payments, SSA worked jointly with FMS and the Federal Reserve to test the transfer of approximately 7,500 electronic payments from Treasury to the Richmond, Virginia, Federal Reserve Board through the Automated Clearing House network. SSA reported that it began generating and issuing Title II and Title XVI benefits payments using the compliant software at SSA and FMS in October 1998.

SSA Implemented a Y2K Change Management Process

To further reduce the risk of disruptions, in the fall of 1998 SSA instituted a Y2K change management process. We previously testified that this effort represented a best practice governmentwide that should be adopted by other agencies.[4] SSA's process consists of three key components: (1) a quality assurance process, (2) Y2K system recertifications, and (3) a moratorium on discretionary software modifications.

A key feature of SSA's quality assurance process is its use of a validation tool to assess the quality of its previously renovated mission-critical applications. SSA began piloting the tool in November 1998 and expanded its use full-scale in December. The tool searches application programs to identify any date field or date logic that may fail as a result of any inadvertent modifications.

The second key component of SSA's change management process involves its plans to recertify previously renovated applications where date errors had been identified and Y2K compliant software was then modified. The recertification process includes performing forward date testing of the modified software and reevaluating the software using the quality assurance validation tool. In addition, business function experts perform independent reviews of all test outputs before recertifying the software's compliance.

Also, SSA plans to enforce a moratorium on discretionary software changes from September 1, 1999 through March 31, 2000. This moratorium is intended to help mitigate the risks associated with changing its certified systems by reducing the number of software modifications made. In those instances in which software changes are necessary—such as when compliant software must be modified due to legal or other agency requirements—SSA plans to recertify the software's compliance. Examples of software that will be modified include applications impacted by Title II benefits rate increases and Title XVI cost-of-living adjustments that are to take effect in November, and certain cyclical software modifications that are to occur after September.

[4] Year 2000 Computing Crisis: Readiness Improving, But Much Work Remains to Avoid Major Disruptions (GAO/T-AIMD-99-50, January 20, 1999).

SSA Still Needs to Complete Critical Tasks to Ensure Year 2000 Readiness

While SSA has been a Y2K leader, it must still complete several critical tasks to ensure its readiness for the year 2000. These tasks include

- ensuring the compliance of all external data exchanges,
- completing tasks outlined in its contingency plans,
- certifying the compliance of one remaining mission-critical system,
- completing hardware and software upgrades in the Office of Telecommunications and Systems Operations, and
- correcting date field errors identified through the quality assurance process.

SSA reported as of mid-July that six of its external data exchanges were still in the process of being made Y2K compliant. In each instance, these include files that have been addressed by SSA but which need further action on the part of SSA's business partners to achieve Y2K compliance. For example, SSA transmits one file on cost-of-living adjustments to the Department of Veterans Affairs (VA). While SSA has made the file compliant, VA must still complete its testing in order to receive the file in a Y2K compliant format. VA is scheduled to complete its testing in August. In addition, SSA is waiting to verify the successful transmission of three compliant files from Treasury regarding information on tax refund actions. SSA expects to verify the compliance of the Treasury files during the first week of August. SSA also still needs to verify the successful transmission of two Massachusetts death data files. SSA expects to complete this activity by the end of this week.

Completing tasks in its contingency plans and coordinating with its own staff and its business partners to ensure the timely functioning of its core business operations is likewise critical. This includes coordinating with its benefit delivery partners on contingency actions for ensuring timely benefits payments. For example, SSA plans to assist Treasury in developing alternative disbursement processes for problematic financial institutions. SSA is also now in the process of testing all of its contingency plans, with expected completion in September. In addition, SSA must implement its day-one strategy, consisting of actions to be executed during the last days of 1999 and the first few days of 2000.

SSA also has one remaining mission-critical stand-alone system—the Integrated Image-Based Data Capture System—which must still be certified as Y2K compliant. This system is used to scan and convert W-2 forms to electronic format for entry into the Annual Wage Reporting System. According to officials in SSA's Office of Systems, the

SSA-developed application software has been renovated, tested, and implemented into production; however, SSA cannot certify the system's compliance until it has completed testing of the system's upgraded commercial off-the-shelf software used for tracking W-2 form data from the point of receipt to image scanning. This testing is not scheduled to conclude until late August.

The installation of software and hardware upgrades in SSA's Office of Telecommunications and Systems Operations must also be completed. For example, SSA must install Internet browser patches for the IWS/LAN software by August.

Finally, SSA must correct a number of date-field errors recently identified using its QA tool. SSA reported that as of July 23, 1999, it had assessed 92 percent (283 of 308) of its mission-critical applications (having a total of about 40 million lines of code),[5] and that it had identified 1,565 date field errors. SSA is in the process of correcting these identified date problems. As of mid-July, it reported that 44 of the 283 applications had been corrected, recertified, and returned to production. SSA plans to correct, recertify, and implement all of its remaining applications by November, when it is scheduled to modify some mission-critical applications to reflect Title II benefit rate increases and Title XVI cost-of-living adjustments.

IWS/LAN: Installations Continue But Contributions to Improved Mission Performance Remain Unclear

The second major information technology initiative that I will discuss today is SSA's IWS/LAN modernization effort. SSA expects IWS/LAN to play a critical role by providing the basic automation infrastructure to support redesigned work processes and to improve the availability and timeliness of information. Under this initiative, SSA planned to replace approximately 40,000 "dumb" terminals[6] and other computer equipment used at about 2,000 SSA and state DDS sites with an infrastructure consisting of networks of intelligent workstations connected to each other and to SSA's mainframe computers.

[5]Thirteen applications were not tested because they are no longer in use (e.g., obsolete, retired, replaced), 10 because they were incompatible with the QA tool, and 1 because it was no longer part of SSA's inventory. One application remained to be tested.

[6]SSA's "dumb" terminals are connected to its mainframe computers through its data network and are controlled by software executed on the mainframes.

The resources that SSA plans to invest in acquiring IWS/LAN are enormous. The first phase of the planned project that started in 1996, was to be a 7-year, approximately $1 billion effort to acquire, install, and maintain 56,500 intelligent workstations and 1,742 local area networks, 2,567 notebook computers, systems furniture, and other peripheral devices.[7]

The basic intelligent workstation that SSA planned to procure included a 100-megahertz Pentium personal computer with 32 megabytes of random access memory and a 1.2-gigabyte hard (fixed) disk drive. We reported in 1998,[8] however, that the IWS/LAN contractor—Unisys Corporation—had raised concerns about the availability of the intelligent workstations being acquired, noting that the 100-megahertz workstations specified in the contract were increasingly difficult to obtain. At that time, SSA's Deputy Commissioner for Systems did not believe it was necessary to upgrade to a faster processor because the 100-megahertz workstation met the agency's needs.

Over the past year, SSA has continued its aggressive implementation of IWS/LAN. The agency reported, as of mid-July 1999, that it had completed the installation of 70,518 workstations and 1,742 LANs at 1,565 SSA sites and 177 DDS sites. As the agency has proceeded with the initiative, however, it has revised its requirements several times based on the need for additional workstations. Specifically, from June 1998 through April 1999, SSA modified its contract with the Unisys Corporation three times to purchase additional workstations and related hardware. These modifications increased from 56,500 to 70,624, the total number of intelligent workstations acquired under the Unisys contract.[9] In addition, because Unisys faced difficulty in obtaining the 100-megahertz workstations specified in the initial contract, the additional workstations acquired through the modifications were configured with processor speeds ranging from 266 megahertz to 350 megahertz.

[7]The national IWS/LAN initiative consisted of two phases. During phase I, SSA planned to acquire workstations, LANs, notebook computers, systems furniture, and other peripheral devices as the basic, standardized infrastructure to which additional applications and functionality can later be added. Phase II was intended to build upon the IWS/LAN infrastructure provided through the phase I effort.

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

[9]SSA also used another procurement vehicle to procure 1,767 additional workstations that are also part of the IWS/LAN architecture.

According to SSA officials overseeing the initiative, SSA's initial estimates of its IWS/LAN requirements had not fully considered the needs of all SSA and state DDS sites. As a result, additional workstations were necessary to (1) ensure Y2K hardware compliance at all DDS sites, (2) complete installations in some of SSA's larger sites, and (3) support training needs. SSA reported that the contract modifications cost about $32 million and that it had completed the installations of all but 106 workstations acquired via the modifications by July 11, 1999.[10]

Beyond these modifications, however, SSA has continued to increase its requirements and is currently in the process of acquiring additional workstations to support the national IWS/LAN initiative. In particular, SSA's Office of Systems concluded during fiscal year 1999 that the workstations acquired via the Unisys contract and its subsequent modifications were not sufficient to fulfill the IWS/LAN requirements of all SSA and DDS sites. As a result, the Chief Information Officer (CIO), in November 1998, approved a request for a $45 million, 5-year follow-on contract to acquire, install, and maintain at least 6,900 additional workstations and about 275 additional LANs.

According to a Systems official, the intelligent workstation that SSA has specified for the follow-on contract is, at a minimum, a 333-megahertz Pentium II processor with 64 megabytes of random access memory and a 4-gigabyte hard (fixed) disk drive. SSA is currently evaluating vendors' proposals and expects to award the contract by the end of July.

Although the CIO approved the Unisys contract modifications and the follow-on contract, SSA's Deputy Commissioner for Finance, Assessment and Management had previously expressed concerns about SSA's need for the additional workstations and their expected benefits. In particular, in letters to the CIO in November 1998 and April 1999, the Deputy Commissioner recommended that the CIO approve the additional workstations from Unisys and the follow-on contract award on the condition that SSA would, respectively, (1) reassess the total number of work year savings for IWS/LAN and (2) reconcile the number of workstations against staffing levels. The CIO agreed to these conditions and requested that relevant agency components determine the reasons for the additional workstations and identify the benefits expected to be

[10]According to SSA, the remaining workstations are to be installed by October 1999.

achieved from them. Although this effort has been ongoing for about 8 months, as of July 22, the study had not been finalized.

IWS/LAN's Actual Contribution to Improved Productivity and Mission Performance Remains Unclear

Last June, we expressed concern that SSA lacked target goals and a defined process for measuring IWS/LAN performance—essential to determining whether its investment in IWS/LAN was yielding expected improvements in service to the public.[11] According to the Clinger-Cohen Act and OMB guidance, effective technology investment decision-making requires that processes be implemented and data collected to ensure that (1) project proposals are funded on the basis of management evaluations of costs, risks, and expected benefits to mission performance and (2) once funded, projects are controlled by examining costs, the development schedule, and actual versus expected results. We therefore recommended that SSA establish a formal oversight process for measuring the actual performance of IWS/LAN, including identifying the impact that each phase of this initiative has on mission performance and conducting postimplementation reviews of the project.

Although SSA agreed with the need for performance goals and measures, its Information Technology Systems Review Staff had neither completed nor established plans for performing in-process reviews of IWS/LAN to (1) compare the estimated cost levels to actual cost data, (2) compare the estimated and actual schedules, (3) compare expected and actual benefits realized, and (4) assess risks. In addition, while the Clinger-Cohen Act and OMB guidelines call for postimplementation evaluations to determine the actual project cost, benefits, risks, and returns, SSA has not scheduled a postimplementation review to validate the IWS/LAN phase I projected savings and to apply lessons learned to make other information technology investment decisions. According to the Director of the Information Technology Systems Review Staff, the agency has no plans to perform either in-process or postimplementation reviews unless problems are identified that warrant such an effort.

As expressed in our earlier report, it is essential that SSA conduct in-process and postimplementation reviews for the IWS/LAN initiative. Since 1994, we have expressed concerns regarding SSA's need to measure

[11] GAO/AIMD-98-136, June 19, 1998.

the actual benefits achieved from its implementation.[12] Moreover, as the agency continues to expand IWS/LAN via its follow-on workstation acquisitions, it is critical for the agency to know how well it has achieved the savings projected in its initial assessments supporting this initiative. Without such reviews, the agency will be unable to make informed decisions concerning (1) whether it should continue, modify, or terminate its investment in a particular initiative or (2) how it can improve and refine its information technology investment decision-making process.

SSA Will Need to Continue to Address DDS Network Management Concerns

Our 1998 report also noted concerns among state DDSs about the loss of network management and control over IWS/LAN operations in their offices and dissatisfaction with the service and technical support received from the IWS/LAN contractor.[13] Accordingly, we recommended that SSA work closely with the DDSs to identify and resolve the network management concerns.

SSA has worked with the DDSs to address these issues. For example, it is providing additional servers to give the DDSs certain administrative rights capabilities, such as access to specific login scripts and full control over DDS applications. SSA has also worked with the DDSs to streamline the maintenance process and establish agreements that would allow the DDSs to perform their own IWS/LAN maintenance. Under such agreements, according to SSA, states could rely on their in-house technical staff—rather than the services of the IWS/LAN contractor, Unisys Corporation—to address maintenance problems. At the conclusion of our review, SSA had entered into a maintenance agreement with one state DDS—Wisconsin—and was considering the requests of four other DDSs.

Other issues also continue to concern the DDSs. For example, representatives of the National Council of Disability Determination Directors, which represents the state DDSs, stated that they remain concerned about SSA's attempts to implement a standard print solution. In addition, they stated that SSA has not ensured that the workstations implemented adhere to a standard configuration that provides all DDS system administrators with the same rights. SSA has acknowledged these issues and plans to work with the states to address them.

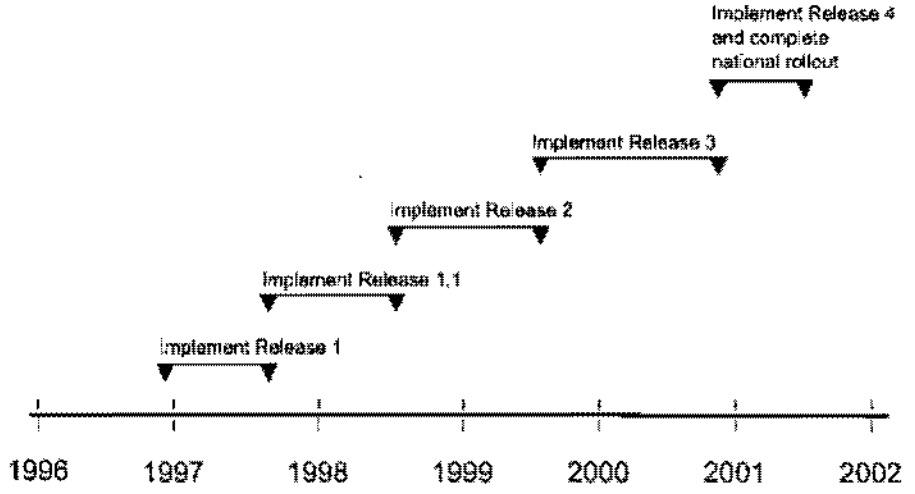
[12]Social Security Administration: Risks Associated With Information Technology Investment Continue (GAO/AIMD-94-143, September 19, 1994).

[13]GAO/AIMD-98-136, June 19, 1998.

RDS: Development Problems Have Led SSA to Discontinue the Initiative

SSA's work toward developing RDS has been ongoing for many years. The initiative began in 1992 as the Modernized Disability System and was redesignated as RDS in 1994 to coincide with the agency's efforts to reengineer the disability claims process. As shown in figure 1, SSA had planned to implement the RDS software starting November 1996 and to complete the national rollout by May 2001.

Figure 1: Planned RDS Rollout Schedule



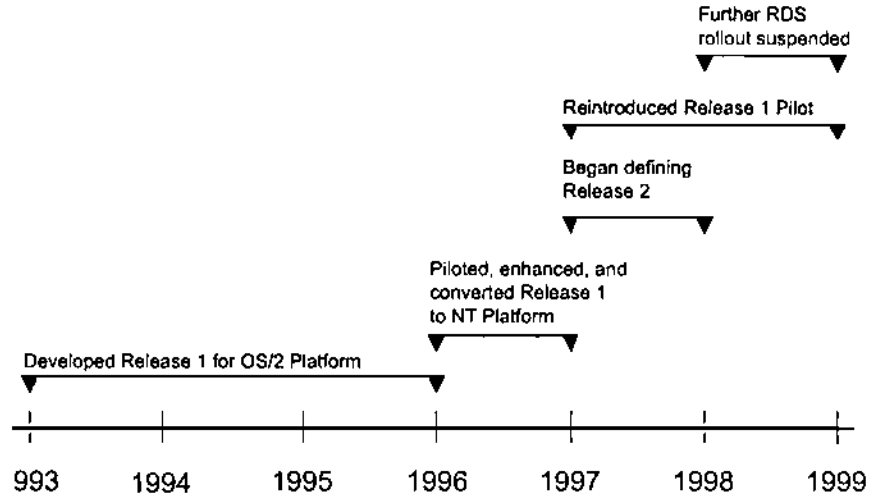
Source: SSA.

When completed, RDS was to be the first major programmatic software application to operate on SSA's IWS/LAN infrastructure and be part of the enabling platform for SSA's modernized disability claims process. Specifically, RDS was to automate the Title II and Title XVI disability claims processes—from the initial claims-taking in the field office to the gathering and evaluation of medical evidence in the state DDSs, to payment execution in the field office or processing center, and include the handling of appeals in hearing offices. SSA anticipated that this automation would contribute to increased productivity, decreased disability claims processing times, and more consistent and uniform disability decisions. However,

after approximately 7 years and more than $71 million[14] reportedly spent on the initiative, SSA has not succeeded in developing RDS and no longer plans to continue the effort.

As figure 2 shows, from 1993 through 1999, SSA took various steps toward developing the RDS software.

Figure 2: Actual RDS Rollout Schedule



Source: SSA.

However, even in its earliest stages, this effort proved problematic and was plagued with delays. For example, in September 1996, we reported that software development problems had delayed the scheduled implementation of RDS by more than 2 years.[15] An assessment of the development effort revealed a number of factors as having contributed to that delay, including (1) using programmers with insufficient experience, (2) using software development tools that did not perform effectively, and

[14]The reported costs were for RDS software design and development, pilot tests, and contractor support.

[15]Social Security Administration: Effective Leadership Needed to Meet Daunting Challenges (GAO/HEHS-96-196, September 12, 1996).

(3) establishing initial software development schedules that were too optimistic.

SSA proceeded with the initiative nonetheless and, in August 1997, began pilot testing the first release of the RDS software in its Alexandria, Virginia, field office and the federal DDS[16] for the specific purposes of (1) assessing the performance, cost, and benefits of the software and (2) determining IWS/LAN phase II equipment requirements. However, as we previously reported, SSA encountered performance problems during the pilot tests.[17] For example, Systems officials stated that, using RDS, the reported productivity of claims representatives in the SSA field office dropped due to the system's slow response time. Specifically, the officials stated that before the installation of RDS, each field office claims representative processed approximately five case interviews per day. After RDS was installed, each claims representative could process only about three cases per day.

In response to the RDS performance problems, SSA delayed its plans for expanding the pilot to other offices and, in March 1998, contracted with Booz-Allen and Hamilton to independently evaluate and recommend options for proceeding with the initiative. According to the statement of work, Booz-Allen and Hamilton was tasked to provide SSA with a comparative cost, benefit, risk, and schedule assessment for RDS, and to propose alternative strategies for achieving its underlying objectives. The contractor was originally scheduled to deliver its report to SSA in September 1998, at which time SSA planned to select an option for proceeding to achieve objectives intended for the initiative. However, SSA later extended this milestone, with the draft report being delivered in February 1999. Systems officials subsequently required the contractor to address additional comments and concerns put forth by SSA and the DDSs, resulting in additional delays. SSA provided the report to us on July 26.

According to the Booz-Allen and Hamilton report, the RDS software had defects that would diminish the current case-processing rate at DDS sites. In addition, SSA had not been timely in addressing the software defects. For example, 90 software problems identified by SSA staff remained unresolved after more than 120 days. As a result, the Booz-Allen and

[16]The federal DDS provides backup services to state DDSs when the state offices cannot process their workloads and serves as a model office for testing new technologies and work processes.

[17]GAO/AIMD-98-136, June 19, 1998.

Hamilton report recommended that SSA discontinue the RDS initiative and focus on an alternative solution involving the use of an electronic folder to replace the paper-based case folder in the disability determination process. Further, to reduce development risks, the contractor recommended that the electronic folder project be segmented into manageable sections.

SSA Plans to Launch a New Initiative

Based on the assessment it received from Booz-Allen and Hamilton, SSA has discontinued the development of RDS and has begun to pursue a new strategy for addressing the needs of its disability determination process. According to the RDS project manager, the strategy that SSA is now considering will be multifaceted, incorporating three components: (1) an electronic disability intake process—which will include a subset of the existing RDS software, (2) the existing DDS claims process, and (3) a new system for the Office of Hearings and Appeals. In addition, we were told that the strategy will rely on the use of an electronic folder to transmit data from one processing location to another. The electronic folder is to be a data repository, storing documents that are keyed in, scanned, or faxed, and will essentially replace the current process of moving a paper folder from one location to another and entering data into a separate system. SSA began pilot testing its new strategy on July 26.

However, as SSA is beginning to move forward with this new initiative, it needs to take advantage of opportunities to apply improved software development processes. In January 1998, we reported that SSA had begun taking steps to improve its software development capability.[18] Significant actions that SSA 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 improvements,[19] and (3) establishing management groups to oversee software process improvement activities. SSA has developed and is currently applying the improved software development processes to 11 projects.

Given the failure of RDS, it is imperative that any future software initiatives adhere to the improved processes and methods. Without such linkage, SSA again risks spending millions on a project that will not succeed. On July 27,

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

[19]The Software Engineering Institute at Carnegie Mellon University, in Pittsburgh, Pennsylvania.

SSA officials told us that the new post-RDS initiative will be linked to the agency's software development improvement efforts.

In summary, SSA has encountered mixed success in implementing its key information technology initiatives. The agency has clearly been a leader on Y2K and has demonstrated a commitment to addressing the challenges of the century date change. Further, the agency has worked aggressively to implement IWS/LAN as its basic automation infrastructure. However, the benefits of the IWS/LAN investment remain uncertain because SSA has not yet assessed its actual contribution to improved mission performance. In addition, after years of problems, SSA terminated RDS, which will delay expected improvements in the processing of disability claims. To avoid repeating past mistakes on its future information technology efforts, SSA will need to, at a minimum, apply disciplined information technology investment management practices and adhere to improved software development processes.

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

Contact and Acknowledgements

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Social Security Administration
Communications to Congress

Prepared Statement By Kenneth S. Apfel
Commissioner Of Social Security
Before The House Committee On Ways And Means
Subcommittee On Social Security
Subject - Information Technology Enhancements
July 29, 1999

Mr. Chairman and Members of the Subcommittee:

Thank you for inviting me to testify about the Social Security Administration's (SSA) progress on implementing information technology initiatives. These initiatives are critically important when we consider that our ability to manage our workloads now--and in the future--rests on our ability to use technology extensively and effectively, and I am proud of SSA's achievements in this area.

It is clear technology has been, and will continue to be indispensable to SSA's success in achieving the goals set forth in the Agency Strategic Plan. The success of goals such as the ability to deliver customer-responsive, world class service, to make SSA program management the best in the business, with zero tolerance for fraud and abuse, and to be an employer that values and invests in each employee, is directly linked to SSA's ability to apply advances in technology. As you yourself have noted, Mr. Chairman, computers will play a critical role in our ability to process benefit applications, pay benefits timely, and guard against fraud.

From 1992 through 1999, SSA has spent $4.3 billion on information technology to support its programs. These costs include funds spent from the Information Technology Systems budget, the automation investment fund, and salaries and expenses of information technology personnel. My testimony today will focus on how we have invested those resources and what benefits have been returned as a result of those investments. The areas I will discuss today are: SSA's preparedness for the Year 2000; automation of our disability processes; a project to provide our employees with workstations with the capability to process claims and respond to customer inquiries (also known as the Intelligent Workstation/Local Area Network or IWS/LAN project);and issuance of Social Security Statements (formerly known as Personal Earnings and Benefit Estimate Statements, or PEBES).

Year 2000

Preparing for the change of century date--from 1999 to 2000--is one of the biggest challenges ever to face the technology industry. At SSA our national computer

center maintains and operates hundreds of mission-critical systems supported by over 35 million lines of in- house computer code, as well as hundreds of commercial off-the-shelf vendor products that had to be reviewed and changed where necessary to ensure that January 2000 payments will be made correctly and on time to the nearly 50 million Social Security and Supplemental Security Income (SSI) beneficiaries who could be affected by the Year 2000 (or Y2K) changeover.

I want to thank the Subcommittee for holding this hearing and for your efforts in making the public aware of SSA's progress to make sure that we will pay benefits timely and that SSA's system will function as it should. As I testified before the Ways and Means Committee in February, SSA's benefit payment system is Year 2000 compliant. As we like to say, "We are Y2K OK." We have worked closely with the Treasury Department, Federal Reserve, and the Postal Service to ensure that Social Security and Supplemental Security Income (SSI) checks and direct deposit payments for January will be paid on time. Since October 1998, payments for both Social Security and SSI programs have been made with Year 2000-compliant systems at both SSA and Treasury.

We worked with the State Disability Determination Services (DDS) to make sure that the 55 State DDSs that have automated systems to support the disability determinationprocess are Year 2000 compliant. I am happy to report that as of January 1999 all of the State DDS systems are Year 2000 compliant, tested, and implemented.

We recognize that it is not enough for SSA to be Year 2000 compliant if our trading partners are not ready. We have worked very closely with all of our trading partners. I am pleased to report that all outgoing data exchanges are Year 2000 compliant and implemented. All but three of our incoming data exchanges are compliant and implemented. The remaining three are in testing and will be implemented in early August 1999.

We have worked hard to make sure that all of our mission critical systems are Year 2000 compliant, and now we are taking steps to make sure that we do not introduce possible date defects into these systems. Whenever a system that has been Year 2000 certified is changed due to legislation or other requirements, we are recertifying the system to make sure it is still Year 2000 compliant. In addition, beginning this month we have instituted a moratorium on installation of commercial off-the-shelf software and mainframe products, and we will impose a similar moratorium in September for discretionary changes to our own software. The moratoriums will be in place through March 2000.

We have developed a detailed strategy that comprises the comprehensive set of actions that will be executed during the last days of 1999 and the first days of 2000. The strategy also includes the activities leading up to the critical century rollover date, such as identification of key personnel involved, preparation of facilities checklists, establishment of the Y2K command center, a schedule for testing all systems over the weekend, and other activities. Implementation of the strategy will ensure, to the extent possible, that SSA's facilities and systems will be fully operational on January 3, 2000--the firstbusiness day of the new century. That is, service to the public and our trading partners will continue without interruption due to the change of century date.

Finally, we recognize that our system depends on infrastructure services, such as the power grid or the telecommunications industry and third parties, which are beyond our control. In March 1998, SSA completed its Y2K Business Continuity

and Contingency Plan, which is updated quarterly. The plan identifies potential risks to Agency business processes, ways to mitigate each risk, and strategies to ensure continuity of operations.

As part of the plan, we have in place local plans for each of our field offices, teleservice centers, processing centers, hearings offices, and State DDSs. We have also developed contingency plans for benefit payment and delivery. We continue to work closely with the Treasury Department and the Federal Reserve to identify any Year 2000 issues that might affect direct deposit payments. While we have not identified any so far, ira problem should occur in January, the Treasury Department will quickly issue a replacement Social Security check, and SSA offices will provide emergency payment services to beneficiaries with critical needs. I do not consider Social Security's job done until timely and correct benefits are in the hands of all of our beneficiaries.

I know that we are all concerned about ensuring that all beneficiaries are paid on time, but I want to be sure to urge you to resist proposals to make the January 2000 Social Security benefit payment in December 1999. After a thorough review of the pros and cons of making payments early, the Administration determined that such action is not necessary given the readiness of agency payment systems and business continuity and contingency plans. We believe that there are risks associated with making payments early.

Such actions could easily be interpreted by the public as an indicator of the government's inability to make automated payments in January 2000. Such a signal could prove disastrous if citizens decide to withdraw their currency in anticipation of a disruption in benefits or other payments, or try to cancel electronic payments and revert to check payments. At this point, the damage that could result from public overreaction could be far more serious than technology risks resulting from potential Year 2000 problems. Moreover, providing early payments in December could require the government and industry to make additional programming changes to account for the payments with the requisite testing of those systems and would raise a number of difficult tax policy issues if there were a move to extend early payments of other transactions in the public or private sector beyond simply Social Security payments.

IWS/LAN Project

As a part of our strategic goal of delivering customer-responsive, world class service and our strategy for providing employees ready access to the information they need to serve the public as described in SSA's Strategic Plan, SSA initiated the IWS/LAN project. As you know, Mr. Chairman, the Strategic Plan paints a broad picture of SSA's future, as well as our means and strategies to achieve our long-range goals. SSA's business approach to providing world-class service while workloads grow relies on business process and information technology improvements, such as IWS/LAN. This technology is key to our business strategy because it provides employees with state-of-the-art tools to serve the public and it opens up exciting new possibilities for doing business with our customers in the future. This project establishes a national computer network including desktop computer workstations for all SSA and DDS employees supported by appropriate communications and software systems. This technology is critical in taking claims efficiently and providing online service to national 800-number callers. This project also reflects SSA's conviction that employees deserve a professional environment in which they can readily access information enabling them to increase productivity and to provide better service to the public. SSA's strategic goal--to be an employer

that values and invests in each employee, relies in part on providing such tools and training needed for high quality performance.

In 1995, at the time Social Security became an independent agency, one of our first undertakings was the implementation and distribution of this new computer equipment. SSA has accomplished what many said could not be done. I am happy to report that we have successfully installed more than 75,000 workstations and 1,742 local area networks in SSA and State DDS offices throughout the country. To achieve this, we installed the new equipment in 75 offices per month, which was a major undertaking, as all installations had to be done on the weekends. I am particularly proud that these installations were accomplished without any disruption to our ability to serve the public.

SSA is currently in the process of acquiring an additional 6,900 workstations and 275 local area networks to complete the installation for all employees. This project is one of the largest information technology initiatives ever undertaken in the Federal government.

The IWS/LAN project provides the enabling infrastructure for many of the technologybased initiatives that SSA is implementing. It provides a standardized platform and architecture that now exists throughout SSA and the DDSs and our hearings and appeals offices, which I described earlier. In addition, the accomplishments of IWS/LAN pave the way for our ability to provide service electronically and exploit emerging technologies to improve service to SSA's customers.

Our redesigned title II system is a major investment that has enabled us to do our job more efficiently. That technology has allowed us to improve the services we provide, as well as the manner in which we provide those services. When the public comes in to file a claim for Social Security or Supplemental Security Income benefits, their claims are now processed faster and with greater accuracy than ever before. We are able to handle more than 70 million telephone calls per year to our 800 number by using automated responses to our customers, as well as by using technology that allows our employees to quickly locate necessary information. Our streamlined process for reporting W-2s allows us to provide more timely and accurate feedback to our nation's employers. Finally, we are now making use of the Internet to provide our customers with a wide range of SSA services. And, we are in the process of converting our processing centers from paperbound processing to paperless, electronic processing, which will make these offices more efficient, less costly to operate and will provide better services.

Automation of Disability Process

In 1992, SSA began an ambitious software development project, the Reengineered Disability System (RDS), to provide an automated disability case processing system. The primary goal of RDS was to improve service to our disability clients, by reducing processing time and providing a framework for more consistent and uniform disability decisions.Our initial plan was to develop a single system that would support all the SSA components involved in the disability process. That

includes our nationwide network of field offices, the 55 State DDSs and our hearings and appeals offices. We developed a prototype system and implemented it in the pilot SSA field offices in Virginia and the Federal DDS in our Baltimore headquarters. While we achieved some success in the pilot, we ran into significant performance problems.

Because of these performance problems, we felt it would be prudent to obtain an independent evaluation of our pilot system. We delayed further pilot implementation and contracted with Booz-Allen and Hamilton to evaluate the RDS process and recommend options for proceeding.

Based on the contractor's recommendations, we are changing the way we will deploy automation to the disability process. Rather than replace all of the existing DDS systems with one central system, we will build on the strengths of the existing software systems in the DDSs, and link them electronically to an automated field office disability system, based on the RDS system we piloted in the Virginia offices. We are now calling this approach eDIB.

RDS was a very large initiative that required a substantial early investment to build the hardware and software infrastructure needed to support the prototype system. From 1992 through 1999, SSA invested a total of $4.3 billion in information technology investments; we spent a little over $71 million on this project. Roughly, one half of this $71 million investment continues to be applicable to the new strategy recommended by the independent review. Included in this is the automated system which will be used in SSAfield offices to strengthen the disability application process and enhance its cost effectiveness. The remaining half is the price we have paid to learn a number of valuable lessons in how to manage the risks associated with deploying this type of technology throughout SSA and the 55 DDSs.

Our new strategy will focus on working with the DDSs to build on their systems, providing more flexibility in the process and recognizing differences in case processing among the States. As with our successes with IWS/LAN and Y2K, SSA needs to continue to strive to apply advances in information technology to improve our disability claims process, and to do so in a way that manages the risk inherent in any technology improvements.

Mr. Chairman, let me illustrate the reason why we must automate the current disability claims process. If you were to walk into one of our offices today to file a disability claim, the SSA representative would complete a paper questionnaire to document information about your disability. The form includes doctors' names and addresses, medications you take, tests you have had performed, documentation of your daily activities, and other detailed medical information. Depending on your individual circumstances, the form might need to be supplemented by additional information concerning your vocational history. Once this was completed, we would need to assemble the folder and mail the information to the State DDS.

Compare that with the improvements an automated process would provide us and which will be facilitated by the software I mentioned earlier in my testimony. All of the information needed for the claims application will be entered electronically by the SSA interviewer using the work station and transmitted electronically to the State DDS. Wewill eliminate the mailing time delays. We will reduce the need to recontact the disability applicant because the system would assure that all questions are answered and readable. Information technology will give us a quicker, more efficient process and provide much better customer service.

An important facet of the new disability process revolves around our efforts in working with the medical community to use advanced technology to efficiently obtain an exchange of medical evidence. As you know, difficulties in obtaining medical records have a critical impact on our ability to make timely and accurate decisions on disability claims.

Our efforts in this area are focused on enabling providers to electronically transmit medical evidence quickly and securely. The ability to receive this evidence electronically will facilitate a number of steps during the disability process resulting in significant customer service improvements.

Technology improvements will also be invaluable as we work to improve the hearings process, which is a key performance indicator of our strategic plan goal to provide customer-responsive, world-class service. Our hearings office improvements initiative relies on enhanced automation and management data collection and analysis. This will facilitate the monitoring and tracking of case processing and development steps; facilitate the transfer of case-related information; help ensure the completeness of case development and analysis; and increase the efficiency of highly variable labor- intensive functions such as scheduling.

SSA and its State partners remain committed to the common goal of providing automation to improve the processing of disability claims. We plan to follow a strategy that will manage the risks involved in this initiative. By making incremental changes, bycarefully developing and evaluating our prototypes before they are put into production, and by making modest investments that build on our existing infrastructure, I am confident we will be able to significantly improve the way we manage the disability claims process.

Social Security Statements

One of SSA's basic responsibilities to the public is to help Americans understand Social Security and its importance to them and their families. As part of our public education efforts, SSA has been issuing earnings and benefit estimate statements to the public since 1988. And, as I mentioned at the beginning of my testimony, our Strategic Plan identifies strengthening public understanding of our Social Security programs as one of our five Agency Strategic goals.

So far, more than 37 million people have requested and received earnings and benefit statements--formerly known as Personal Earnings and Benefit Estimate Statements (PEBES). In amendments to the Social Security Act in 1989 and 1990, Congress provided that SSA was to phase-in issuing PEBES by issuing them to all workers aged 60 or over in FY 1995; in FY 1996 through FY 1999 to individuals who reach age 60 in those years; and annually to all covered workers aged 25 and older beginning in FY 2000. In addition to the PEBES mailing required by law, SSA sent PEBES to increasingly younger individuals in advance of the schedule in the law. SSA sent a PEBES to workers aged 40 and older--about 73 million people--between September 1995 and March 1999.The statements we will begin to mail in October--the largest customized mailing ever undertaken by the federal government--will be our newly-designed Social Security Statement which, like its PEBES predecessor, provides estimates of Social Security retirement, disability, and survivors benefits that workers and their families could be eligible to receive now and in the future. The automatic mailings will take place at a rate of about half a million Statements per business day, with about 10 million issued each month.

Workers can expect to receive their Statement each year about three months before their birthday.

SSA's computer based recordkeeping and information technology improvements will allow us to produce and mail the statements for about 56 cents each This is a considerable achievement when we consider that, when we began issuing PEBES in 1988, there were private vendors producing their own version of benefit estimate statements for individuals and charging them a fee of $10 or more.

SSA redesigned the PEBES format and language to make it easier to read and understand. We tested four prototypes with focus groups in three different age groups (ages 25-35, 36-50, and over 50). Additional public input was obtained through a mail survey of 16,000 randomly selected individuals from the same age groups. Focus group and mail survey participants alike overwhelmingly found the redesigned statement an improvement over PEBES.

I am pleased to report that the results of a recent Gallup survey, undertaken at SSA's request, revealed that individuals who had received a statement had a significantly increased basic understanding of Social Security. The survey also found that the individuals responding had an increased understanding of some important basic featuresof Social Security. This relationship validates the performance measures we use to track our progress in meeting our "Public Understanding" strategic goal: we track both the increasing number of PEBES we send to the public and the increasing public knowledge about our programs.

The information in the Statement provides workers with an easy way to determine whether their earnings (or self-employment income) are accurately posted on their Social Security record. This is important because the amount of a worker's future benefits will be based on his or her earnings record. The Statement tells how to correct inaccurately posted earnings.

We encourage workers to use the Statement to plan for their financial future. Workers can use the Statement to better plan for their financial needs when they retire, or if they become disabled or die and leave survivors.

Conclusion

As I said at the beginning, Mr. Chairman, SSA's ability to use technology and make systems improvements will be critical to our success as an Agency, given the workloads we will face. I am proud to report that SSA was one of only two Government agencies to receive an A grade in management of information technology from the Government Performance Project from the Alan K. Campbell Public Affairs Institute of Syracuse University's Maxwell School of Citizenship and Public Affairs.Use of technology has already enabled SSA to improve significantly the service it provides to the American people, and I would like to cite a few examples to illustrate this point:

- In 1982, it took 6 weeks for a person to receive a Social Security card from SSA. Now it takes 5 days.
- In 1982, it took 39 months to post annual wage reports to workers' earnings records. Now, this task is completed in 6 months.
- In 1982, it took four years to perform annual recomputations for beneficiaries

entitled to higher benefits. Now this is done in 6 months.

- In 1982, SSA needed three weeks of computer processing time to calculate annual cost-of-living increases. Now, this done in 24 hours.

- In 1982, it took 15 days to issue an emergency replacement payment. This is done now in 5 days.

I am pleased with these achievements, but I believe that SSA can do better. In time, we believe the investments in automation technology that SSA has made in recent years will be vitally important in enabling SSA to manage the increasing workloads it will experience in coming years.

As we look to the future, access to data will be vitally important to SSA's future plans to improve program integrity. For this purpose, the Administration supports the House-passed bipartisan "Foster Care Independence Act of 1999" (H.R. 1802), which includes provisions for data matches, and I would like to commend the Committee, Mr. Chairman, for your efforts on this bill. H.R. 1802 expands the pool of data available for making SSI eligibility and payment determinations by requiring frequent SSA matches with the Health Care Financing Administration and by facilitating electronic exchanges of information from financial institutions about financial assets owned by SSI applicants and beneficiaries. It is data matches, such as these, that will help SSA continuously guard the integrity of our programs.

Throughout its almost 65-year history, Social Security has made a difference in the lives of Americans, and we have a responsibility to be careful stewards of our programs both now and as we move into the 21 st century. As demonstrated in our Agency Strategic Plan, we have ambitious goals, and I am proud of those computer systems achievements which will provide the framework for us to achieve them. I look forward to working closely with the members of this Subcommittee in that spirit on these important endeavors, and would be happy to answer any questions you might have.

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