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Report to Congressional Requesters

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SOFTWARE SYSTEMS

SSA Encountering Significant Delays in Its Claims Modernization Project

GAO/IMTEC-87-8

GAO

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Information Management and
Technology Division

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December 22, 1986

The Honorable Lowell Weicker, Jr.
Chairman, Subcommittee on Labor,
Health and Human Services, and Education
Committee on Appropriations
United States Senate

The Honorable William Proxmire
Ranking Minority Member, Subcommittee on Labor,
Health and Human Services, and Education
Committee on Appropriations
United States Senate

The Honorable Lawton Chiles
United States Senate

This is our third and final report[1] responding to your December 18, 1985, request for information regarding the Social Security Administration's (SSA) Claims Modernization Project (CMP). At one time, CMP represented a major SSA effort to improve the software used to process claims for benefits and to change benefit records, software that SSA had reported to be problem-ridden. In fiscal year 1985, SSA processed about 5 7 million claims for benefits and 68 million changes to benefit records involving $193 billion in beneficiary payments. Your request posed several questions regarding the nature and progress of the project (see appendix). To answer these questions, we reviewed (1) the agency's progress in achieving the project's original objectives and schedules and (2) related project management issues.

Although CMP has been SSA's primary software improvement project for the past 4 years, its accomplishments to date have been limited. Specifically, we found that the project's scope has been scaled back from redesigning software that processes (1) new claims for benefits and (2) post-entitlement actions (changes to the records of individuals already receiving benefits) to only redesigning the software for new claims. The post-entitlement area —which SSA has stated is presenting the greatest problems—is no longer being addressed under CMP. Even with these reduced objectives, CMP has fallen behind schedule.

[1]Previous reports Social Security Actions and Plans to Reduce Agency Staff, GAO/HRD-86-76 BR, March 1986, and ADP Workstations SSA's $64 Million Acquisition For Fiscal Year 1987 Should Be Reconsidered, GAO/IMTEC-86-34, September 1986

We also found that major aspects of the reduced project need management attention in order for SSA to avoid creating systems that are vulnerable to problems that it has experienced in the past. First, the agency continues to develop new software before completing standards for software documentation, testing, and validation. Second, a pilot test of the project has not tested all performance aspects of the hardware configuration and software components and has not provided conclusive information on how the reduced CMP will help SSA achieve its goal of improved service to the public. Finally, despite the reduced scope of CMP, the delays being experienced, and the inadequate pilot testing, SSA is making a hardware procurement large enough to support the original CMP—an action we have questioned in the past[2] and still question.

Scope and Methodology

To determine both the changes in CMP's scope and the progress of SSA's implementation of the project, we analyzed pertinent documentation on its development, including its various plan updates. We also interviewed agency officials responsible for project management, software development, and planning efforts. We did not review SSA's progress in its other software development initiatives.

We performed our review primarily at SSA headquarters in Baltimore, Maryland, but we also visited four of SSA's field offices and four of the agency's service centers to better understand the impact and importance of the modernized system on field office operations The field offices we visited were CMP pilot offices—which are testing the new system using actual claimants—in Ensley, Alabama, Kansas City, Kansas; Pasadena, California; and York, Pennsylvania. We also visited program service centers—which process much of SSA's workload—in Birmingham, Alabama; Kansas City, Missouri; Philadelphia, Pennsylvania; and Richmond, California.

During this review, we met often with the present and former CMP project managers to apprise them of issues we had identified and to obtain their comments. However, as you requested, we did not obtain official agency comments on a draft of this report. Otherwise, we performed our work in accordance with generally accepted government auditing standards. Our review was performed from February through December 1986.

[2]ADP Acquisitions SSA Should Limit ADP Procurements Until Further Testing Is Performed, GAO/IMTEC-86-31, August 1986

Background

In 1982, SSA indicated[3] that the computer systems used to process new claims and post-entitlement actions for the Retirement, Survivors, and Disability Insurance and Supplemental Security Income programs were problem-ridden, and as a result, were causing erroneous benefit payments to be made. In 1983, we testified[4] that systems inefficiencies and limitations were adversely affecting service to beneficiaries. To overcome these problems, SSA began a comprehensive program to modernize its entire automatic data processing (ADP) operation. This effort, known as the Systems Modernization Plan, identified the need to improve four major ADP categories—software (Software Engineering), hardware (Capacity Upgrade), communications (Data Communications Utility), and data bases (Data Base Integration). SSA viewed the improvement of its deficient software as the main thrust of the modernization program, recognizing that its previous attempts to modernize its computer systems focused on hardware improvements without adequately addressing software effectiveness. In September 1981, the Commissioner of SSA testified[5] that buying new machinery (hardware) would not solve the agency's systems problems.

In 1982, SSA estimated that it would require $478 million to modernize its systems and that the modernization, including redesign of all deficient software, would take 5 years. By October 1985, SSA was indicating that total modernization costs would be $990 million and that the effort would extend through fiscal year 1990. In October 1986, SSA's plan only estimated costs through fiscal year 1988, even though activities are projected into the 1990s Through fiscal year 1988, SSA estimates costs to be $642 million.

Scope of CMP Reduced and Completion Delayed

SSA has reduced the original scope of CMP and has repeatedly revised scheduled completion dates. Consequently, software developed to date under the project has been limited to automating (1) the process that field offices use to collect and edit information on new benefit claims and (2) numerous computations which field office employees must make. The completion date for the remainder of the reduced CMP is unknown. In reducing the project's scope, the agency has deferred the

[3]Systems Modernization Plan, U S Department of Health and Human Services, SSA Pub No 41-002

[4]GAO testimony before the Special Committee on Aging, United States Senate, on Social Security Administration's Performance in Providing Public Service, November 16, 1983

[5]Hearing before a Subcommittee of the Committee on Government Operations, House of Representatives, "Viability of the Social Security Administration's (SSA) Computer Systems," September 23, 1981

modernization of the post-entitlement software, which processes 94 percent of its beneficiary-related computer transactions

Reduced Scope of CMP Will Not Address Areas With Most Problems

In 1983, the agency began CMP as a major initiative under the Systems Modernization Plan. Its interim software goal was to modernize the agency's computer programs that process new claims for benefits. New claims processing includes collecting data from applicants, determining their eligibility for benefits, and computing the benefit amount. CMP's long-term goal was to modernize the software used to process post-entitlement actions—those events that occur after an individual is receiving benefits, such as change of address, change of name, and adjustments for erroneous payments. Achievement of these goals would have provided SSA's field offices with improved automation and would have overcome many software deficiencies which SSA recognized in earlier testimony and which were noted in the 1982 Systems Modernization Plan.

Between 1983 and 1985, CMP's software goal was reduced from improving the new claims and post-entitlement software to its present goal of improving the two aspects of the new claims software: (1) automating the manual data-collection system for new claims and (2) redesigning the software that determines eligibility and computes the benefit amount. The first objective has been accomplished, thus eliminating the need to fill out forms.

Work under the first objective has also resulted in automating numerous computations that field office employees must perform and has made more information regarding the claimant—such as verification of social security number and records of earnings—available to SSA employees while the claimant is still in the office.[6] These achievements will assist SSA field office employees, who spend about one-third of their time working on new claims. Work on the second objective is scheduled to begin in 1988. There is no estimated completion date for the redesign of post-entitlement software.

Although modernizing post-entitlement software has been delayed indefinitely, SSA has long maintained that the post-entitlement area is the most error-prone. For example, in November 1983 the Acting SSA

[6]The method by which SSA's systems provide this information is a function of the Data Base Integration Program of the Systems Modernization Plan, not a CMP effort

Commissioner, in testimony[7] before the Senate Special Committee on Aging, indicated that it was imperative that SSA improve the post-entitlement systems "because it is the area in which we make most of our errors." As recently as February 1986, SSA's Acting Deputy Commissioner for Programs and Policy identified 20 continuing problems in the post-entitlement process, including the following unresolved system-related problems·

- inability to quickly process beneficiary name and/or address corrections and changes;
- excessive delays in reissuing missing or stolen checks;
- delays in changing the records of a deceased beneficiary, which result in incorrect payments to survivors (this system limitation also frequently results in the agency's failure to credit checks returned for reason of death);
- duplicate posting of beneficiary remittances in overpayment cases (this problem results in a significant manual work load); and
- inability of the system to automatically process requests by beneficiaries to recompute payment amounts (such requests must be processed manually).

To evaluate the impact of CMP's reduced scope, we believed it important to determine the number of computer transactions involved. We accomplished this by obtaining information on all beneficiary-related computer transactions for a 6-month period in 1986 that were processed by the software systems originally scheduled for redesign (both new claims and post-entitlement). Our analysis indicates that the reduced version of CMP, when complete, will affect software that processes only 2.2 percent of these computer transactions. Specifically, the software that will be redesigned under the current project processed 1,984,561 of 89,396,506 transactions. In contrast, the post-entitlement software, which will no longer be completed under the project, processed 84,353,541, or 94 percent, of the transactions.

During our discussions on the reduced scope of CMP, present and former project managers acknowledged that the original scope of the project was to replace all beneficiary-related software They also said that SSA had changed the scope because the redesign effort was too large and complex a task to be completed in a single effort As stated previously, SSA plans to address post-entitlement redesign, but not as part of CMP

[7]Hearing before the Special Committee on Aging, U S Senate, "Social Security How Well Is It Serving the Public?" November 29, 1983

Reduced Version of CMP Is Delayed at Least 3 Years Beyond SSA's Original Plan

Despite the reduction in scope, SSA has been unable to achieve its projected software development milestones for the modernization of the software that processes new claims. A draft document dated March 1984 indicates that the new claims software was scheduled to be redesigned by early 1985. In January 1985, SSA moved the target date for completing the new claims software to November 1986 The 1987 update of the Systems Modernization Plan, dated October 1986, indicated that CMP would be complete in mid-1987 However, on October 6, 1986, shortly after the 1987 version of the plan was released, the project manager told us that, due to delays in determining functional requirements[8] in the project under which post-entitlement software will be redesigned, the completion date for CMP is now unknown.

Although CMP no longer includes redesigning post-entitlement software as one of its objectives, the functional requirements for this software must be completed before work on CMP's remaining objective—the redesign of software to determine eligibility and compute benefits—can be started. We agree with an agency official who indicated that this process must be followed to ensure that data will flow through the new system from the new claims process to the post-entitlement process in the most efficient and effective manner. Because the functional requirements for the post-entitlement software will not be completed until January 1988, work on CMP's last objective cannot begin until after that date In short, completion of the reduced version of CMP has been delayed at least 3 years, while CMP's most important original objective—redesign of post-entitlement software—will not be completed until sometime in the 1990s.

Aspects of CMP Need Management Attention

Three aspects of CMP that are important to the overall success of the project need management attention. First, SSA continues to develop software without completing standards governing software documentation, testing, and validation. Such standards are needed to facilitate future software maintenance. Second, while the agency has established a pilot program to test, study, and evaluate the project's operational aspects, some important objectives—such as verifying the new system's operational performance, determining its impact on field office positions, and evaluating its impact on service to the public—will not be achieved when SSA begins implementing the program nationwide Third, the quantity of ADP equipment SSA is procuring to support CMP is questionable in

[8]"Functional requirements" is a statement of capabilities which must exist in a system to satisfy user requirements

light of the delays in software development and the inadequate pilot testing.

Standards for Software Development Not Completed

In the 1982 Systems Modernization Plan, SSA characterized its software as poorly documented and difficult to maintain Because of these stated deficiencies, the agency indicated that, as of 1982, software design standards and improvement to existing software documentation would be completed prior to beginning new software development. SSA recognized that it is difficult to properly develop software without standards because there are unlimited options available to programmers for designing, coding, testing, and documenting software. Lack of uniformity in these areas makes maintenance of the software difficult and costly, particularly when one system must interact with another. We reported in August 1985[9] that between 1982 and 1985 SSA was still designing new systems before (1) completing such standards and (2) in our opinion, adequately documenting existing systems.

While we did not review their adequacy, the agency has recently completed standards for software definition, design, and implementation. However, it is still developing software—in this instance, CMP software—without the benefit of agency-approved standards for software documentation, testing, and validation. Staff responsible for designing CMP software told us that they had to develop their own standards in order to complete their software tasks This practice may result in CMP software programs being completed under different standards than those used to develop other agency software, even though the programs are eventually expected to operate together. In our opinion, such a situation could contribute to a crisis similar to the one experienced by SSA in the early 1980s and which was attributed, in part, to inadequate software development standards In September 1981, SSA's former Associate Commissioner for Systems stated that the agency's software programs "cause computer failures or produce incorrect results . . . because of archaic style, unnecessary complexity, and the lack of a comprehensive, contemporary method of program development and testing."

In our August 1985 report, we noted that SSA had begun to redesign its software systems prior to completing its planned software standards. We recommended that the agency perform an analysis to identify and address the risks inherent in this approach. In Senate Report 99-151,

[9]Social Security Administration's Progress in Modernizing Its Computer Operations, GAO/IMTEC-85-15, August 1985

dated October 4, 1985, the Senate Appropriations Committee directed SSA to respond to our recommendation. In its February 28, 1986, response, SSA indicated that such an analysis was unnecessary because it had established the "necessary" standards for the development of their new systems. We maintain that SSA has not established all of the standards that it said it would in 1982. We believe that developing software without agency-approved standards represents a risky approach to software development. An SSA official responsible for completing standards informed us that a lack of resources is the primary reason for the incomplete software development standards.

SSA's Pilot Test Has Not Provided Conclusive Results

In 1985, SSA created a pilot test for CMP to evaluate its effectiveness. While SSA's test has generated some useful information, it has not provided conclusive results for verifying the reduced CMP's operational performance (software and hardware integration) and the impact that the project may have on field office positions. Perhaps more importantly, the pilot test has not provided SSA with information on improving the quality of service to the public in such areas as claims-processing time, payment accuracy, and client satisfaction Although SSA's pilot test objectives have not been achieved and SSA has not measured CMP's impact on service to the public, the agency will begin nationwide implementation of CMP hardware and the completed portions of CMP software in early 1987. Further, the agency has no firm plans to use pilot offices to (1) periodically collect data on the impact of CMP on each of the several indicators of quality of service to the public or (2) validate future software programs as they are released.

SSA's strategy for testing CMP involved using a two-phased pilot test at 20 field offices to verify planning assumptions and to surface and resolve problems before implementing the project nationwide. The first phase of the pilot test began in early 1985 at the York, Pennsylvania, and Baltimore, Maryland, field offices after the installation of about 40 computer terminals in each office. The second phase began in early 1986 at 18 additional field offices and will continue until nationwide CMP implementation begins in early 1987 SSA had originally planned to install and test an average of about 20 terminals at each of the 18 offices but installed only 3 at each due to difficulties in obtaining the planned number of terminals. By testing this reduced number of terminals in 18 of the 20 offices, we believe SSA has not obtained sufficient information to provide conclusive results on CMP's impact on the operational performance of the system, field office positions, or service to the public.

Some Important Pilot Test Objectives Have Not Been Achieved

According to a project planning document, the pilot test was to accomplish the following objectives:

- determine effects and changes in field office work flow,
- define technical and management training needs,
- evaluate the human factors of office automation,
- verify the operational performance of the new systems, and
- determine the impact of the project on field office positions

Documentation provided by the project manager indicates that the agency has collected some useful information during the pilot test in areas such as determining CMP's impact on field office work flow, defining training needs, and evaluating the effect of office automation on human factors Although the project manager stated that the agency has been unable to gain the volume of information it could have obtained by equipping the 18 additional offices as planned, he felt that enough information has been collected and analyzed to support nationwide implementation of the project.

While SSA has accomplished some of its objectives, it has not succeeded in certain key areas In its 1985 Annual Report to the Congress, SSA stated that all operational aspects of its new system would be completely tested, studied, and evaluated during the pilot test. SSA has not accomplished this. The test has not demonstrated the operational performance of the total configuration of hardware SSA plans to procure and software it plans to develop. Specifically, the pilot test has not been performed using the terminals, data communications equipment, and central computers that will be used nationwide as we observed in our August 1986 report Further, due to the delays in software development discussed previously, SSA has not been able to conduct tests of the software that determines eligibility and computes the benefit. An SSA official stated that SSA may evaluate selected future software releases in pilot offices, but the agency has no firm plans to do this.

SSA's test is limited because it evaluates individual hardware and software components in a piecemeal fashion, rather than providing for an overall and thorough measure of projected performance of the components before being deployed. Pilot testing of new systems is essential to verify that they will consistently provide correct results A September 1985 report by the National Bureau of Standards,[10] on another major government modernization effort, stated that a prototype test should be

[10]"Patent and Trademark Automation Review," National Bureau of Standards, September 20, 1985

designed to include an evaluation of the performance for all major subsystems and functional components of the planned system as early as possible in the development cycle. The report states that as subsystems of a large, complex, automated system are developed, they should be evaluated in a test (or pilot) environment over a long enough period to obtain stable and complete results before releasing them for operational use. We believe that failure to adequately test new systems increases the potential for undetected errors and reduces the extent to which the software can be relied on to provide accurate information.

In the past, SSA has experienced difficulties after awarding contracts for the total complement of ADP system components that did not function as intended within the total system. For example, in August 1984, we reported[11] that SSA had experienced considerable problems with a major data communications equipment procurement. Among other things, SSA did not conduct an adequate pilot test of the equipment within the total ADP system before awarding the contract for the full complement of equipment. As a result, SSA received equipment that was plagued with problems that adversely affected service to the public for at least 2 years after installation. We concluded in our August 1986 report that SSA should use its field office pilot program not only to test software development, but also to determine that the hardware to be acquired will address the agency's operational needs.

SSA also has not quantified CMP's impact on field office positions during the pilot test, even though this issue was one of its objectives and has been of interest to both the Congress and the Office of Management and Budget. SSA conducted "before and after" tests of field office positions at the York and Baltimore pilot offices, and the results indicated that the project would substantially reduce the workload for individuals who review claims or enter claims information on a computer terminal. However, the agency's test report stated that more information was needed to ensure an accurate picture of the project's impact on these positions. The project manager stated that the agency plans to continue studying the impact of CMP on field office positions

Pilot Test Has Not Measured Impact on Client Service

In addition to not achieving its objectives regarding CMP's operational performance and impact on field office positions, SSA has not used the pilot test to determine whether CMP is achieving a major overall program

[11] Additional Information on the Social Security Administration's Management of Data Communications Contracts with Paradyne Corporation, GAO/IMTEC-84-23, August 1984

objective—improving the quality of service to the public SSA has identified several indicators of quality of service to the public, including processing time for new claims, accuracy of payments, client waiting times, and client satisfaction. In addition, an SSA official stated that information on the number of times a client was recontacted after the initial interview was another indicator of quality of service to the public However, the pilot test has not provided complete information on these indicators. SSA conducted "before and after" studies on initial claims accuracy rates and processing times at the York and Baltimore pilot offices. The report of CMP's impact on these two indicators is inconclusive. Specifically, the report shows that the accuracy of new claims was minimally affected by the project, with accuracy rates increasing slightly at Baltimore and decreasing slightly at York. The report states that frequent changes to the software during the test period may have adversely affected accuracy rates. It also states that the processing time for new claims was reduced an average of about 4 to 6 days but that the reduction was probably due to the special attention given to the claims processed during the test.

In short, SSA's pilot test has not verified the operational performance of the proposed configuration of hardware and software nor has it demonstrated that CMP will improve the quality of service to the public. Although the Deputy Operations Manager agreed that SSA could benefit from collecting quality of service information on an on-going basis, SSA has no plans to collect data on client waiting times, client satisfaction, or client recontacts to identify how CMP affects these quality of service indicators.

Hardware Purchases Continue Despite Delays in Software Development and Inadequate Pilot Testing

In our August 1986 report, we stated that SSA was about to procure ADP hardware components—terminals, data communications equipment, and computers—without proper justification. At that time, we stated that SSA could not determine the optimal mix of systems components because, among other things, SSA had not completed all of the related functional requirements for software development. We found, for example, that the functional requirements for the Retirement, Survivors, and Disability Insurance program's post-entitlement activities and for all functions of the Supplemental Security Income program were not scheduled to be completed until December 1986—approximately 2 years after equipment needs were determined. Consequently, SSA's attempts to determine the optimal mix of ADP components through workload projections produced conflicting estimates We also found that because SSA's pilot test offices had not received the planned amount of hardware, SSA's test

would not determine whether the fully configured system could be expected to meet performance objectives. For this and other reasons, we recommended that SSA proceed cautiously with its contractual commitments for the ADP hardware until it could better identify its computer needs. However, SSA proceeded with the contract without reassessing these needs.

SSA has been using 4,200 terminals to process its claims workloads under its existing pre-CMP system In order to implement CMP as originally designed (including new claims and post-entitlement), SSA estimated that it needed between 23,000 and 39,000 terminals. Although the scope of CMP has been significantly reduced and delayed several years, SSA has not re-evaluated the number of terminals it needs As we discussd earlier in this report, SSA officials stated on October 6, 1986, that the remaining functional requirements have been delayed and are now scheduled for completion in 1988, further delaying the completion of the reduced-scope CMP. However, on September 24, 1986, SSA entered into a contract to procure an initial quantity of 22,892 terminals, with an option to procure 15,954 additional terminals, as well as other associated equipment. The initial quantity of terminals will be placed in field offices over a 2-year period ending in November 1988. In a recent trade publication,[12] the Commissioner indicated that SSA had proceeded with the contract to avoid losing time in system modernization.

While we recognize that certain benefits will be realized through ready access to terminals by SSA staff, the software that generates the large majority of the Retirement, Survivors, and Disability Insurance and Supplemental Security Income workload—which SSA cited in the contract as justification for procuring the 22,892 terminals—will not be completed until sometime in the 1990s Given the difficulties and delays that SSA is encountering in modernizing software, as well as the incomplete design of the pilot test, it is questionable whether SSA knows the type and quantity of equipment needed and whether these large-scale procurements will be effectively utilized until the 1990s This calls into question the validity of the quantity of equipment and delivery schedules represented by the current contract. Based on past trends in technological innovations for ADP equipment, it is possible that this equipment will become obsolescent before it can be fully utilized

[12]"Critics Don't Slow SSA's Plans GAO Advice Not Taken," Government Computer News, October 24, 1986, pp 1 and 6

Conclusions

While CMP has automated the process of collecting data for new claims, SSA does not know whether the improvements in service to the public it envisioned through modernizing both initial claims and post-entitlement software will materialize. After stating in the original modernization plan that major systems problems would need to be corrected within 5 years, in the fifth year of this program, SSA has completed no major portion of the software redesign, although significant amounts of hardware have been procured The software redesign area of greatest concern—post-entitlement—has been delayed until sometime in the 1990s. Furthermore, while SSA had originally projected that its modernization plan would cost $478 million and increased this estimate to $990 million in 1985, the agency is no longer projecting the total cost

SSA has not established an adequate software foundation for modernizing its claims systems to achieve its objective of improved service to the public In implementing the reduced CMP, SSA has not followed sound management practices In addition, while SSA cited CMP as being critical to improving its systems' operations, the project's scope has been reduced, excluding the area in which SSA has experienced its greatest number of problems—post-entitlement. Even with its reduced scope, CMP has been delayed at least 3 years. The post-entitlement software will not be completed until sometime in the 1990s The size and complexity of redesigning the post-entitlement software raises questions about how SSA will conduct this larger aspect of software modernization Thus, most of the software-related problems SSA had originally hoped to overcome by 1986 through CMP may not be corrected for many years.

We recognize that redesigning its software presents SSA with a large and complex task—as evidenced by the need to reduce the scope of CMP To deal with such a complex effort, SSA needs to follow good systems development practices. However, because SSA has not followed such practices in two key areas—developing software standards and pilot testing—SSA could be creating systems that are vulnerable to problems similar to those it has experienced in the past. Without standards for testing, documenting, and validating software, future modifications to improve the systems or to implement legislative requirements could be difficult and costly Without an adequate test of a prototype of its planned system, SSA cannot develop sufficient information for current and future software redesign, nor can the agency determine how well the software will perform on the planned complement of equipment Also, it cannot determine the type and amount of hardware needed to implement the software

Despite the reduced scope of CMP, the delays being experienced, and the inadequate pilot test, SSA has contracted to procure the full complement of terminals to support the original CMP. We questioned the need for the full complement in an earlier report, and, because of the issues discussed in this report, we reaffirm our concern about the quantity of that equipment. Since SSA has proceeded with the contract, it is now faced with other alternatives, such as renegotiating current quantities and delivery schedules

Given SSA's limited progress in modernizing its beneficiary-related software—which the agency has identified as critical to its goal of improved service to the public—it is not clear how the current approach will achieve that goal in a timely and cost-effective manner

Recommendations

To avoid a continuation of the problems which have hindered SSA's software modernization effort and related hardware acquisitions, we recommend that the Secretary of Health and Human Services direct the Commissioner of the Social Security Administration to reassess SSA's approach to modernization, including determining the criticality of the deficient software areas originally included in CMP and prioritizing the redesign of that software accordingly. SSA should then do the following:

- Develop time frames and cost estimates for achieving the redesign.
- Conduct a prototype test that reflects the results of the reassessment and is designed to include an evaluation of the performance of the total hardware configuration and software components as they are developed. At a minimum, the test should include verifying operational performance and additional equipment needs, and the impact on field office positions, as well as evaluating the impact on the overall program objective of improving service to the public.
- Reconsider the quantity of hardware needed and the timing of its installation. If the reassessment discloses that the quantity of hardware being procured, as well as the installation schedule of such hardware, exceeds the needs of the scaled back and delayed CMP, we recommend that SSA consider cost-effective alternatives, including renegotiation of the hardware contracts. Since the installation schedules have been established in the contract, SSA needs to give priority attention to this recommendation.

Finally, as we have in previous reports, we again recommend that SSA complete development of software standards and apply these standards in future software development in order to reduce the level of risk inherent in the agency's software improvement practices.

We are sending copies of this report to the appropriate House and Senate Committees, the Secretary of Health and Human Services; the SSA Commissioner; the Administrator of General Services, the Director, Office of Management and Budget; and to other interested parties upon request.

Warren G. Reed
Director

Request Letter

United States Senate

COMMITTEE ON APPROPRIATIONS
WASHINGTON, DC 20510

December 18, 1985

Honorable Charles A. Bowsher
Comptroller General of the United States
Washington, D.C. 20548

Dear Mr. Comptroller General:

On May 2, 1985 we sent you a letter requesting, by January 1986, an evaluation of the extent to which automation might permit Social Security Administration (SSA) staffing cuts without a decline in services to social security recipients. On September 18, 1985, members of your staff provided us with a briefing on the status of SSA's proposed staff cuts and office closings. The purpose of this letter is to expand our original request to encompass all proposed cuts and to request a separate study focusing on SSA's automation effort.

We are interested in where staffing cuts are taking place, the basis for future cuts, and any discernable impact of staffing reductions. We are especially interested in those reductions which SSA directly attributes to automation improvements. We understand that a major portion of those cuts are from: (1) the Claims Modernization Project (CMP) -- about 5,400 positions and (2) reductions in SSA/Baltimore ADP staff -- about 1,000 positions.

Because we would like to use your findings on these matters in the appropriations hearings next year, we are asking that you provide the results of your analysis of the above to use by March 15, 1986, and assist us in preparing them for the hearing.

Also, because CMP is a major part of SSA's automation effort, we would also like you to do an in-depth study of CMP and report the results to us by mid-summer of 1986. The study should examine: (1) whether or not the CMP is adequately

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addressed in the risk analysis recommended by GAO's August 30 report (IMTEC-85-15); (2) the management of CMP systems development; (3) whether CMP is a cosmetic "front end" data retrieval system or a complete redesign of the application software; and (4) the impact of CMP on other ADP modernization efforts, including the Data Communication Utility and Data Base Integration Projects.

Sincerely,

WILLIAM PROXMIRE
Ranking Minority Member

LOWELL WEICKER, JR.
Chairman
Subcommittee on Labor-HHS-
Education Appropriations

LAWTON CHILES

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