

February 1996

# SOCIAL SECURITY

## Telephone Access Enhanced at Field Offices Under Demonstration Project





**Health, Education, and  
Human Services Division**

B-260584

February 23, 1996

The Honorable William Roth  
Chairman  
The Honorable Daniel Patrick Moynihan  
Ranking Minority Member  
Committee on Finance  
United States Senate

The Honorable Bill Archer  
Chairman  
The Honorable Sam M. Gibbons  
Ranking Minority Member  
Committee on Ways and Means  
U.S. House of Representatives

The Social Security Administration (SSA) administers the Retirement and Survivors and the Disability Insurance Programs and the Supplemental Security Income Program. Together, these programs affect the lives of almost every person in this country. SSA has an extensive field office structure to administer these programs, consisting of more than 1,300 local offices. It also has a nationwide toll-free telephone number and is testing enhanced local office telephone service at selected offices.

SSA has a long history of trying to provide caring and courteous service to its customers. Recently, it has established a goal of providing world-class public service in administering Social Security programs. Accessible telephone service that will address callers' questions and concerns is a critical part of SSA's service delivery goal. SSA recently initiated a demonstration project to test whether new telephone equipment and technology would improve phone access to its local offices.

Beginning in late February 1995, SSA began installing new telephone equipment, called automated attendant and voice mail, at 30 of its more than 800 nationwide field offices that list their phone numbers in local telephone directories.<sup>1</sup> The equipment was installed in different configurations. All staff in each office had voice mail installed on their phones. Some of the offices also received automated attendant with

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<sup>1</sup>Automated attendant refers to equipment that answers telephone calls; voice mail refers to equipment that plays prerecorded messages and can record information left by callers.

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automated service options on their general inquiry phone lines.<sup>2</sup> As part of the demonstration, SSA planned two internal evaluations of the project to assess the equipment's effect on local office efficiency and employees' views of the equipment and to identify callers' views about this new service.

The Social Security Independence and Program Improvements Act of 1994 directed us to determine whether this new equipment would improve the public's telephone access to local SSA offices and report our results by January 31, 1996. Also on the basis of congressional interest, we obtained information about SSA's efforts to evaluate its demonstration project.

To gauge how access changed with the new equipment's installation, we met with officials responsible for the project and conducted two tests of telephone service at the participating offices. One test established baseline performance data for phone service before installation of the equipment. The second test measured service after installation of the equipment.<sup>3</sup> We measured how access changed for those wanting to speak directly to an SSA representative about a general matter. We did not, however, measure the use of the automated services. Appendix I details the design and execution of our tests.

As part of our work, we also visited 12 of the 30 local offices participating in the demonstration project. At these offices we met with managers, supervisors, and staff using the new equipment to discuss its effect on daily operations and any public reaction. We also met with SSA personnel responsible for conducting internal evaluations of the project. We reviewed documents about study objectives and SSA strategies to achieve those objectives. We began this assignment in January 1995 and completed our analysis in December 1995. This assignment was performed in accordance with generally accepted government auditing standards.

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## Results in Brief

Telephone access (calls reaching an SSA employee either with the caller spending no time on hold or less than 2 minutes on hold) under one of the configurations being tested by SSA showed an improvement of

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<sup>2</sup>"Automated service options" refers to question-and-answer voice mail features. Callers who choose this option hear prerecorded questions that solicit basic information such as their name, address, and Social Security number. Responses to these questions are recorded so that SSA can later take appropriate action to fulfill service requests.

<sup>3</sup>For test purposes, we selected the eight busiest telephone-call days within a 1-month period. Therefore, our results are not comparable with those from our prior report on local office busy-signal rates, which reported an average busy-signal rate over a 1-month period.

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23 percentage points. In addition, busy-signal rates dropped by more than 55 percentage points; however, because staffing did not increase, many callers reaching SSA spent some time on hold before speaking with an SSA representative. SSA field office staff also perceived the installation of voice mail equipment at their desks as having a very positive effect on office efficiency and public service.

SSA has initiated two internal evaluations of the demonstration project. Neither SSA's study of the new equipment's effect on local operations nor its study of public reaction to the new equipment, however, was completed as of early February 1996.

Our work suggests that the technology tested in the demonstration project has the potential to further SSA's public service goals. However, public reaction and the effect on operations will need to be factored in as SSA assesses the costs and contributions of this technology to meeting these goals.

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## Background

For many years, the Congress has expressed concerns about the public's telephone access to SSA. Efforts to improve this access have resulted in a dual system of telephone service (a nationwide 800 number and local office service at more than 800 of SSA's field offices) and also led to the current demonstration project.

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## Telephone Service at SSA

In 1989, SSA established a nationwide toll-free 800 number to replace its local office telephone service. With the implementation of this service, SSA directed its local offices to remove their general inquiry telephone numbers from local phone directories. In their place, the offices listed the new toll-free 800 number.

In establishing this toll-free network, SSA intended to provide all of its customers with equal and toll-free access to program services. SSA envisioned that the public would call the 800 number with basic questions about the program, when reporting changes in benefit status, with problems or concerns specific to Social Security records, or to make appointments with local field office staff. The public could continue to contact local office staff when necessary by requesting the unpublished telephone number for any office from SSA's 800 number staff.

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The establishment of a national toll-free telephone network was planned to facilitate an agencywide 20-percent staff reduction that occurred between 1985 and 1990. By transferring a large workload from its field offices to the 800 number, SSA hoped the downsized offices would be better able to conduct nontelephone business.

SSA had start-up problems when the 800 number went on-line nationwide. It had underestimated the volume of calls that would be made to the 800 number and was not able to staff the service adequately, especially when call volumes were heaviest. High busy-signal rates made it difficult for the public to reach SSA, generating complaints to SSA and to the Congress.

In response, SSA took several steps to expand its capacity to handle the volume of 800 number calls. These included actions to increase staff devoted to handling calls during the heaviest calling periods, converting additional facilities to 800 number phone centers, and increasing the number of telephone lines devoted to 800 number calls. Even with these actions, busy-signal rates remained high because the number of calls placed to the 800 number continued to grow rapidly. For example, in 1990, callers placed 85 million calls to SSA, and the overall busy-signal rate was 34 percent. In 1994, callers placed almost 117 million calls to the 800 number, and the overall busy-signal rate grew to about 45 percent.

During the start-up of the 800 number, these problems concerned the Congress so much that, in 1990, it required SSA to restore telephone access to local offices. As a result, SSA reinstated direct local telephone service to about 830 of its more than 1,300 local offices by publishing their telephone numbers in local directories in addition to the 800 number. However, the Congress did not provide any additional resources for SSA to either purchase telephone equipment or increase staff to handle the reinstated workload.

Because it had fewer field office staff due to its downsizing in the late 1980s, SSA chose to implement the local office telephone service with a minimum number of telephone lines and staff. In June 1992, the House Committee on Ways and Means asked us to evaluate the public's ability to access local offices that offered local phone service. In March 1993, we reported that the busy-signal rate at local offices averaged 47.3 percent during the month tested.<sup>4</sup> In October 1993, SSA advised the Congress about

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<sup>4</sup>Social Security: Telephone Busy Signal Rates at Local SSA Field Offices (GAO/HRD 93-49, Mar. 4, 1993).

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its plans to conduct a demonstration project to enhance local office operations and perhaps improve telephone access to its local offices.

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## Telephone Demonstration Project Design and Installation

To improve the public's telephone access to its local offices, SSA is conducting a demonstration project to test telephone equipment known as automated attendant and voice mail. SSA's demonstration project involves 30 of its field offices and three different configurations of the automated attendant and voice mail equipment (referred to as methods A, B, and C in this report). SSA wanted local offices from each of its 10 regions involved in the project, and it allowed the regions to select these offices on the basis of the type of telephone equipment they were already using and their willingness to participate in the project.<sup>5</sup>

Each method being tested in the demonstration project represents a different configuration of equipment. In method A offices, SSA added automated attendant and question-and-answer mail boxes to its general inquiry lines. In addition, it added voice mail to staff member extensions.

A caller to method A offices hears a recorded greeting that identifies the agency, office hours, and address. This basic information answers caller questions in many cases. Callers seeking other types of assistance have other options:

- Callers may press the extension number of a particular employee with whom they may be working on a claim or other matter.
- If not already working with an SSA representative, callers may also select an automated service menu for routine matters such as reporting changes in address, making an appointment to file for benefits, or requesting an original or duplicate Social Security card. These services are provided without direct staff intervention through the use of question-and-answer voice mail messages.
- Finally, if callers wish to speak to an SSA representative, they can choose to hold the line until one becomes available.

Method B offices operate the same way as method A offices except that one additional feature is available. Method B offices have an additional general inquiry telephone line to play a message that advises callers that all available lines are busy. This message also states that the caller should either call at a later time or may call SSA's toll-free 800 number. Callers are

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<sup>5</sup>The selection of offices to participate in the demonstration project was not done randomly.

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only connected to this line when all the other general inquiry lines are already in use.

For the demonstration, method C offices do not have any additional telephone lines, automated attendant, or the related question-and-answer mailboxes on their general inquiry lines. They have only voice mail capability at the desks of staff members.

The underlying objective of the demonstration project is to improve the public's access by making more telephone lines available to handle phone calls at local offices. The demonstration project equipment configurations have also extended service hours for method A and B offices because, with automated attendant, after-hours calls can be answered and callers can leave voice mail messages.

Most method A and B offices received additional general inquiry telephone lines when SSA installed the new equipment in their offices. Local managers in some participating offices, however, did not want additional lines because they believed that they could not handle additional telephone calls without increased staffing. Table 1 shows each method A and B office and the number of general inquiry lines each had before and after equipment was installed for the demonstration project. As shown, five method A and eight method B offices received at least one additional general inquiry line.



**Table 1: List of Method A and B Office General Inquiry Line Increases—Before and After Equipment Installation for Demonstration Project**

Office name	General inquiry lines before	General inquiry lines after
<b>Method A</b>		
American River, Cal.	2	2
Manchester, N.H.	2	2
Flatbush, N.Y.	3	3
Newport News, Va.	2	3
Knoxville, Tenn.	3	13
Las Vegas, Nev.	10	15
Harlingen, Tex.	1	4
Sioux City, Ia.	2	4
Cheyenne, Wyo.	3	3
Oakland, Cal.	4	4
<b>Method B</b>		
Pocatello, Ida.	1	3
Attleboro, Mass.	1	5
Albany, N.Y.	2	3
Petersburg, Va.	2	4
Asheville, N.C.	4	5
West Indianapolis, Ind.	2	5
El Dorado, Ark.	2	6
Norfolk, Neb.	3	3
Stockton, Cal.	4	5

## Telephone Access Has Improved, but More Calls Are Being Placed on Hold

We found statistically significant improvement in access under method B, while method A showed no statistically significant change in access. Under method B, busy-signal rates dropped greatly, but more calls were being placed on hold. Because method C did not involve any change to the general inquiry lines, we did not consider its effect on access to the local lines.

When examining how telephone access changed by the individual offices in the demonstration, we found mixed results among both methods A and B. We also found that SSA staff in the demonstration offices strongly believe that the voice mail equipment on their desk phones enhanced efficiency and public service.

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To measure changes in access for evaluation purposes, we grouped the call outcomes into two categories: access and no access. We considered access to consist of two call outcomes: calls in which we spoke to an SSA employee without spending any time on hold and calls in which we were on hold for less than 2 minutes before speaking to an SSA employee.<sup>6</sup> We considered no access to consist of five different call outcomes: busy signals, no answer after the phone rang 10 times, recorded messages directing us to call at a later time, calls that were disconnected before we had a chance to speak with an SSA representative, and all calls in which we were placed on hold for more than 2 minutes.

We selected 2 minutes as the time we would wait on hold before hanging up because we thought it was a reasonable expectation. In addition, our definition is consistent with information SSA obtained from a survey of its clients. In July 1994, SSA reported that 90 percent of the respondents who used the 800 number said that being on hold for no more than 2.3 minutes would be good service.

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## More Calls Have Reached SSA at Method B Offices

Table 2 compares how telephone access changed with the installation of new equipment at method A and B offices. It shows that method B offices had an improvement of 23 percentage points in the calls reaching SSA and that this change was large enough to be statistically significant. The method A configuration did not produce a statistically significant change in access under our test.

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<sup>6</sup>This definition of access actually encompasses other possible call outcomes that occur under the demonstration: callers who connect but hang up after hearing the greeting, callers who dial the extension of an SSA staff member they know, and callers who connect and select the option to use the automated services. Because the system being tested requires callers to make a choice in service options, it was not possible to measure the occurrence of these individual events.

**Table 2: Changes in Telephone Access Under Methods A and B Before and After Equipment Installation for Demonstration Project**

In percent			
Call outcome	Before	After	Change (after minus before)
<b>Method A</b>			
Access	22.1	27.2	5.1
No access	77.9	72.8	(5.1)
<b>Method B</b>			
Access	23.5	46.5	23.0 <sup>a</sup>
No access	76.5	53.5	(23.0) <sup>a</sup>

<sup>a</sup>Indicates that the change is statistically significant. This means that we are 95 percent confident that an actual change occurred and that it was in the direction indicated.

Examining the results of our analysis by call outcomes provides a better understanding of the changes occurring under the demonstration project. As shown in table 3, the installation of the new equipment and additional telephone lines has resulted in a large drop in busy signals. After installation, busy signals dropped at method B offices by 55.2 percentage points. The large increase in the number of callers receiving the “call later message” after installation of the new equipment probably accounts, in part, for the drop in busy-signal rates.

**Table 3: Call Outcomes Under Each Tested Method by GAO's Definition of Access Before and After Equipment Installation for Demonstration Project**

In percent						
Call outcome	Method A			Method B		
	Before	After	Change (after minus before)	Before	After	Change (after minus before)
<b>Access</b>						
No time spent on hold	20.1	1.4	(18.7) <sup>a</sup>	21.5	9.4	(12.1) <sup>a</sup>
On hold less than 2 minutes	2.0	25.8	23.8 <sup>a</sup>	1.9	37.1	35.2 <sup>a</sup>
<b>Subtotal</b>	<b>22.1</b>	<b>27.2</b>	<b>5.1</b>	<b>23.5<sup>b</sup></b>	<b>46.5</b>	<b>23.0<sup>a,b</sup></b>
<b>No access</b>						
Busy signals	60.3	54.1	(6.2)	67.8	12.6	(55.2) <sup>a</sup>
No answer 10 rings	12.2		(12.2) <sup>a</sup>	0.3	0.6	0.3
Call later message	2.3		(2.3)	6.4	23.9	17.5 <sup>a</sup>
Disconnected		1.4	1.4		1.0	1.0
On hold more than 2 minutes	3.1	17.3	14.2 <sup>a</sup>	1.9	15.5	13.6 <sup>a</sup>
<b>Subtotal</b>	<b>77.9</b>	<b>72.8</b>	<b>(5.1)</b>	<b>76.5</b>	<b>53.5</b>	<b>(23.0)<sup>a,b</sup></b>

<sup>a</sup>Indicates that the change is statistically significant. This means that we are 95 percent confident an actual change occurred and that it was in the direction indicated.

<sup>b</sup>Does not add because of rounding.

The other substantial change shown in table 3 relates to calls placed on hold. The table shows two categories for calls placed on hold: on hold less than 2 minutes and on hold more than 2 minutes. The percent of calls in both of these categories increased greatly under the demonstration. With newer equipment, more telephone lines, and a constant level of staff assigned to answer these calls, the additional calls reaching SSA are being placed on hold until staff can answer them.

Examining how access changed at each office within methods A and B showed mixed results. For example, tables 4 and 5 show that 3 of the 10

method A offices and 4 of the 9 method B offices showed statistically significant improvement in access. However, five of the method A offices and the five remaining method B offices showed no significant change in access. Furthermore, two method A offices also showed statistically significant declines in telephone access rates. Local factors such as call volumes, the number of telephone lines available, and staffing issues may account for the wide variation in access rates at the office level.

**Table 4: Analysis of Changes in Access Rate at Method A Offices Before and After Equipment Installation for Demonstration Project**

In percent			
Method A office	Access rate before	Access rate after	Change (after minus before)
American River, Cal.	0.0	0.0	0.0
Manchester, N.H.	71.9	21.9	(50.0) <sup>a</sup>
Flatbush, N.Y.	6.1	3.0	(3.1)
Newport News, Va.	2.9	2.9	0.0
Knoxville, Tenn.	6.7	43.3	36.6 <sup>a</sup>
Las Vegas, Nev.	0.0	2.6	2.6
Harlingen, Tex.	21.1	52.6	31.5 <sup>a</sup>
Sioux City, Ia.	47.5	65.0	17.5
Cheyenne, Wyo.	33.3	61.5	28.2 <sup>a</sup>
Oakland, Cal.	33.3	10.0	(23.3) <sup>a</sup>
<b>Aggregate total</b>	<b>22.1</b>	<b>27.2</b>	<b>5.1</b>

<sup>a</sup>Indicates that the change is statistically significant. This means that we are 95 percent confident that an actual change occurred and that it was in the direction indicated.

**Table 5: Analysis of Changes in Access Rate at Method B Offices Before and After Equipment Installation for Demonstration Project**

In percent			
Method B office	Access rate before	Access rate after	Change (after minus before)
Pocatello, Ida.	21.1	78.9	57.8 <sup>a</sup>
Attleboro, Mass.	9.4	6.3	(3.1)
Albany, N.Y.	12.1	57.6	45.5 <sup>a</sup>
Petersburg, Va.	0.0	48.6	48.6 <sup>a</sup>
Asheville, N.C.	0.0	20.0	20.0 <sup>a</sup>
West Indianapolis, Ind.	60.0	73.5	13.5
El Dorado, Ark.	31.6	36.8	5.2
Norfolk, Neb.	60.0	70.0	10.0
Stockton, Cal.	3.3	10.0	6.7
<b>Aggregate total</b>	<b>23.5</b>	<b>46.5</b>	<b>23.0<sup>a</sup></b>

<sup>a</sup>Indicates that the change is statistically significant. This means that we are 95 percent confident that an actual change occurred and that it was in the direction indicated.

We recognize that a caller placed on hold (rather than receiving a busy signal) can be considered successful access to SSA. In fact, SSA considers access to its 800 number successful when a caller is connected to SSA regardless of whether the caller has spoken with a representative, heard a recorded message, spent a long period of time on hold, or hung up while on hold. Analyzing our data using this broader interpretation of access, we found that statistically significant improvement occurred under both methods A and B. These results are shown in table 6.

**Table 6: Changes in Telephone Access Under Methods A and B When All Calls Placed on Hold Are Considered Successful Access to an SSA Representative**

In percent			
Call outcome	Before	After	Change (after minus before)
<b>Method A</b>			
Access	25.2	44.5	19.3 <sup>a</sup>
No access	74.8	55.5	(19.3) <sup>a</sup>
<b>Method B</b>			
Access	25.4	61.9	36.5 <sup>a</sup>
No access	74.6	38.1	(36.5) <sup>a</sup>

<sup>a</sup>Indicates that the change is statistically significant. This means that we are 95 percent confident that an actual change occurred and that it was in the direction indicated.

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Using this definition of access, on an office level, we noted additional improvements. Among method A offices, significant improvement in access occurred in 1 more office—4 of the 10 offices instead of 3 of the 10 offices improved. Among method B offices, significant improvement in access occurred in three additional offices—seven of the nine method B offices improved instead of four of the nine offices.

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### Voice Mail Equipment Has Improved Office Efficiency and Public Service

Staff at all demonstration offices had voice mail installed on their desk telephones. We visited 12 of the 30 demonstration offices and met with office managers and staff using the new equipment. Overall, we heard almost universal praise about how the voice mail feature improved office operations and enhanced customer service.

All 12 of the office managers we interviewed were enthusiastic about the new equipment's voice mail feature. Seven of the 12 managers told us that the voice mail equipment increased their claims representatives' efficiency. Other managers told us that the voice mail equipment added flexibility to their offices and improved customer service. Finally, all of these managers told us that feedback they have received from the public about the new voice mail equipment has been positive.

We also interviewed 71 staff members who use the voice mail equipment. Most of these staff members told us that the new equipment has improved service to the public by making it easier to reach SSA. They said that when a caller tries to reach a specific SSA representative who is not at his or her desk, the caller can leave a message on the staff person's voice mail. Furthermore, many of the staff members we interviewed told us that voice mail has enabled them to manage their workload better and has increased their productivity. Some of these staff also told us that they no longer worry about losing messages or receiving inaccurately recorded messages. Others said that with voice mail, callers can leave messages and information needed for processing a claim. This eliminates the need for repeated calls between SSA and the public, speeding up the claims process.

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### SSA's Internal Evaluations of the Demonstration Project

Two separate SSA organizational entities are evaluating the telephone demonstration project. SSA's Office of Workforce Analysis (OWA) is evaluating the equipment's effect on office productivity and employee reactions. The Office of Program Integrity Reviews (OPIR) is evaluating public reaction to the equipment. Neither SSA study had been finished as of early February 1996.

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## OWA Study: Objectives and Methodology

OWA's study has two basic objectives, determining the equipment's effect on productivity levels and identifying employee experiences and reactions to using the equipment. To measure the new equipment's effect on productivity, OWA planned to gather and compare certain data. For example, OWA planned to examine how busy-signal rates and call volumes have changed using data obtained from the telephone companies servicing the demonstration offices. OWA also planned to measure the amount of work generated by callers using the automated services option (reporting address changes or missing checks). It has directed local offices to prepare weekly reports on the number of callers using these services.

To examine employee reactions, OWA has planned to have field office managers and staff who answer the telephones fill out a short questionnaire. The questionnaire is soliciting information about how well the system has performed and respondents' views on ease of use and training adequacy.

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## OPIR Study: Objectives and Methodology

To obtain information about the public's reaction to the new equipment, OPIR planned to install caller ID equipment at 19 of the 30 demonstration offices. Offices with caller ID are to record the phone numbers on certain dates. OPIR prepared several different questionnaires for its staff to use when contacting callers. OPIR planned to contact 1,500 callers, 500 for each equipment configuration but has encountered complications. Its report is to be finished in February 1996.

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## Conclusions

Overall, the addition of new equipment and telephone lines has demonstrated that access to SSA offices can be improved. Even if SSA does not devote additional staff to answering telephones in local offices, this technology may help improve the efficiency and effectiveness of the agency's service to the public. To fully evaluate whether to install the demonstration phone equipment in other locations, however, an important consideration for SSA will be the public's and SSA employees' views along with the equipment's relative costs and contributions to meeting SSA's public service goals.

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## Agency Comments

SSA commented on a draft of this report in a letter dated January 29, 1996 (see app. II). SSA agreed with our findings that enhanced technology has increased the public's telephone access to field offices. It also agreed with our view that a full evaluation of productivity issues and employee



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acceptance of and public reaction to the new equipment is needed before installation of this equipment across the board. SSA noted that its internal studies on these issues will be completed by the end of February 1996.

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Copies of this report are being sent today to SSA and parties interested in Social Security matters. Copies will be made available to others upon request. If you have any further questions, please contact me on (202) 512-7215. GAO contacts and staff who prepared this report are listed in appendix III.



Jane L. Ross  
Director, Income Security Issues

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**Abbreviations**

OPIR	Office of Program Integrity Reviews
OWA	Office of Workforce Analysis
SSA	Social Security Administration
SSI	Supplemental Security Income

# Objectives, Scope, and Methodology

The objective of our review was to determine if the installation of the new telephone equipment has improved the public's access to the participating offices in SSA's demonstration project. To do this, we placed phone calls to offices before and after installation of the new equipment being tested and recorded outcomes of these calls (busy signal, placed on hold, and the like). From these outcomes, we then calculated access rates.

As noted earlier in this report, SSA installed two types of new equipment at 30 field offices: automated attendant and voice mail. The equipment was installed in three different configurations. We labeled these configurations methods A, B, and C. SSA designated 10 offices to test each method. Table I.1 shows these office locations.

**Table I.1: SSA Offices Participating in the Demonstration Project by Method**

<b>Method A</b>	<b>Method B</b>	<b>Method C</b>
Manchester, N.H.	Attleboro, Mass.	Bangor, Me.
Flatbush, N.Y.	Albany, N.Y.	Geneva, N.Y.
Newport News, Va.	Petersburg, Va.	Reading, Penn.
Knoxville, Tenn.	Asheville, N.C.	Charleston, S.C.
St. Paul, Minn.	West Indianapolis, Ind.	Cedartown, Ga.
Harlingen, Tex.	El Dorado, Ark.	Champaign, Ill.
Sioux City, Ia.	Norfolk, Neb.	Oklahoma City, Okla.
Cheyenne, Wyo.	Murray, Utah	Roswell, N.M.
Oakland, Cal. (D/T)	Stockton, Cal.	Winfield, Kans.
American River, Cal.	Pocatello, Ida.	Las Vegas, Nev.

We conducted the preinstallation phase of the test from mid-January through the end of February 1995, placing our calls on what we believed to be the 8 busiest days during that period. We reasoned that the best way to measure changes in phone access was to test performance on the busiest calling days rather than on average calling days.

To identify the busiest calling days, we used information on telephone call volume to the 800 number during the same period in 1994. SSA has information that tracks the busy-signal rate for the 800 number. Using these data, we identified the 8 busiest days from mid-January through the end of February in 1994. We chose this period because SSA began installation of the new equipment at the 30 offices during the last week of February 1995.

The busiest days tended to be Mondays, Fridays, the third of the month (when Social Security checks are normally delivered), and the day after a holiday. The exact days we chose for study were January 17 and 30 and February 1, 3, 6, 7, 21, and 27.

SSA had planned to complete installation of the phone service by June 1995. However, it encountered several installation problems. By late July, only one office did not yet have the equipment installed. We decided to give the field offices some time to become acquainted with the equipment. By using the 1994 call log for SSA's 800 number, we selected the following 8 days on which to conduct the postinstallation phase calls: August 22, 29, and 30 and September 5, 6, 8, 11, and 13.

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## Sampling Procedure

We designed the test using statistical sampling principles so that calls would be randomly distributed throughout the day and across the 30 SSA offices during each of the two 8-day test periods. To provide an adequate level of precision for our estimates of the busy-signal rates, we made 350 preinstallation calls and 350 postinstallation calls for each of the three methods being tested.

To determine the time of the calls, we divided the workday into 28 15-minute segments (beginning at 9 a.m. and ending at 4 p.m.). This created 224 time periods over the 8-day test period (8 days times 28 time periods per day). Since 10 locations could be called during each of the 224 time periods, we had a total of 2,240 possible time/location combinations, with each representing a possible telephone call.

We numbered these combinations 1 through 2,240, with number 1 assigned to the combination of the first location and the first time period (9:00 to 9:15 a.m.) of the first of the 8 days, and number 2,240 assigned to the combination of the tenth location and the last time period (3:45 to 4:00 p.m.) on the eighth day. We then picked at random 350 of the numbers from 1 to 2,240. For each number picked, we looked up the corresponding time/location combination that had been assigned that number and placed a telephone call at that time to that location.

For example, one of the random numbers we picked was 572. We had assigned that number to location number 2 during the 9:15 to 9:30 a.m. period on the third day. As shown in table I.1, location number 2 for method A is the Flatbush office. Therefore, we placed a call to Flatbush during the 9:15 to 9:30 a.m. period on the third day. We also placed calls

during the same period on the same day to the Albany and Geneva offices, locations number 2 under methods B and C.

For the postinstallation period, we placed an identical set of calls, in time and location, to those placed to estimate the busy-signal rates before installation of the new equipment. For example, since we had picked the number 572 we again placed calls to the Flatbush, Albany, and Geneva offices during the 9:15 to 9:30 a.m. period on the third day of our postinstallation test.

We used the same set of 350 random numbers for both our pre- and postinstallation tests of the equipment to make our comparisons of changes in the three methods' access rates as fair as possible. By placing the preinstallation test calls on the same days and at the same times to each of the three groups of 10 locations, we hoped to minimize the effect on our estimates of variation among locations in the volume of calls received on particular days or during particular hours. Similarly, by placing our postinstallation test calls to the same locations and at the same times as those of our preinstallation test calls, we attempted to minimize the effect of variation among locations in the general call volume between the mid-January through February period and the period of our postinstallation test in August and September.

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## **Adjustments to Our Sampling Plans**

Several events arose during our analysis that necessitated adjusting the data for study purposes. Table I.2 summarizes these adjustments.

**Table I.2: Adjustments to SSA Offices Participating in the Demonstration Project by Method**

<b>Method A</b>	<b>Method B</b>	<b>Method C</b>
Manchester, N.H.	Attleboro, Mass.	Bangor, Me. <sup>a</sup>
Flatbush, N.Y.	Albany, N.Y.	Geneva, N.Y.
Newport News, Va.	Petersburg, Va.	Reading, Penn.
Knoxville, Tenn.	Asheville, N.C.	Charleston, W.Va.
St. Paul, Minn. <sup>a</sup>	West Indianapolis, Ind.	Cedartown, Ga.
Harlingen, Tex.	El Dorado, Ark.	Champaign, Ill.
Sioux City, Ia.	Norfolk, Neb.	Oklahoma City, Okla.
Cheyenne, Wyo.	Murray, Utah <sup>a</sup>	Roswell, N.M.
Oakland, Cal. (D/T)	Stockton, Cal.	Winfield, Kans.
American River, Cal.	Pocatello, Ida.	Las Vegas, Nev. <sup>a</sup>

<sup>a</sup>Affected demonstration office.

Due to unforeseen events, we could not complete our comparison exactly as planned. Some of the field offices had to be dropped from the study or moved to another method.

SSA did not install new equipment in the St. Paul or Bangor field offices as had been planned. Therefore, we excluded St. Paul and Bangor from our study. We also discovered that the phone number we had used in the first phase of the study for the Murray field office was incorrect so we excluded this office from our analysis. Finally, the Las Vegas field office, which was to receive equipment for method C, instead received the equipment for method A. These adjustments resulted in 10 field offices using method A, 9 field offices using method B, and 8 field offices using method C in our analyses.

For each method, we estimated the proportion of times that the public would have accessed SSA when calling the offices in the test during the 8 days on which we placed calls. Because our estimates—which apply only to the 8 days on which we placed calls—are based on a limited number of phone calls, each estimate has an associated sampling error. At the 95-percent confidence level, sampling errors for our estimates of access rates under each method (both pre- and postinstallation) are about 5 percentage points. Sampling errors for our estimates of changes in access rates under each method are about 7 percentage points. In many instances, sampling errors for estimates of access rates at individual offices are substantially higher.

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## Questionnaire

We designed a simple computer-assisted telephone interview to collect the data on the outcome of each telephone call attempt. The information collected included whether (1) we got a busy signal, (2) the phone rang without being answered (we hung up after 10 rings), (3) a person answered, (4) we were placed on hold (we waited 2 minutes before hanging up), and (5) we were disconnected.



# Comments From the Social Security Administration



## SOCIAL SECURITY

Office of the Commissioner

January 29, 1996

Ms. Jane L. Ross  
Director, Income Security Issues  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Ms. Ross:

Enclosed are two copies of the Social Security Administration's comments on the U.S. General Accounting Office's Report, "Telephone Access Enhanced at Field Offices Under Demonstration Project" (GAO/HEHS-96-70), dated December 21, 1995.

We appreciate the opportunity to comment. Please let us know if we may be of further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Shirley S. Chater".

Shirley S. Chater  
Commissioner  
of Social Security

Enclosures (2)

SOCIAL SECURITY ADMINISTRATION BALTIMORE MD 21235-0001

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**Appendix II**  
**Comments From the Social Security**  
**Administration**

COMMENTS OF THE SOCIAL SECURITY ADMINISTRATION (SSA) ON THE  
GENERAL ACCOUNTING OFFICE (GAO) DRAFT REPORT, "TELEPHONE ACCESS  
ENHANCED AT FIELD OFFICES UNDER DEMONSTRATION PROJECT"  
(GAO/HEHS-96-70)

We appreciate the opportunity to comment on the GAO draft report evaluating telephone access to the SSA field offices (FO) participating in demonstration pilots that are testing new telephone equipment, automated attendant technology and voice mail.

In GAO's review, testing focused exclusively on the issue of telephone access, defined as reaching an SSA employee either without spending any time on hold or less than 2 minutes on hold. GAO obtained data by simply calling the offices before and after installation of the equipment and recording the outcome of those calls. GAO also visited several offices and spoke with managers and employees about their reactions to the equipment.

GAO concludes that its findings suggest the addition of new equipment and telephone lines can further SSA's public service goals.

In general, we agree with GAO's findings that enhanced technology increases the public's telephone access to FOs. However, we caution that this technology cannot be fully evaluated until all aspects have been addressed: costs and benefits, quality, productivity, and public and employee reactions. Increased access alone, without improved productivity and public acceptance, may not be sufficient to support use of this technology across the board.

As the report states, the Office of Workforce Analysis (OWA) has been working with GAO and the Office of Program and Integrity Reviews (OPIR) to evaluate the use of automated attendant telephone service in designated FOs. Both OWA and OPIR have collected data through several different study methodologies conducted over several months. OWA's study is addressing whether the technology increased access, whether increased access improves productivity, and whether employees reacted positively to the automated attendant technology. OPIR's study is evaluating the public's reaction to the new technology. These studies will provide further insight into the effectiveness of the technology. We expect the OWA and OPIR evaluations to be completed by the end of February 1996.

# GAO Contacts and Staff Acknowledgments

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## GAO Contacts

Roland H. Miller III, Assistant Director, (202) 512-7246  
William J. Staab, Evaluator-in-Charge, (202) 512-6814

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## Staff Acknowledgments

In addition to those named above, the following individuals made important contributions to this report: Jim Wright and Jay Smale developed our sample design and the computer-assisted interview instrument used to record telephone call outcomes; Inez Azcona, and Jeffrey Bernstein collected the data, visited local SSA offices and helped prepare this report; Wayne Turowski and Steve Machlin did the computer programming and analysis of data.

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