

GAO

Report to the Chairman, Subcommittee  
on Oversight, Committee on Ways and  
Means, House of Representatives

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March 1996

# TAX ADMINISTRATION

## Making IRS' Telephone Systems Easier to Use Should Help Taxpayers







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General Government Division

B-259951

March 11, 1996

The Honorable Nancy L. Johnson  
Chairman, Subcommittee on Oversight  
Committee on Ways and Means  
House of Representatives

Dear Madam Chairman:

Improving service to taxpayers is one of the goals the Internal Revenue Service (IRS) hopes to achieve by restructuring its organization and modernizing its information systems. Guided by a broad plan called the "Customer Service Vision," IRS has begun a long-term process of consolidating work units, retraining employees, and developing new information systems to enable those employees to better serve taxpayers.

The Customer Service Vision calls for eliminating most written correspondence between taxpayers and IRS, a step that IRS expects to achieve by substantially increasing the availability of telephone service. IRS officials recognize that the success of the Customer Service Vision depends on taxpayers being able to easily reach IRS by telephone, but IRS has had a long-standing telephone accessibility problem. One of the ways IRS plans to provide better telephone access is through the use of interactive telephone systems.

Interactive telephone systems—systems taxpayers can use to call IRS to get answers to their questions and complete transactions without talking to a telephone representative—are critical to the success of IRS' Customer Service Vision.<sup>1</sup> IRS plans for the 30 interactive systems currently being developed to eventually answer 45 percent of all taxpayers' telephone calls. To the extent that many taxpayers can resolve their problems without talking with IRS telephone representatives, other taxpayers who do need to talk to telephone representatives should find it easier to reach them.

We reviewed IRS' efforts to develop interactive telephone systems because they are critical to achieving the improved taxpayer service sought by IRS' Customer Service Vision. Our review was carried out and this report was prepared as part of our basic legislative responsibility for reviewing

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<sup>1</sup>Taxpayers are to be able to call IRS' telephone assistance program and, by listening to the system, to be able to make selections of subjects by pressing numbers on their telephones, thus interacting with the system to resolve a question or complete a transaction. For example, the Voice Balance Due system discussed in this report is intended to allow taxpayers who owe delinquent taxes to complete arrangements for an installment payment agreement on the telephone without talking to a telephone representative.

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federal programs and activities. Because of the Subcommittee's continuing interest in improving the quality of IRS' service to taxpayers, you asked that we issue this report to you. We evaluated the steps IRS has taken to

- make the interactive telephone systems easy for taxpayers to use,
- meet security requirements for protecting taxpayer data, and
- assign "owners" who would be responsible for providing the developers with input about systems' requirements.

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## Results in Brief

The successful implementation of interactive telephone systems is key to IRS' achieving its Customer Service Vision because IRS expects that the demand for telephone assistance will double as it directs taxpayers to use the telephone rather than paper correspondence. As of July 1995, IRS had developed and pilot-tested three new interactive telephone systems, but the telephone systems may be difficult to use. Consequently, taxpayers may not use the systems to the extent necessary for IRS to improve its telephone accessibility and realize the benefits it expects.

The first three interactive telephone systems may be difficult to use because IRS' telephone routing system (1) requires taxpayers to remember up to eight menu options when design contractor guidelines call for no more than four and (2) does not allow taxpayers to return to the main menu when they make a mistake or want to resolve other issues. IRS was aware of these problems but believed that the range of questions made it difficult to limit to four the number of options and that simply condensing the options to a smaller number might not be the best solution. While IRS was conducting a cost-benefit analysis of ways to allow taxpayers to return to the main menu, it was not planning to conduct a cost-benefit analysis of the use of multiple toll-free numbers, which IRS officials had recommended to overcome the problem of too many menu options. Providing taxpayers with a written, detailed step-by-step description on how to use the interactive systems' menu options is another way IRS could make its telephone systems easier for taxpayers to use. A cost-benefit analysis would help IRS identify the most beneficial way to overcome the problems. Unless corrected, these problems may cause significant numbers of taxpayers not to use the interactive telephone systems. This would result in the systems' not achieving their goal of reducing the workload for IRS telephone representatives and thereby improving taxpayers' access to IRS' assistance.

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IRS complied with Department of the Treasury and IRS security requirements when developing the first three interactive telephone systems. As required, IRS certified that the systems protected taxpayer data. According to IRS officials, the first three interactive telephone systems did not require extensive security measures. Future interactive systems are to allow taxpayers who call greater access to their tax information. These systems will require more extensive security measures for ensuring that IRS can identify the callers. IRS plans to use various measures, including personal identification numbers (PIN), to provide this protection. However, IRS is still developing the overall security requirements for its modernization program. Therefore, the PIN process may have to be modified or replaced if the security requirements for IRS' modernization program call for stricter security measures.

For its interactive telephone systems, IRS officials responsible for overseeing the tax refund and IRS office locations systems' development—called owners—in some instances did not provide the Telephone Routing Interactive Systems (TRIS) Project Office with timely input during the time that the TRIS Project Office was developing the systems. As a result, the TRIS Project Office had to modify some features of the systems. For example, after the TRIS Project Office staff had completed the pilot test for a system to provide callers with information about the location of IRS offices, the owner of that system decided to delete information from the system that told taxpayers the locations they could visit for tax assistance. The owner did not want that information included because IRS wanted taxpayers to telephone for assistance rather than visit IRS offices. If the owner had been more involved with the system's design and informed the TRIS Project Office staff of this decision earlier, development time and money could have been saved.

We have previously reported our concerns about the assignment of process owners and their roles and responsibilities in a report that reviewed the challenges IRS faces in achieving its Customer Service Vision.<sup>2</sup> That report included recommendations to IRS for avoiding further problems in assigning owners and clarifying their responsibilities. IRS subsequently took action that if effectively implemented, should resolve our concerns about the system owners discussed in this report.

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<sup>2</sup>Tax Administration: IRS Faces Challenges in Reorganizing for Customer Service (GAO/GGD-96-3, Oct. 10, 1995).

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## Background

For many years, taxpayers have had difficulty getting through when they call IRS' toll-free telephone assistance program for help with a tax law, an account, or other tax questions. IRS has taken action to answer more taxpayers' calls, but the number of calls IRS receives still greatly exceeds the number it is able to answer. In response to this problem and others, IRS studied how it could provide taxpayers with better service. In 1993, IRS' Service Center Organization Study included a concept of customer service based on state-of-the-art technology. IRS plans to reduce paper correspondence by directing taxpayers to call IRS for answers to their questions. In fiscal year 1994, IRS received about 156 million calls at its toll-free call sites. IRS estimated that the volume of calls to be received when its Customer Service Vision is in place would almost double the number of calls IRS received in fiscal year 1994.

To improve taxpayers' ability to reach IRS by telephone, IRS anticipates that 45 percent of all taxpayer calls would be resolved through new interactive telephone systems. Taxpayers would use their Touch-Tone telephones to gain access to the interactive telephone systems where they would obtain answers to their questions without talking to IRS telephone representatives. With these new systems, the number of available telephone representatives may no longer limit taxpayers' ability to resolve their questions because many taxpayers should be able to obtain answers to questions and complete many transactions without talking to telephone representatives. For example, IRS envisions that by 2001 taxpayers who could not pay their tax debt in full could use their telephones to set up agreements to pay monthly installments without talking to IRS telephone representatives.

To facilitate the transition to its new business vision, IRS reorganized its management structure around key operating areas called "core business systems."<sup>3</sup> An integral part of its new management approach included assigning owners to the underlying processes that are to support the Customer Service Vision. Among other things, owners are expected to provide system designers with the business requirements for new systems and to make sure that the systems will meet the needs of the taxpayers that the owners are responsible for serving.

The TRIS Project Office is developing the interactive telephone systems, including preparing menus and scripts to be used at IRS call sites. The TRIS

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<sup>3</sup>IRS has six core business systems. Each represents a closely related set of processes, defined in terms of a customer's needs. For example, IRS' Managing Accounts Core Business System includes all of the steps involved in collecting, maintaining, and providing taxpayer account information to taxpayers and IRS employees who need it.

Project Office is also working with other IRS offices, which are responsible for current and future operations, to obtain requirements for the interactive telephone systems. IRS envisions that it could have as many as 30 or more of these systems available to taxpayers by 2001.

As of July 1995, the TRIS Project Office had developed and pilot-tested three of the new interactive telephone systems at the Nashville Customer Service Site. These were the Location, Refund Inquiry, and Voice Balance Due (VBD) systems. During the pilot test, taxpayers were able to use the Location system to obtain the mailing address of the IRS offices. The Refund Inquiry system let taxpayers determine the status of their refund and speak to an IRS representative, if needed.<sup>4</sup> VBD allowed eligible taxpayers access to their accounts and provided the capability to establish an installment agreement to pay delinquent taxes without speaking to an IRS telephone representative.

IRS' October 1994 business case cost-benefit analysis on all of the interactive telephone systems showed greater benefits than costs. IRS projected the benefits of all of the systems to be about \$155 million through 2001. The benefits included labor savings of almost \$154 million and material savings, due to reduced paper correspondence, of \$1 million. The projected cost of the systems for the same time period was about \$51 million, thereby making the ratio between the benefits and projected costs to be about 3 to 1.

## Objectives, Scope, and Methodology

We focused our review on the first three of the new interactive telephone systems that IRS is developing. Our objectives were to evaluate IRS' efforts to (1) make the systems easy for taxpayers to use, (2) meet security requirements for protecting taxpayer data, and (3) assign owners who would be responsible for providing the developers with input about systems' requirements.

To evaluate IRS' efforts to make the interactive telephone systems easy for taxpayers to use, we compared the three systems IRS pilot-tested in Nashville with the contractor—American Institute for Research—guidelines that were developed for IRS to follow when designing its interactive systems. The guidelines provided that the

<sup>4</sup>Refund Inquiry is an interactive system similar to Tele-Tax but is not part of the Tele-Tax system. Tele-Tax has a separate toll-free number and provides taxpayers an option to listen to tapes on different tax topics and check on the status of their refund. Taxpayers calling Tele-Tax do not have the option to talk with a representative. IRS officials told us that Tele-Tax may be phased out at a later date.

interactive telephone systems should have no more than four options and allow taxpayers to return to the main menu. We also considered the views of officials from IRS' Information Systems Group, including the TRIS Project Office, which was responsible for the technical design of the interactive systems; IRS' Taxpayer Service and Collection organizations, which were responsible for providing the TRIS Project Office with design requirements; the American Institute for Research, which was the research company that developed the design guidelines; and IRS' Value Tracking Core Business Group, which provided us with taxpayers' perceptions about interactive telephone systems. Finally, we observed a demonstration of the three systems to assess what taxpayers heard when they used the systems.

To evaluate IRS' efforts to meet security requirements for protecting taxpayer information, we compared the security measures for the interactive systems to Treasury's and IRS' security requirements. We also considered the views of officials from the TRIS Project Office, the IRS Chief Counsel, and the Privacy Advocate's Office on the issues and problems involved with protecting taxpayer data. We interviewed officials from the banking industry and compared how they provided security for their interactive systems to how IRS provided security for its systems. We reviewed IRS' proposal for the use of a PIN process in later interactive systems and contacted officials from IRS' Systems Engineering and Program Management Office who were responsible for determining the security requirements for IRS' Tax Systems Modernization efforts.

To evaluate IRS' assignment of owners, we reviewed documentation on IRS' core business system structure that provided guidelines specifying when owners should be designated and what input they should provide for developing new systems. We interviewed the TRIS Project Office staff to determine if owners had been designated, if so, when and who the owners were, and whether they provided the information that the TRIS Project Office needed. We then interviewed the officials who provided the TRIS Project Office with input, including officials from Taxpayer Service, the Ensuring Compliance Core Business System, and the Customer Service Executive Office.

We did our review from October 1994 to September 1995 in accordance with generally accepted government auditing standards. We requested comments on a draft of this report from the Commissioner of Internal Revenue or her designee. On January 24, 1996, several IRS officials, including the Chief, Customer Service Branch (Taxpayer Services); Director, Case Division (Information Systems); and Section Chief, TRIS



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Project Office, provided us with oral comments. These comments were supplemented by a memorandum from the Chief of Taxpayer Services on January 31, 1996. Their comments are summarized on pages 17 and 18 and incorporated in this report where appropriate.

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## IRS' Telephone Systems May Be Difficult to Use

Taxpayers may find it difficult to use IRS' interactive telephone systems because IRS' telephone routing system (1) requires taxpayers to remember too many options to obtain the information they need and (2) provides no way for taxpayers to correct menu selection mistakes or resolve more than one issue. IRS was aware of these problems.

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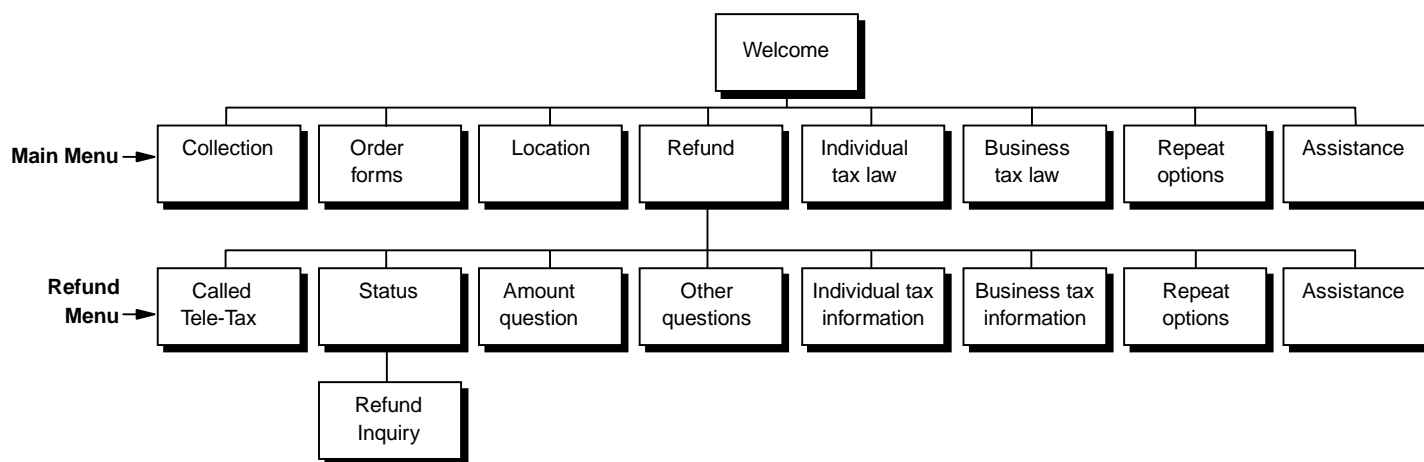
## Taxpayers Are Required to Remember Too Many Options

Taxpayers are required to remember up to eight options when they call IRS. The guidelines a contractor prepared for developing IRS' telephone interactive systems recommended three or four options as the optimal number on a menu from which a caller may choose. According to the contractor, having a larger number of menu options makes it difficult for taxpayers to remember which option to select and may cause them to wait for an available telephone representative, thereby unnecessarily increasing IRS' workload and the time the taxpayer spends on the telephone. When taxpayers call IRS' toll-free interactive telephone assistance program, they are welcomed to the program and are asked to choose from different options on the main menu. Taxpayers select an option by pressing the appropriate number on their telephone that corresponds to the service they need. For example, as shown in figure 1, when taxpayers call the Nashville Customer Service Site to obtain the status of their refunds, they hear eight main menu options.<sup>5</sup> After they select the refund option, they hear another eight options from the refund menu, including the status option. After they select the status option, they gain access to the Refund Inquiry interactive telephone system.

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<sup>5</sup>As a prototype site, Nashville chose to use eight main menu options. Similar to Nashville, the other toll-free call sites provide taxpayers with assistance on procedural, tax law, and account questions. But, unlike Nashville, they require taxpayers to choose from five main menu options.

Figure 1: Nashville Prototype Menu Selections for Refund Inquiry



Source: TRIS Project Office.

In a study done on IRS' telephone system, taxpayers said five to six options were more than they could remember.<sup>6</sup> Because there were more options than they could remember, taxpayers said they would like to read the options before calling. It seems that this could help taxpayers use the options more effectively and could limit the need for some taxpayers to wait for an available representative or to call back.

IRS has recognized that the large number of menu options causes a problem for taxpayers, but it has not yet determined the best way to solve the problem. In April 1994, IRS set up a team to study how IRS should respond to future taxpayers' needs. One of the things the team examined was the number of options offered by IRS' telephone routing system. The team recommended that taxpayers hear no more than four menu options. IRS officials told us that the range of taxpayer' questions makes it difficult to limit the number of options to four. Similarly, the team recognized that simply condensing the options into a smaller number might not be the best solution because the options may become too broad and taxpayers may not be able to find their specific topics. As a result, taxpayers might call

<sup>6</sup>Evaluation of the TRIS Prototype, Phase 3, Final Report, The American Institute for Research, Washington, D.C., October 7, 1992.

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and wait to talk to an available IRS representative rather than choosing an interactive system.

To overcome the problem of too many menu options, IRS officials, who were working toward making the transition to the Customer Service Vision, recommended using multiple toll-free numbers without conducting a cost-benefit analysis. However, a cost-benefit analysis would help to identify the most beneficial way of overcoming this problem.

Several issues are important when considering the cost of ways to address this problem. These include (1) the adverse effect on taxpayers of IRS' long-standing difficulty in providing access to its telephone assistance program, (2) the cost to taxpayers who are directly affected by lack of service, and (3) IRS' high cost to solve taxpayers' problems by correspondence relative to solving them by telephone.

By considering all possible alternatives when assessing ways to overcome the problem of too many menu options, IRS could better ensure that the best solution is selected. While using multiple toll-free numbers is one possibility, providing taxpayers with a written, detailed step-by-step description of the menus and how to use them is another way IRS could make it easier for taxpayers to use its telephone system. As reported in the study of IRS' telephone system, taxpayers said that advance information describing the menus and how to use them would be helpful in gaining access to the interactive systems, such as the Refund Inquiry, Location, and VBD.

An IRS experience during the 1994 filing season further illustrates the benefit of taxpayers' having advance information about the telephone menus. IRS was concerned about the length of time taxpayers took to select their options. But, at one call site, IRS found that taxpayers were spending less time selecting their options than the national average. IRS learned that the taxpayers took less time because the call site's telephone representatives were instructing callers on how to get to their selection the next time they called for similar assistance. The result was that taxpayers spent less time in the menu selecting their options.

At the time of our review, IRS had not taken action to provide taxpayers information about the menus. We identified two possibilities for providing such information and discussed them with IRS officials. One possibility would be for IRS to publish information on how to use the menus and descriptions of the options—as they do for Tele-Tax—in taxpayers' tax

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form instruction booklets. Another way to disseminate this information would be for IRS to use a “stuffer”—a sheet of paper that contains information about the menus—in correspondence sent to taxpayers about their tax accounts.

Taxpayer Service and TRIS Project Office officials said they have not published information on the menu options in the tax instruction booklets because (1) multiple menu options would have to be explained and (2) menus change during the tax filing season—January through April. For example, Nashville would have to explain eight different options. Also, during the filing season, the menus at all of the sites are reordered because taxpayers are primarily calling about earnings statement (W-2) information and tax refund status. In addition, call sites have some discretion in changing their menus to meet local situations.

The TRIS Project Office officials agreed it would be a good idea to provide taxpayers with a description of the options if IRS’ National Office instituted a policy that all call-site menus would be the same and that changes to the menus, including filing season changes, would be the same. As part of the Customer Service Vision, IRS plans to route calls nationwide. Having standard menus could help taxpayers use the menus and gain access to interactive systems.

The evidence—the IRS study cited earlier and IRS’ experience at the call site where IRS provided callers with information about the menus—indicates that advance information may help taxpayers and shorten the time they spend on the telephone. Less time on the telephone per caller would mean that IRS could serve more taxpayers.

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### Taxpayers Are Unable to Correct Menu Selection Mistakes or Resolve More Than One Issue

Taxpayers who select the wrong menu option or want to resolve multiple issues with one telephone call must wait for an available telephone representative or hang up and call back because IRS’ interactive telephone systems do not allow taxpayers to return to the main menu. IRS’ design guidelines call for such a feature, but IRS officials said they decided against using it to limit the amount of time taxpayers stay in the system. The officials believed that by limiting the taxpayers’ time in the system, more taxpayers could be served.

Having a feature allowing taxpayers to return to the main menu will be especially important in the future. A part of IRS’ modernization effort is to

consolidate all of a taxpayer's issues on one notice.<sup>7</sup> Therefore, taxpayers who receive these multiple-purpose notices may need to return to the main menu to complete their various business items in one telephone call. Without this feature, many taxpayers would have to call back or wait for an available telephone representative to obtain the information they need and as a result spend more, not less, time in the system. The final evaluation report on the TRIS Project Office prototype said that taxpayers would more than likely wait for an available telephone representative if they could not return to the main menu, thereby staying in the system longer. Additionally, they could become frustrated and not call back, resulting in the taxpayer not obtaining the needed information.

Allowing taxpayers to return to the main menu may reduce taxpayer frustration and allow them to obtain the information they need more quickly and in one telephone call, thereby enabling IRS to serve more taxpayers. For example, if a taxpayer selected the Collection menu option after receiving a bill or notice and also needed to know the mailing address of an IRS office, the taxpayer would have to wait for an available representative or hang up and call back and select the Location option. If callers could return to the main menu, they could select the Location option and use the interactive system to obtain the information they need in one telephone call.

## IRS Has Certified That Initial Interactive Telephone Systems Meet Existing Security Requirements

IRS complied with Treasury's and IRS' security requirements for protecting taxpayer information when designing the first three interactive systems. Generally, the level of security required depends on the type of data IRS will allow taxpayers to access. IRS was required to provide security measures because two of the interactive systems—Refund and VBD—allow callers to have access to tax account information. To meet security requirements for these systems, IRS must verify the callers' identities so that they are allowed access only to their own tax information. The Location system provides taxpayers with the mailing address of the IRS offices. Because the Location system does not disclose taxpayer data, it does not require any security measures.

Each of IRS' interactive telephone systems meets the requirement for validating caller identity in a different way. For example, Tele-Tax allows taxpayers to obtain the status of their refunds. For the Tele-Tax system, IRS

<sup>7</sup>Notices are written communications made up of standard paragraphs put together by IRS staff on the basis of information in IRS' computerized files of tax returns and related transactions. A common situation resulting in notices is mathematical errors made by taxpayers on returns. In such cases, the notices IRS sends inform the taxpayers of the errors and ask for a response.

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protects taxpayer data by requiring taxpayers to identify themselves by entering the amount of their refund, their filing status, and social security number before they can obtain their tax refund status. The Refund Inquiry system requires taxpayers to provide the same identification information as the current Tele-Tax system requires before obtaining their tax refund status. The VBD system requires taxpayers to key in an access code, which is printed on the notice sent to taxpayers, before they are allowed access to their accounts. IRS officials believe these security measures protect the data being provided.

In accordance with IRS' security requirements, IRS certified that the first three systems met its existing security requirements. However, changes to these systems could be needed if IRS' modernization efforts result in the need for stronger security measures to meet stricter requirements.<sup>8</sup> If the requirements are more strict, IRS may have to recertify that the systems adequately protect taxpayer data.

IRS plans to provide more protection for taxpayer data. IRS plans to use the PIN process to provide this protection. Later interactive telephone systems are to allow taxpayers to access more account data. For example, the Account View system that the TRIS Project Office plans to develop is intended to allow taxpayers to obtain account information, including the amount of taxes they owe. According to IRS officials, use of the PIN process in the Account View system should help prevent unauthorized access to such information. The officials told us not every taxpayer will need a PIN or will use it frequently, but they said the PIN process will help provide the level of security currently required to allow taxpayers access to their account information and to protect the information from unauthorized users. However, until IRS defines its security requirement for its modernization program, it is not possible to determine if the PIN process would be adequate.

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<sup>8</sup>IRS' security requirements call for information systems to provide reasonable protection of taxpayer data and to ensure that taxpayer information is disclosed only to authorized parties. Security measures, such as passwords, PINs, audit trails, user authorization, and screening criteria, are the tools used to verify taxpayers' identities to protect their account data from unauthorized access and thus meet the security requirements.

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## IRS Developed the Initial Interactive Systems Without Complete and Timely Input From Owners

The initial interactive systems were planned to support work processes that cut across two IRS Core Business Systems—Managing Accounts and Ensuring Compliance. A major part of the Managing Accounts Core Business System deals with responding to taxpayers' tax law and account questions on the telephone. A part of the Ensuring Compliance Core Business System involves IRS employees' using the telephone to collect overdue taxes. These two activities, among others, are being combined in IRS' customer service call sites.

An integral part of the core business management structure is IRS' reliance on owners of the processes that make up IRS' work. Thus, process owners are officials who are responsible for ensuring that new products and services that affect activities within their process—such as the interactive telephone systems—meet the requirements of the Customer Service Vision.

Owners have to be designated early in the design of systems to be able to ensure that the systems meet the goals of the Customer Service Vision and to limit any redesign. IRS allowed the initial three systems to be developed without certain input being obtained from owners, such as owners' providing the TRIS Project Office with requirements to ensure the new systems met the needs of the Customer Service Vision. In the case of the VBD system, the owner was designated after most of the system design had been done. The other two systems—Location and Refund Inquiry—were developed without timely input from the owners. Consequently, the TRIS Project Office has had to modify some systems' features after the owners found that the systems did not fully meet certain aspects of the Customer Service Vision.

During our review, there was some confusion within IRS as to who owners should be and what they should do, especially for the VBD interactive system, which involved more than one core business system. The TRIS Project Office obtained input from two core business systems in developing the VBD system—Managing Accounts, which includes Taxpayer Service, and Ensuring Compliance. However, the TRIS Project Office officials were not clear who would determine if the VBD system met the goals of the Customer Service Vision since both core business systems were involved. The officials told us that initially they thought the Customer Service Site Executive was the owner. When we talked to Customer Service staff, they said that Ensuring Compliance Core Business System owned the VBD system, but the Director of Ensuring Compliance referred us to the Managing Accounts Core Business System. The TRIS

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Project Office officials said they also looked to the Managing Accounts Core Business System for staff to help the TRIS Project Office design the VBD system. The officials said they completed the design and development of the VBD system without knowing the owner because, in their view, they understood what the system should do. They said a similar system had been developed and tested in IRS' Laguna Niguel District in 1992 and this earlier version provided them with enough background to develop the newer system.

IRS did not designate an owner until late in the development of the VBD system. Near the end of the pilot test for the new system, IRS designated the Assistant Commissioner for Taxpayer Services as the owner for all of the interactive systems and an executive in Taxpayer Service was designated as the person the TRIS Project Office officials could contact for support.<sup>9</sup> The VBD system has recently been approved for rollout to several call sites, and IRS officials told us the system was meeting their needs. However, IRS risked having to make modifications to the system, because an owner was not designated earlier in its development.

While officials in the Managing Accounts Core Business System assumed the role of owner for the Location and Refund Inquiry systems, the TRIS Project Office officials told us that they were not provided timely input on the quality measures. These measures are important because they gauge whether the system was designed as needed to meet the Customer Service Vision. The TRIS Project Office developed the quality measures without the owners' input and began the pilot testing of the systems. Near the end of the 30-day test period the owners wanted additional measures included. The TRIS Project Office extended the test period by 30 days to test the additional measures. Managing Accounts officials working on the quality measures said that they wanted to be involved with the TRIS Project Office earlier, but that their ongoing workload prevented them from doing so.

After the pilot tests, the owners decided to make changes in the systems because the systems were not going to support the Customer Service Vision. For example, in the Location system, the owners decided to take out information that told taxpayers the locations they could visit for tax assistance because the Customer Service Vision calls for taxpayers to use

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<sup>9</sup>IRS' traditional functional organization continues to exist along with the structure resulting from the core business systems approach. For example, the functional organization called Taxpayer Services is synonymous with the Managing Accounts Core Business System and their organizational boundaries are identical. Compliance, the other functional organization involved in customer service, is synonymous with the core business system called Ensuring Compliance and this functional and core business system pair also have identical boundaries.



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the telephone rather than visit IRS offices to resolve their issues. According to a TRIS Project Office official, had the owners told them this earlier, they would not have included the location information in the system and development time and cost could have been saved. The official said the TRIS Project Office also will have to modify the system to meet this new requirement of not telling taxpayers the locations for receiving tax assistance.

The TRIS Project Office encountered a similar problem after the pilot test of the Refund Inquiry system. After developing the system, the TRIS Project Office discovered that the system's security mechanism would not allow some authorized taxpayers to use the system. Specifically, taxpayers entered the amount of the tax refund they expected, but IRS matched this amount to the amount that IRS was sending to the taxpayer. In cases where IRS had adjusted the taxpayers' return, which resulted in changes to the refund amount, the amounts would not match. Consequently, when the two refund amounts differed, taxpayers could not proceed in the system. At the time of our review, the TRIS Project Office was planning to modify the Refund Inquiry system to match the anticipated refund amount as stated on taxpayers' returns. A TRIS Project Office official said that this problem could have been avoided with more owner input into the design of the system.

The problems with assigning owners and making sure that owners who are assigned provide critical input into the development of new systems was addressed in our October 1995 report<sup>10</sup> that reviewed the challenges IRS faces in achieving its Customer Service Vision. In that report we recommended that IRS clarify the criteria for designating owners and define their roles and responsibilities for Tax Systems Modernization projects involving more than one core business system. The report also recommended that IRS emphasize to owners the need for them to provide the input necessary to develop, test, and implement new customer service products and services.

In comments on our October 1995 report, IRS agreed with our recommendations and said that the Modernization Executive, a senior executive who reports to the IRS Commissioner, had been charged with directing, prioritizing, and coordinating any projects dealing with modernization. The Modernization Executive was also charged with ensuring that owners were identified early in the development of projects that involve more than one core business system. We believe the actions

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<sup>10</sup>GAO/GGD-96-3.

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IRS identified, if properly carried out, should avoid further confusion in this area.

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## Conclusions

The success of the interactive telephone systems is critical to IRS' reaching the goals of its Customer Service Vision. As IRS directs taxpayers to use the telephone more, it expects that the volume of calls will increase dramatically. To achieve the Customer Service Vision, the interactive telephone systems must be easy to use; otherwise, taxpayers may not use the systems to the degree IRS expects, thus jeopardizing (1) the \$104 million in net benefits IRS estimated the systems could provide and (2) the better service taxpayers need and deserve.

Taxpayers may find it difficult to use IRS' interactive telephone systems as currently designed because IRS' telephone routing system (1) requires taxpayers to remember too many menu options and (2) does not allow taxpayers to return to the main menu when they make a mistake or want to resolve other issues.

While IRS was conducting a cost-benefit analysis of ways to allow taxpayers to return to the main menu and considering how to overcome the problem of too many menu options, it was not planning to conduct a cost-benefit analysis of possible solutions to this problem. An analysis of the costs and benefits of using multiple toll-free numbers as well as other possible options, such as providing taxpayers with a written, detailed step-by-step description on how to use the interactive systems' menu options, would help IRS determine the most cost-beneficial solution to this problem.

IRS complied with Treasury's and IRS' security requirements for protecting taxpayer data when it designed the first three interactive systems. IRS also has developed a PIN process for use with future systems requiring more protection. However, IRS may have to make some modifications to the PIN process and the systems because they were designed before IRS defined the security requirements for its modernization program.

Since the interactive telephone systems are so critical to its Customer Service Vision, IRS owners need to be involved early in the design of the interactive systems. Early involvement can aid in reducing system modifications. We found that modifications were required in two of the three interactive systems and that IRS risked the need for modifications in the third interactive system because of confusion about who should own

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the systems and what such owners should do. We recommended steps IRS could take to avoid repetition of this situation in our October 1995 report, and IRS agreed to actions we believe should resolve the problems.

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## Recommendation

We recommend that the Commissioner of Internal Revenue direct the appropriate officials to conduct a cost-benefit analysis of the actions needed to overcome the problems caused by too many menu options, including using multiple toll-free numbers and providing taxpayers with a written, detailed step-by-step description on how to use the interactive systems' menu options.

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## Agency Comments and Our Evaluation

We requested comments on a draft of this report from the Commissioner of Internal Revenue or her designated representative. Responsible IRS officials, including the Chief, Customer Service Branch (Taxpayer Services); Director, Case Division (Information Systems); and Section Chief, TRIS Project Office, provided IRS' comments in a January 24, 1996, meeting. These comments were supplemented by a January 31, 1996, memorandum from the Chief of Taxpayer Services clarifying remarks made during our discussion. We have incorporated modifications in response to their comments in this report where appropriate. IRS officials agreed with our recommendation and said they would conduct a cost-benefit analysis of using multiple toll-free numbers by December 1997. While this analysis will address one option for overcoming the problem, we believe the analysis should also evaluate other alternatives. This would help IRS determine the most cost-beneficial solution to the problem.

IRS' written memorandum said that this year's 1040 forms and instructions booklet to taxpayers provides information on how to call IRS' automated telephone systems. The 1040 instructions explain to taxpayers who have a Touch-Tone telephone how to enter the automated telephone systems. It then provides an explanation about selecting certain topics as shown on the main menu line in figure 1. However, the 1040 instructions do not provide the detailed step-by-step guidance we believe is necessary for taxpayers to easily use the systems.

IRS officials said that in a pilot test of their telephone routing system conducted in the Cleveland District in 1993, most taxpayers were satisfied with the system. IRS officials also said that the customer satisfaction surveys conducted after the pilot on the VBD and Location interactive

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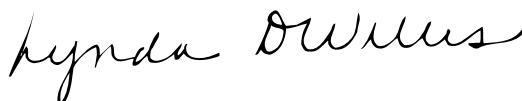
telephone systems show that most taxpayers found them easy to use. However, IRS officials recognize that some taxpayers may have difficulty with the telephone systems because of too many menu options and that design contractor guidelines call for no more than four menu options. IRS plans to do further tests of the telephone menu options and interactive telephone systems to determine customer needs and the ability of customers to use the systems easily. IRS also plans to conduct an evaluation of the menu options by December 1996.

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We are sending copies of this report to other congressional committees, the Secretary of the Treasury, the Commissioner of Internal Revenue, and other interested parties.

Major contributors to this report are listed in the appendix. If you or your staff have any questions concerning this report, please call me on (202) 512-9110.

Sincerely yours,

A handwritten signature in cursive script that reads "Lynda D. Willis".

Lynda D. Willis  
Director, Tax Policy and  
Administration Issues

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# Major Contributors to This Report

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