

**Oversight of the Business Systems  
Modernization Contractor Needs Improvement**

**January 2004**

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WASHINGTON, D.C. 20220

INSPECTOR GENERAL  
for TAX  
ADMINISTRATION

January 28, 2004

MEMORANDUM FOR CHIEF INFORMATION OFFICER

*Gordon C. Milbourn III*

FROM: Gordon C. Milbourn III  
Assistant Inspector General for Audit (Small Business and  
Corporate Programs)

SUBJECT: Final Audit Report - Oversight of the Business Systems  
Modernization Contractor Needs Improvement  
(Audit # 200320028)

This report presents the results of our review of the Internal Revenue Service's (IRS) oversight of the Business Systems Modernization (BSM) Contractor. The overall objective of our review was to determine whether the Business Systems Modernization Office (BSMO) implemented effective processes to ensure the BSM contractor, Computer Sciences Corporation (CSC),<sup>1</sup> addressed and improved the areas of concern identified by the IRS in April 2002.

In summary, the BSM program is progressing slowly and continues to face many challenges. Four major modernization projects<sup>2</sup> are experiencing significant cost increases and missing proposed completion dates. Over the past several years, we have provided the BSMO with recommendations and corrective actions that would strengthen controls and improve processes to help reduce some of the concerns.

In April 2002, the IRS issued a letter to the CSC that identified concerns and improvements that were needed in the BSM program. The first IRS concern involved the CSC's responsibility to ensure all essential business requirements<sup>3</sup> for the proposed new computer systems were defined by the CSC and its major subcontractors. The IRS emphasized that the requirements must be defined before the projects' development

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<sup>1</sup> The CSC was selected as the PRIME contractor to integrate the IRS' systems modernization efforts.

<sup>2</sup> The Infrastructure Shared Services, Customer Account Data Engine, Integrated Financial System, and e-Services projects.

<sup>3</sup> Business requirements refer to the essential functional and operational capabilities that should be provided by the proposed new computer systems and business processes.

phase<sup>4</sup> of work. The IRS also required written assurance from the CSC that its major subcontractors had identified all significant business requirements and performed their work with adequate diligence.

The second IRS concern involved the qualifications needed by key personnel from the CSC and its subcontractors. The qualifications were listed and key personnel were defined as project managers, team leaders, systems or project architects, lead analysts and designers, project planners, and cost estimators who have significant responsibility for technical or management decision making.

The first concern raised by the IRS has been addressed. The CSC timely notifies IRS management of proposed changes to the business requirements of the modernization projects. However, the projects are still experiencing a significant number of changes related to business requirements subsequent to the design phase.<sup>5</sup>

In addition, the IRS continues to approve the development of the new computer systems without obtaining written assurance from the CSC that the new computer systems will meet the needs of the IRS. The BSMO officials informed us that they did not believe obtaining written assurance from the CSC would solve any problems. For the Customer Account Data Engine (CADE) project, the IRS is currently spending additional funds to have the Software Engineering Institute at Carnegie Mellon University conduct an independent technical assessment.

The second concern, involving qualifications needed by key personnel from the CSC and its major subcontractors, has not been addressed. The BSMO has not established an effective process to ensure the CSC selects and assigns qualified key personnel to the BSM program. We found inconsistencies in how the IRS project managers approve key personnel proposed by the CSC. Several of the IRS project managers were unaware of the qualifications required by the IRS' April 2002 letter because the contents of the letter were never provided as guidance to the BSMO staff.

Concerns similar to the ones that necessitated the IRS' letter to the CSC have continued to occur in the BSM program. Examples include:

- The CADE project, originally estimated to cost \$50 million and scheduled to be released in January 2002, has been delayed. A new release date has not been set. CSC officials admitted that one of the reasons for the latest delay was because the staff from one of the CSC's major subcontractors did not have experience with large projects.

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<sup>4</sup> The development phase of a modernization project is that in which the computer system is built. The proposed new system is integrated with other IRS computer systems, tested, and piloted.

<sup>5</sup> The design phase of a modernization project is that in which the components of the new computer system are analyzed and designed. The significant business requirements for the new computer system are identified and documented.

- The e-Services project, a \$60 million project originally promised for June 2002, delayed its initial release until August 2003 at an estimated cost of over \$135 million.
- The Integrated Financial System project, originally estimated to cost \$36 million and scheduled to be released in October 2003, has been delayed. The new release date is scheduled for early 2004. A new cost estimate has not been set.

To more clearly define the CSC's responsibility to fully document the business requirements prior to beginning system development, we recommended that the Chief Information Officer (CIO) ensure future task orders include the requirement that the CSC provide written assurance that it and its subcontractors performed adequate diligence in defining all significant business requirements and that the proposed new systems will deliver all of the essential functional and operational capabilities needed by the systems' users. We also recommended that the CIO require the BSMO to conduct an analysis of future change requests<sup>6</sup> to determine whether the change should have been part of the contractor's normal requirements gathering.

To ensure all CSC and subcontractor personnel have the necessary qualifications and expertise, we recommended that the CIO require the BSMO to adopt the definition of key personnel from the IRS' April 2002 letter and incorporate all key personnel and their required qualifications into the task orders.<sup>7</sup> The CIO should also require the contractor to submit a plan to assure the IRS that all currently assigned key CSC and subcontractor personnel have the necessary expertise.

Management's Response: Management fully agreed with three of our recommendations, partially agreed with one recommendation, and disagreed with the final recommendation. IRS management plans to take the following actions: formally institute a checkpoint in the development process where detailed specifications will be established, require the CSC to formally give its written assurance at this checkpoint under fixed-price contracts for all systems development and implementation projects, include contracting language to hold the CSC accountable for any material requirements under the agreed contract price, and monitor accepted corrective actions on a monthly basis until completion.

IRS management also plans to standardize procedures to identify and review the qualifications of key CSC personnel and subcontractor personnel and establish an Education and Experience Matrix that identifies education requirements, experience, and responsibilities for key personnel. The Office of Procurement will develop template language to be included in each task order, excluding fixed-price contracts. Management's complete response to the draft report is included as Appendix IV.

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<sup>6</sup> A change request is a document initiated by the IRS or the CSC to propose a change to a computer system.

<sup>7</sup> Task orders are contracts the IRS signs with the CSC. The task orders describe the work to be performed by the CSC.

Office of Audit Comment: Management is implementing an alternate corrective action for our first recommendation, which requires written assurance from the CSC to perform adequate diligence in defining all significant business requirements. We agree with their corrective action because, under the new CIO directive, the CSC will provide its written assurance at a new checkpoint.

Management partially disagreed with our recommendation to review key personnel proposed by the CSC under fixed-price contracts. For fixed-priced contracts, management does not believe they should be in a position of vetting the PRIME team<sup>8</sup> and will not perform any special personnel reviews.

Management also disagreed with our recommendation that the CIO require the CSC to submit a plan assuring the IRS that all currently assigned key CSC and subcontractor personnel either (1) have the necessary expertise, (2) can acquire the necessary expertise, or (3) will be replaced in a reasonable time period. They stated it is not feasible or cost effective at this time, and key personnel should be retained unless their performance is unsatisfactory.

Based on the history of the BSM projects being delayed and over budget, we believe our recommendations could help avoid future project delays and cost increases for existing and future contracts, regardless of the type of contract, by assuring qualified personnel are assigned to projects. While we still believe our recommendations are worthwhile, we do not intend to elevate our disagreement concerning it to the Department of the Treasury for resolution.

Copies of this report are also being sent to the IRS managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions or Margaret E. Begg, Assistant Inspector General for Audit (Information Systems Programs), at (202) 622-8510.

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<sup>8</sup> The CSC heads an alliance, the PRIME Alliance, of leading technology companies to help modernize the IRS business and computer systems.

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### Background

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The Internal Revenue Service (IRS) is currently in the midst of a multiyear, multibillion dollar effort to modernize its information technology and business systems. The IRS Business Systems Modernization Office (BSMO) manages the modernization efforts and oversees the work of the PRIME contractor, Computer Sciences Corporation (CSC), which the IRS hired in December 1998. The CSC heads an alliance, the PRIME Alliance, of leading technology companies to help modernize the IRS business and computer systems.

The Business Systems Modernization (BSM) program continues to face many challenges, such as continued project cost increases and deployment delays. We previously reported areas of concern and recommended actions that would enable the IRS to strengthen its oversight of the PRIME contractor. For example, in a previous report<sup>1</sup> on the use of performance-based contracting in the BSMO, we discussed how performance standards often focused on the production of documentation rather than the development of the business systems. We reported that the plans for monitoring contractor performance were subjective and not always consistent among projects and that the use of recommended firm fixed-price task orders<sup>2</sup> had decreased. We recommended improvements in the use of performance-based contracting to address these issues.

In another report,<sup>3</sup> we discussed how significant changes to the e-Services project's business requirements<sup>4</sup> and setbacks in other development efforts resulted in increased costs and

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<sup>1</sup> *Additional Improvements Are Needed in the Application of Performance-Based Contracting to Business Systems Modernization Projects* (Reference Number 2002-20-170, dated September 2002).

<sup>2</sup> Task orders are contracts the IRS writes with the CSC. The task orders describe the work to be performed by the CSC. A firm fixed-price task order sets a price that is not subject to any adjustment because of cost overruns incurred by the contractor.

<sup>3</sup> *Improvements Are Needed in the Management of the e-Services Project to Enable Timely Progress Towards Future Goals* (Reference Number 2001-20-144, dated September 2001).

<sup>4</sup> Business requirements refer to essential functional and operational capabilities that should be provided by the proposed new computer systems and business processes.

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delays in completing the project. The IRS estimated, in April 2000, that the project would require \$3.8 million to complete its design phase by September 2000. However, by March 2001, the estimated costs to complete this phase increased to over \$17 million and the expected date of completion had been delayed until June 2001. Much of this increased cost and delay in project development was due to significant changes to the project's requirements. Therefore, we recommended the BSMO ensure the e-Services project team identify, evaluate, and monitor all significant dependencies on the other modernization projects.

The IRS has also identified concerns with the results of the BSM program. In April 2002, the IRS issued a letter to the CSC addressing significant concerns that were being encountered in the BSM program and the CSC's responsibilities in relation to those concerns. The IRS presented two main issues and the corrective actions needed to ensure future success.

The first concern the IRS identified involved the CSC's responsibility to ensure all essential business requirements were defined by the CSC and its major subcontractors. The letter stated:

*When CSC proposes that the IRS approve [the] exit of milestone 3<sup>5</sup> for any project, we will require written assurance from CSC that its major subcontractors have done adequate diligence concerning the relevant scope of IRS operations (i.e., operations directly affected by the project) to assure that all essential functional and operational capabilities will be provided by the proposed new systems and business processes. These capabilities should be documented in the form of the business*

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<sup>5</sup> Milestone 3 is the term used to refer to the design phase of the IRS system development life cycle methodology. This is the work phase in which the new computer system and its requirements are analyzed, designed, and documented.



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*requirements that are called for in the life cycle methodology<sup>6</sup> at the exit of milestone 3.*

The life cycle methodology the IRS adopted presumes all significant business requirements are defined before a BSM project completes the design phase at milestone 3. Defining these business requirements is the CSC's responsibility. The IRS required that all necessary changes to business requirements that arise after a project exits milestone 3 be called to the attention of IRS management on a timely basis.

The second concern raised by the IRS involved the qualifications needed by key personnel from the PRIME Alliance. The IRS required all key CSC and subcontractor personnel to have three capabilities:

1. Demonstrated track record of successful projects that include business process reengineering and business systems implementation in financial services organizations in the private and/or governmental sectors.
2. Demonstrated expertise in the more specific business functional areas covered by the project, such as collections or customer service.
3. Either a track record of successful work with the IRS that demonstrates an in-depth understanding of IRS operations and the IRS enterprise architecture, or a clear plan to acquire such expertise in a manner which is not at the expense of the IRS.

The IRS defined key personnel as persons such as project managers, team leaders, systems or project architects, lead analysts and designers, project planners, and cost estimators who have significant responsibility for technical or management decision making.

The IRS requested the CSC to submit a plan to assure that all currently assigned key personnel either (1) have the necessary expertise in the above three areas, (2) can rapidly

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<sup>6</sup> Life cycle methodology refers to the processes and procedures the modernization program follows to design, develop, and deploy the new computer systems.

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### The Internal Revenue Service Is Timely Notified of Changes to Business Requirements

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acquire that expertise at the CSC's expense, or (3) will be replaced in a reasonable time period with individuals who have the necessary expertise.

Our audit was conducted in the BSMO facilities in Lanham, Maryland, between May and September 2003 in accordance with *Government Auditing Standards*. Detailed information on our audit objective, scope, and methodology is presented in Appendix I. Major contributors to the report are listed in Appendix II.

The IRS required the CSC to timely notify IRS management of any significant changes to business requirements that arise after a project exits milestone 3 so that informed decisions could be made at the appropriate level. IRS management could then decide whether to modify the new computer system being built or incorporate the newly identified business requirement(s) into a subsequent release<sup>7</sup> of the project.

This requirement has been met. IRS management is timely notified of proposed changes to the business requirements of modernization projects. The BSMO project managers of the four projects we reviewed<sup>8</sup> are adequately involved with the ongoing development and deployment activities and are fully aware of changes to the projects' business requirements.

Although the concern of the IRS receiving timely notification of changes to business requirements has been addressed, the projects are still experiencing a significant number of changes after they complete milestone 3, referred to as the design phase. As the IRS emphasized in its April 2002 letter, the CSC is responsible for identifying all significant business requirements for the projects prior to the exit of milestone 3.

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<sup>7</sup> Modernization projects usually have multiple releases in which new computer systems are updated with additional features.

<sup>8</sup> We interviewed the IRS project directors for the Infrastructure Shared Services, Customer Account Data Engine, Integrated Financial System, and e-Services projects.

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### **The Internal Revenue Service Did Not Obtain Written Assurance That New Computer Systems Will Meet Business Requirements**

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Changes to the requirements of computer systems that have already entered the development phase<sup>9</sup> have contributed to delays in completing the projects. The extent of these changes and the delays experienced by the modernization projects are discussed in the next section of this report.

As stated in the Background section of this report, we previously reported that significant changes to a project's requirements resulted in increased costs and delays in completing the new computer system. The IRS also recognized this concern.

To help alleviate the concern, the IRS informed the CSC that the IRS would require written assurance from the CSC that its major subcontractors had conducted their work with adequate diligence. The IRS wanted written assurance from the CSC that major subcontractors considered all IRS operations affected by the proposed new systems and that all essential capabilities would be provided by the new systems. These capabilities should be documented in the form of the business requirements that are called for in the Enterprise Life Cycle (ELC) methodology<sup>10</sup> when the system exits the design phase and begins the development phase.

The ELC presumes all significant business requirements have been defined in a Systems Requirements Report (SRR) before a project moves into development. The SRR is a formal contract deliverable due at the end of the design phase.

The Filing and Payment Compliance and the Integrated Financial System (IFS) projects both received approval to exit the design phase after the IRS issued its April 2002 letter to the CSC. However, the BSMO did not obtain written assurance from the CSC that all significant business requirements were defined for these two projects and that

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<sup>9</sup> The development phase of a modernization project is that in which the computer system is built. The proposed new system is integrated with other IRS computer systems, tested, and piloted.

<sup>10</sup> The IRS and the PRIME contractor follow the ELC methodology to design and develop the new computer systems. The ELC contains the processes and procedures that should be followed.

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the new systems would deliver all of the essential functional and operational capabilities needed by the systems' users.

Key BSMO officials informed us they did not believe obtaining written assurance from the CSC would solve any problems or reduce the volume of requirements changes. They stated that although a complete analysis of change requests<sup>11</sup> has not been performed, a large majority of the changes to requirements are unavoidable due to changes in the tax laws. While this may be true, we believe that written assurance would help reduce the excessive number of changes to the business requirements. Changes to tax laws do add a degree of complexity to the design of computer systems; however, tax law changes are not unforeseeable. Computer systems should be designed to accommodate these variables.

The Filing and Payment Compliance project was postponed in December 2002 shortly after completing its design phase. Therefore, there have been no changes to the business requirements for this project. However, the IFS project, originally estimated to cost \$36 million and scheduled to be released in October 2003, has been delayed. The new release date is April 2004. A new cost estimate has not been set. The IFS project is currently experiencing changes to its originally proposed requirements.

Table 1 presents the effect of extensive changes to the business requirements of four key modernization projects that completed milestone 3 and began the development phase.

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<sup>11</sup> A change request is a document initiated by the IRS or the CSC to propose a change to a computer system.

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**Table 1: Project Change Requests as of July 7, 2003**

<b>BSM Projects</b>	<b>Development Start Date</b>	<b>Approved Change Requests</b>	<b>Completion Status</b>
Security and Technology Infrastructure Release (STIR)	1/2001	48	Delayed 6 months, 5/2002 - 11/2002
Customer Account Data Engine (CADE)	6/2001	38	Delayed since 1/2002. No release date has been set.
IFS	2/2003	7	Delayed 7 months, 10/2003 - 4/2004
e-Services	7/2001	56	Delayed 14 months, 6/2002 - 8/2003

*Sources: Data summarized from the IRS Change Request Tracking system and our audit results.*

For the CADE project, the IRS is currently spending additional funds to have the Software Engineering Institute at Carnegie Mellon University conduct an independent technical assessment.

The e-Services project, a \$60 million project originally promised in June 2002, was delayed until August 2003 at an estimated cost of over \$135 million.

**Recommendations**

To more clearly define the CSC’s responsibility to fully document the business requirements prior to beginning system development, we recommend that the Chief Information Officer (CIO):

1. Ensure future task orders include the requirement that the CSC provide written assurance that it and its major subcontractors performed adequate diligence in defining all significant business requirements and that the proposed new systems will deliver all of the essential

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functional and operational capabilities needed by the systems' users.

Management's Response: The CIO has issued a directive that requires fixed-price contracting for all systems development and implementation projects. Fixed-price contracting requires mutually agreed detailed specifications, which will be addressed at a new checkpoint. The CSC will be required to provide its written assurance at this checkpoint.

Office of Audit Comment: We agree with management's alternate corrective actions because the new CIO directive will hold the CSC accountable for performing adequate diligence in defining all significant business requirements by providing its written assurance at the new checkpoint.

2. Require the BSMO to conduct an analysis of future change requests to determine whether the change should have been part of the contractor's normal requirements gathering. Task orders to define business requirements should be written to hold the CSC responsible for making such changes at no additional cost to the IRS.

Management's Response: Management agreed to include contracting language to the effect that failure to identify any material requirement is the CSC's responsibility and any work to include such a requirement is included under the agreed price.

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### **The Business Systems Modernization Office Has Not Implemented an Effective Process to Ensure Qualified Contractors Work in the Modernization Program**

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The BSMO has not established an effective process to ensure the CSC selects and assigns qualified key personnel to the modernization program. We found inconsistencies in how the IRS project managers approve key personnel proposed by the CSC. Some IRS project managers interview personnel that are proposed by the CSC, while other IRS officials do not believe they have this authority. Several of the IRS project managers were unaware of the three qualifications outlined by the IRS' April 2002 letter. In fact, some IRS officials had never seen the qualification requirements prior to our audit.

The IRS project staffs are not consistently requiring key personnel to be listed on the task orders because the BSMO has not issued clear guidance to its project managers or

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directors regarding who should be considered a key person. Not having guidance on how to define a key person and what qualifications are required has resulted in inconsistencies among the projects' task orders. For example, the current task order for the Infrastructure Shared Services (ISS) project lists 12 individuals as key personnel, while the task order for the e-Services project lists only 5 key personnel. On both projects, several additional individuals should be listed as key personnel, if the definition provided by the IRS is used. By listing these individuals in the contract, the CSC must provide resumés to indicate their qualifications, and the IRS Contracting Officer is authorized to approve or disapprove of any replacement of or substitution for these individuals.

We also noted the three qualifications were not incorporated into the current task orders for the four projects<sup>12</sup> we reviewed. When we inquired as to why these qualification requirements were not included in the task orders, one project team informed us they had never seen the qualification requirements prior to our audit. They also informed us the qualification requirements were not included in the Program Management Plan (PMP).<sup>13</sup> Our review of the PMP and interviews with other BSMO officials confirmed this explanation. The BSMO did not attempt to improve or establish processes at the project level to ensure key personnel from the PRIME Alliance met the three qualifications required by the IRS.

BSMO officials informed us they did not implement a process to ensure key personnel from the PRIME Alliance met the qualifications because they believed the qualifications and experience of key personnel had improved. They also informed us that selecting and assigning qualified personnel is the CSC's responsibility. The BSMO believed no formal changes were needed

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<sup>12</sup> We interviewed the IRS Project Managers or Directors of the ISS (the STIR is a sub-project of the ISS), CADE, IFS, and e-Services projects.

<sup>13</sup> The PRIME Program Management Plan, dated December 13, 2002, presents the technical approach and management processes that the CSC PRIME Alliance uses to work in the modernization program.

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regarding how IRS project managers approved key personnel assigned to their projects.

The CSC provided us with an Action Plan, which reports it completed an assessment of all key PRIME Alliance personnel currently assigned to the modernization program. The Action Plan indicates the CSC completed an assessment of the credentials of the key PRIME Alliance personnel, and, as appropriate, training plans were developed to increase the expertise of the key personnel. We requested the assessment or any documentation that would verify this critical action was taken. However, the CSC did not provide this documentation for our review.

To determine whether key personnel from the PRIME Alliance met the qualifications and expertise requirements, we requested 83 resumés from the IRS project managers on the 4 projects we reviewed. However, the IRS does not always retain these documents. Therefore, we were able to obtain only 13 of the resumés, and our review of this small sample was inconclusive. We also requested resumés from the CSC, but the CSC did not provide these documents.

The IRS National Background Investigation Center provided academic and employment histories for many key individuals from the PRIME Alliance. We reviewed this documentation for the same 83 key personnel working in the IRS modernization program at the project and program levels.<sup>14</sup> Although we were unable to determine whether the key personnel met the specific qualification requirements listed in the IRS' letter, we found two managers who did not have a successful track record as a project manager.

The effect of not having qualified personnel contributed to the latest delay in the CADE project. The rollout of the new CADE system was originally estimated to cost \$50 million and be released in January 2002. The project was delayed, and in July 2003 the IRS announced that the first release of the CADE system would not occur on August 31, 2003, as

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<sup>14</sup> Program level personnel include individuals from the CSC whose responsibilities cut across multiple projects, such as the head of Quality Management or an executive in charge of Transition and Strategic Planning.



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planned. A new release date has not yet been set. The PRIME contractor admitted the subcontractor personnel responsible for developing the new system did not have experience with large projects. The PRIME contractor also admitted that it did not provide adequate oversight of the subcontractor to ensure the subcontractor was on track.

The candor demonstrated by the CSC in this case was appreciated by the IRS. However, the concern of not having qualified experienced personnel from the PRIME Alliance has been ongoing for over a year. The IRS' selection of the CSC in December 1998 was intended to bring commercial best practices and technical, consulting, and managerial expertise to the program. The success of the BSM program depends on obtaining qualified, experienced personnel from the CSC and its PRIME Alliance subcontractors.

Management Actions: The BSMO and the CSC have been working to improve the qualifications of PRIME contractor staff at the highest levels of the program. Several individuals were hired by the PRIME contractor and assigned to the IRS modernization program, after BSMO officials interviewed them and approved their qualifications.

### Recommendations

To ensure the CSC is selecting and assigning qualified key personnel to the BSM program, we recommend the CIO require:

3. The BSMO to establish procedures to ensure a formal, consistent review of the qualifications of key CSC and subcontractor personnel that are selected and proposed by the CSC to work in the IRS modernization program. These procedures should include guidance on how to define those individuals from the PRIME Alliance who should be classified as key personnel at both the program and project levels. The definition of a key person provided in the IRS' April 2002 letter to the CSC should be adopted by the BSMO.

Management's Response: Management agreed to establish standard and uniform procedures across the program to identify key personnel and to ensure consistent review of the

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qualifications of key CSC and subcontractor personnel who are proposed by the CSC to work in any of the key roles. However, for fixed-priced contracts, management does not believe they should be in a position of vetting the PRIME team and will not perform any special personnel reviews.

Office of Audit Comment: We continue to believe the standard and uniform procedures for reviewing key personnel proposed by the CSC should be implemented at the program level for all projects regardless of the type of contract. Delays in fixed-price contracts (e.g., the CADE) can have an adverse effect on the BSM program even though costs may be capped on specific items. The BSMO could help prevent these delays by assuring qualified personnel are assigned to projects.

4. The BSMO to incorporate all key personnel and the three qualifications required in the IRS' April 2002 letter into the key personnel section of the task orders.

Management's Response: Management agreed to work with the Office of Procurement to establish an Education and Experience Matrix that identifies and provides a correlation of the minimum education, experience (in years), and responsibilities of the labor categories identified as key personnel. The Office of Procurement will add this language in each task order, excluding fixed-price contracts.

5. The PRIME contractor to submit a plan to assure the IRS that all currently assigned key CSC and subcontractor personnel at the program and project levels either (1) have the necessary expertise in the three areas required by the IRS' April 2002 letter, (2) can rapidly acquire that expertise at the CSC's expense, or (3) will be replaced in a reasonable time period with individuals who have the necessary expertise.

Management's Response: Management disagreed with our recommendation. They stated that it was not feasible or cost effective at this time.

Office of Audit Comment: Based on the history of BSMO projects being delayed and over budget, we believe the BSMO should assure qualified personnel are assigned to projects to prevent future project delays and cost increases.

**Detailed Objective, Scope, and Methodology**

The objective of this review was to determine whether the Business Systems Modernization Office (BSMO) implemented effective processes to ensure the Business Systems Modernization (BSM) contractor, Computer Sciences Corporation (CSC),<sup>1</sup> addressed and improved the areas of concern identified by the Internal Revenue Service (IRS) in April 2002.

To accomplish this objective, we:

- I. Determined how the BSMO gained assurance from the CSC that all functional and operational requirements and/or capabilities had been defined at a modernization project's milestone 3<sup>2</sup> exit. (Only two projects managed by the CSC have exited milestone 3 since the IRS issued its letter of concern to the CSC in April 2002. The Filing and Payment Compliance and Integrated Financial System (IFS) projects were included in the scope of this test.)
- II. Determined what process the BSMO followed to ensure changes to the business requirements, identified subsequent to a project's milestone 3, were timely reported to IRS management. (Audit tests II, III, and IV were focused around four main projects because significant work was conducted on these projects subsequent to their milestone 3 exit. These four projects were the Customer Account Data Engine, e-Services, IFS, and Security and Technology Infrastructure Release (STIR) projects. The STIR is a subproject of the Infrastructure Shared Services (ISS) project.)
- III. For modernization projects requiring the use of subcontractors that are part of the CSC's PRIME Alliance,<sup>3</sup> determined how the BSMO ensured the CSC selected and assigned subcontractors from the PRIME Alliance that have:
  - A track record of working on successful projects that include business process reengineering and business systems implementation in financial services organizations in the private and/or public sector.

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<sup>1</sup> The CSC was selected as the PRIME contractor to integrate the Internal Revenue Service's systems modernization efforts.

<sup>2</sup> Milestone 3 is the term used to refer to the design phase of the IRS systems development life cycle methodology. This is the work phase in which the new computer system and its requirements are analyzed, designed, and documented.

<sup>3</sup> The CSC heads an alliance, the PRIME Alliance, of leading technology companies to help modernize the IRS business and computer systems.

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- Expertise in the more specific business functional areas covered by the project, such as collection or customer service.
  - Either a track record of successful work with the IRS that demonstrates an in-depth understanding of IRS operations and the IRS enterprise architecture, or a clear plan to acquire such expertise in a manner that is not at the expense of the IRS.
- IV. Determined how the BSMO ensured CSC personnel assigned at the program or project level met the above three experience and expertise requirements. (We requested 83 resumés but received only 13 from the IRS. We reviewed academic and employment histories at the IRS National Background Investigation Center for the 83 key PRIME Alliance personnel that we identified.)
- V. Determined whether the BSMO obtained a written plan from the CSC to assure the IRS that all key CSC personnel assigned to the IRS modernization program, prior to the IRS' April 2002 letter, had the requested qualifications.

**Oversight of the Business Systems  
Modernization Contractor Needs Improvement**

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**Appendix II**

**Major Contributors to This Report**

Margaret E. Begg, Assistant Inspector General for Audit (Information Systems Programs)  
Gary V. Hinkle, Director  
Scott A. Macfarlane, Director  
Tammy Whitcomb, Audit Manager  
Cari Fogle, Senior Auditor  
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Allen Gray, Senior Auditor  
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**Oversight of the Business Systems  
Modernization Contractor Needs Improvement**

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**Appendix III**

**Report Distribution List**

Commissioner C  
Office of the Commissioner – Attn: Chief of Staff C  
Deputy Commissioner for Operations Support OS  
Associate Commissioner, Business Systems Modernization OS:CIO:B  
Chief, Information Technology Services OS:CIO:I  
Deputy Associate Commissioner, Business Integration OS:CIO:B:BI  
Deputy Associate Commissioner, Program Management OS:CIO:B:PM  
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Director, Tax Administration Modernization OS:CIO:B:PM:TAM  
Acting Director, Portfolio Management Division OS:CIO:R:PM  
Chief Counsel CC  
National Taxpayer Advocate TA  
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Audit Liaisons:  
    Associate Commissioner, Business Systems Modernization OS:CIO:B  
    Chief, Information Technology Services OS:CIO:I

Oversight of the Business Systems  
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Appendix IV

Management's Response to the Draft Report



CHIEF INFORMATION OFFICER

DEPARTMENT OF THE TREASURY  
INTERNAL REVENUE SERVICE  
WASHINGTON, D.C. 20224

January 8, 2004

RECEIVED  
JAN 08 2004

MEMORANDUM FOR TREASURY INSPECTOR GENERAL FOR TAX  
ADMINISTRATION

FROM: W. Todd Grams *WTG*  
Chief Information Officer

SUBJECT: Draft Audit Report – Oversight of the Business Systems  
Modernization Contractor Needs Improvement  
(Audit # 200320028)

Thank you for the opportunity to review the subject draft audit report. We appreciated the opportunity to review and discuss an earlier draft of this report with your audit team.

As noted in your report, we did not fully implement some of the recommendations in the letter that Commissioner Rossotti sent to Mr. Honeycutt of Computer Sciences Corporation in April 2002. Nevertheless, over the past couple of years, we have delivered several projects that have improved and expanded service to taxpayers and resulted in significant business efficiencies (Attachment I).

We responded to your specific recommendations in Attachment II. We generally accept your recommendations and in many cases, actions have already been taken to address the recommendations in your report.

If you have any questions, please contact me at (202) 622-6800, or Fred Forman, Associate Commissioner for Business Systems Modernization, at (202) 622-2475.

Attachments

## Oversight of the Business Systems Modernization Contractor Needs Improvement

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### Attachment I

#### I. MODERNIZATION PROJECTS WITH DIRECT BENEFITS TO TAXPAYERS

##### **CC01 - Customer Communications 2001**

*Improves communications infrastructure, including telephone call management, calls routing, and customer self-service applications*

- 68,000 calls in one three-minute period during initial week (coincided with start of Advanced Tax Refund of 2001)
- 50% reduction in waiting time for assistor to answer call
- 50% reduction in abandoned calls
- Number of Spanish calls doubled
- More accurate pre-routing of calls

##### **IRFOF - Internet Refund Fact of Filing (Where's My Refund?)**

*Improves customer self-service by providing instant refund status information and instructions for resolving refund problems to taxpayers with Internet access*

- 17.9 million inquiries in 2003
- 32% of all real time IRS assistance calls come from IRFoF
- Modest reduction of telecommunications costs attributed to IRFoF (about \$250,000)
- Every 1,000 IRFoF contact eliminates 1.5-2.0 refund assistance calls

##### **Advanced Child Care Tax Credit (ACTC)**

*Modifies the Internet Refund application to provide taxpayers with Advance Child Tax Credit refund status on the Internet*

- 15.5 million inquiries to date
- Peak date 1.1 million interactions

##### **Internet EIN**

*Allows businesses and taxpayers to apply for and receive employer identification numbers over the Internet*

- Immediate issuance of an employer identification number for small businesses
- 452,838 internet EIN applications received to date

##### **E-Services**

*Creates a web portal and value adding e-services to promote the goal of conducting most of the IRS's transactions with taxpayers and tax practitioners electronically*

- Over 25,000 PTIN applications (W7P) entered to date; data entry productivity doubled
- Over 16,400 E-File applications to the Third-Party-Data-Store (TPDS) entered to date
- Approximately 3,750 Registered (and confirmed) User Portal (RUP) participants to date



## Oversight of the Business Systems Modernization Contractor Needs Improvement

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### **CRM-Exam**

*Provides a commercial-off-the-shelf software solution to IRS Revenue Agents to allow them to accurately compute complex corporate transactions*

- Delivered to 4,000 LMSB revenue agents

## **II. USE OF TECHNOLOGY TO IMPROVE IRS INTERNAL MANAGEMENT OF RESOURCES**

### **HR Connect**

*Delivers an enterprise solution to allow IRS employees to access and manage their human resources information online*

- Employee self-service tool for many HR functions (personal action requests, position management, internal recruiting, etc.)
- 73,000 internal users

**Oversight of the Business Systems  
Modernization Contractor Needs Improvement**

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**Attachment II**

Draft Audit Report – The Internal Revenue Service Needs To Improve Its  
Oversight of the Business Systems Modernization Contractor  
(Audit # 200320028)

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**IN ORDER TO MORE CLEARLY DEFINE THE RESPONSIBILITY OF CSC TO FULLY DOCUMENT THE REQUIREMENTS PRIOR TO BEGINNING SYSTEM DEVELOPMENT, WE RECOMMEND THAT THE CIO:**

**IDENTITY OF RECOMMENDATION 1:** Ensure future task orders include the requirement that the CSC provide written assurance that it and its major subcontractors performed adequate diligence in defining all significant business requirements and that the proposed new systems will deliver all of the essential functional and operational capabilities needed by the systems' users.

**CORRECTIVE ACTION 1: Agree with this recommendation.** However, we will implement this recommendation in a different way than envisioned in the April 2002 letter. The CIO has issued a directive that requires fixed-price contracting for all systems development and implementation projects. Fixed-price contracting requires mutually agreed detailed specifications which are not created until part way toward Milestone 4. To address this we are establishing a new formal checkpoint, Milestone (MS) 4A, at which point these specifications will be developed. We will require CSC to provide their written assurance at this checkpoint.

**IMPLEMENTATION DATE:**

**COMPLETED:** N/A

**PROPOSED:** June 30, 2004

**RESPONSIBLE OFFICIAL:**

**Associate Commissioner for Program  
Management**

**CORRECTIVE ACTION MONITORING PLAN:** We enter accepted corrective actions into the Item Tracking, Reporting and Control System (ITRAC). These corrective actions are monitored on a monthly basis until completion.

**Oversight of the Business Systems  
Modernization Contractor Needs Improvement**

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**Attachment II**

Draft Audit Report – The Internal Revenue Service Needs To Improve Its Oversight of the Business Systems Modernization Contractor (Audit # 200320028)

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**IDENTITY OF RECOMMENDATION 2:** Require the BSMO to conduct an analysis of future change requests to determine whether the change should have been part of the contractor's normal requirements gathering. Task orders to define business requirements should be written to hold CSC responsible for making such changes at no additional cost to the IRS.

**CORRECTIVE ACTION 2: Agree with this recommendation.** We will link this recommendation to our approach to Recommendation 1. We will include contracting language to the effect that failure to identify any material requirement is CSC's responsibility and any work to include such a requirement is included under the agreed price.

**IMPLEMENTATION DATE:**

**COMPLETED:** N/A

**PROPOSED:** June 30, 2004

**RESPONSIBLE OFFICIAL:** Associate Commissioner for Program Management

**CORRECTIVE ACTION MONITORING PLAN:** See monitoring plan under Recommendation 1.

**TO ENSURE THE CSC IS SELECTING AND ASSIGNING QUALIFIED KEY PERSONNEL TO THE BSM PROGRAM, WE RECOMMEND THE CHIEF INFORMATION OFFICER (CIO) REQUIRE:**

**IDENTITY OF RECOMMENDATION 3:** The BSMO to establish procedures to ensure a formal, consistent review of the qualifications of key CSC and subcontractor personnel that are selected and proposed by the CSC to work in the IRS modernization program. These procedures should include guidance on how to define those individuals from the PRIME Alliance who should be classified as key personnel at both the program and project levels. The definition of a key person provided in the IRS' April 2002 letter to the CSC should be adopted by the BSMO.



