



COMMISSIONER


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

February 10, 2000

OFFICE OF TREASURY  
INSPECTOR GENERAL  
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FOR TAX ADMINISTRATION

MEMORANDUM FOR TREASURY INSPECTOR GENERAL  
FOR TAX ADMINISTRATION

FROM: Charles O. Rossotti   
Commissioner of Internal Revenue

SUBJECT: Response to Draft Audit Report – The Internal Revenue Service  
Needs to Significantly Improve the Inventory Used to Monitor Its  
Year 2000 Conversion Efforts, dated November 5, 1999

Thank you for the opportunity to review and comment on your draft report and recommendations concerning the remaining work needed to address the Year 2000 (Y2K) issues regarding the telecommunications equipment, mid-range computer commercial software, and network operating system inventories.

The Year 2000 (Y2K) Program at the IRS has been a top priority for the agency, as well as a personal priority for me. I share the concerns in your report. We are actively managing the resolution of these concerns through the Property Management Material Weakness at the Financial and Management Controls Executive Steering Committee (FMC ESC).

IRS has made many efforts to improve the quality of the information in the corporate inventory system. We continue to address the problems that remain. As a result, I have given the Chief Information Officer full responsibility for the accuracy of IRS' information technology inventory both for the near term to manage Y2K progress, and for the long term to address this resource management issue. More information about our efforts to improve the technology inventory is included in the attached response.

If you have any questions, please call Paul Cosgrave, Chief Information Officer, at (202) 622-6800, or have a member of your staff call David Junkins, Director, Office of Information Resources Management, at (202) 283-4060, or Barry Herrmann, Chief, Office of IS Program Oversight and Management Controls, at (202) 283-7698, as appropriate.

Attachment

cc: Associate Inspector General, Information Systems Program  
Director Legislative Affairs Division

**Management Response to Draft Audit Report - The Internal Revenue Service Needs to Significantly Improve the Inventory Used to Monitor Its Year 2000 Conversion Efforts**

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**Recommendation #1**

Due to the shortness of time remaining to complete corrective action prior to the Y2K deadline, the Chief Information Officer (CIO) should immediately develop and implement standard inventory processes and procedures to be followed by systems managers and administrators at the field offices to ensure a comprehensive inventory.

**Assessment of Cause**

Written standard inventory processes and procedures for conducting comprehensive inventory reviews either did not exist or were inconsistent.

**Corrective Action #1**

Information Systems (IS) developed the Wall-to-Wall Inventory Reconciliation Process Standard Operating Procedures to ensure Y2K compliance. IS formed dedicated teams to supplement the inventory staff of major IRS sites to implement the standard operating procedures.

**Implementation Date of Corrective Action #1**

**Completed:** October 1, 1999

**Proposed:**

Developed and published the reporting format for the Wall-to-Wall Inventory Reconciliation Process.

**Responsible Officials for Corrective Action #1**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #1A Monitoring Plan**

Not applicable.

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**Recommendation #2**

Due to the shortness of time remaining to complete corrective action prior to the Y2K deadline, the Telecommunications Division should immediately develop a reporting format to be completed by telecommunications technicians at IRS sites that will facilitate reconciliation with the INOMS database. The Telecommunications Division should work directly with local inventory specialists to ensure that data is entered into INOMS.

**Assessment of Cause**

A process for identifying and reporting discrepancies found on the INOMS database to the individual sites for their resolution did not exist.

**Corrective Action #2A (Short Term Y2K)**

The Wall-to-Wall Inventory Reconciliation Process Standard Operating Procedures, dated September 16, 1999, outline the process for ensuring the accuracy of the INOMS database. The scope of the Wall-to-Wall inventory encompasses telecommunication hardware and COTS software and involves three actions which are documented in the procedures:

- Inventory teams will physically reconcile the INOMS database with inventory found or not found on the floor.
- Inventory teams will update INOMS database records to reflect the results of the physical inspection and software interrogation.
- Inventory teams will certify the results of the inventory and provide a list of unreconciled inventory to the site. The site will then have 30 days to do further research and submit a report to close out the inventory

Additional guidelines and procedures, in the new Single Point Automated Data Processing (ADP) Property Management Guidelines, establish accountability in receipt, distribution, excessing, and disposal of ADP hardware, software, and telecommunications inventory throughout the various IRS locations.

**Implementation Date of Corrective Action #2A**

**Completed:** October 1, 1999  
Developed and published the reporting format for the Wall-to-Wall Inventory Reconciliation Process.

**Proposed:**

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**Responsible Officials for Corrective Action #2A**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Telecommunications Division IS:TL

**Corrective Action #2A Monitoring Plan**

Not applicable.

**Corrective Action #2B (Long Term)**

Guidelines and procedures in the new Single Point Automated Data Processing (ADP) Property Management Guidelines will establish clear accountability in receipt, distribution, excessing, and disposal of ADP hardware, software, and telecommunications inventory throughout the various IRS locations. This new SPIF document will outline what ADP support groups do when they receive ADP property. ADP support groups receive all new and transferred ADP property with the accompanying paperwork. The Commissioner signed a policy memo November 12, 1999 designating the Chief Information Officer (CIO) as the responsible official for management and control of ADP property. IS executives are addressing resource issues for the new process.

**Implementation Date of Corrective Action #2B**

**Completed**

**Proposed:** April 1, 2001  
Publish and fully implement Single Point Inventory (SPIF) procedures.

**Responsible Officials for Corrective Action #2B**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #2B Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until it is complete.

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**Recommendation #3**

The Chief Information Officer should conduct site visits at critical IRS installations to perform independent assessments of the inventory to ensure INOMS accuracy and completeness for Y2K readiness.

**Assessment of Cause**

IS needed to confirm the accuracy and completeness of the INOMS database.

**Corrective Action #3**

IS initiated the Wall-to-Wall inventory on August 2, 1999, at all Service and Computing Centers, and completed these inventories on October 15, 1999. Functions checked during these inventories included ten customer service call centers and six Automated Collection System (ACS) call centers located in the service centers. Wall-to-Wall inventory at the eleven major district offices, three forms distribution centers and the National Office began on October 18, 1999.

**Implementation Date of Corrective Action #3**

**Completed:**

**Proposed:** March 1, 2000

Complete reconciliation of the Wall-to-Wall inventory and the INOMS database for the remaining critical IRS installations.

**Responsible Officials for Corrective Action #3**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #3 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings until it is complete.

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**Recommendation #4**

The Chief Information Officer should analyze the current inventory data in the INOMS database and ensure that the inventory does not include discarded/removed equipment.

**Assessment of Cause**

Discarded and unused equipment included in the INOMS database needed to be removed from the inventory.

**Corrective Action #4**

Wall-to-Wall inventory teams are currently conducting inventories and reconciling INOMS inventory data. The Wall-to-Wall and certification process addresses discarded and removed equipment.

**Implementation Date of Corrective Action #4**

**Completed:**

**Proposed:** March 1, 2000

Complete reconciliation of the Wall-to-Wall inventory and the INOMS database for the remaining critical IRS installations.

**Responsible Officials for Corrective Action #4**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #4 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings until it is complete.

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**Recommendation #5**

The Chief Information Officer should assure that the current ADP acquisition procedures are followed:

- Barcode labels should be applied as soon as the ADP property arrives on site.
- The equipment should be entered in the INOMS Database within 10 days, per IRS policy.

**Assessment of Cause**

Some functions do not use INOMS for property management because of the uncertainty of the accuracy and completeness of the INOMS database.

**Corrective Action #5**

IS will appoint an Automated Data Processing (ADP) Property Manager for each site with staff reporting to that manager. The ADP Property Manager will be responsible for ensuring someone applies barcode labels as soon as ADP property arrives on site and enters the equipment in the INOMS Database within 10 days as outlined in the Single Point Automated Data Processing (ADP) Property Management Guidelines.

**Implementation Date of Corrective Action #5**

**Completed:**

**Proposed:** April 1, 2001  
Complete Implementation of Single Point Inventory Function (SPIF) procedures for ADP equipment accountability

**Responsible Officials for Corrective Action #5**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #5 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until complete.

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**Recommendation #6**

The Chief Information Officer should develop, implement, and enforce detailed ADP inventory management procedures and guidelines that consider the following points:

- The INOMS database must be updated as ADP equipment is moved within and between offices.
- The INOMS database must be updated as ADP equipment is removed and/or discarded.

**Assessment of Cause**

Difficulties exist in tracking removed or discarded equipment.

**Corrective Action #6**

The new Single Point Automated Data Processing (ADP) Property Management Guidelines includes procedures for updating INOMS whenever changes in ADP equipment location or inventory status occurs. The document and transition plan provide guidelines and procedures to ensure the accuracy of IRS Automated Data Processing (ADP) inventory. IS will update guidelines as required to incorporate the new procedures and update the existing inventory and property management documents to reflect the newly developed organization structure and policies.

**Implementation Date of Corrective Action #6**

**Completed:**

**Proposed:** April 1, 2001

Complete Implementation of Single Point Inventory Function (SPIF) procedures for ADP equipment tracking.

**Responsible Officials for Corrective Action #6**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E



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**Corrective Action #6 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until it is complete.

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**Recommendation #7**

The Chief Information Officer should determine a strategy for inventory management continuing past the year 2000. If the INOMS database remains the software tool, the following points should be considered. However, if the INOMS database is retired in favor of another tool, the following points should be considered during the tool selection, research, and evaluation process:

- Establishing cascading update/delete relationships between hardware and associated software records could help prevent “orphaned” records and other data inaccuracies.
- Employing automated validation and error checking routines that could minimize the amount of illogical or out-of-range entries.
- Evaluating the feasibility of implementing automated inventory and network management tools (autodiscovery) to assist in the population and/or validation of INOMS.
- Evaluating the feasibility of implementing an electronic interface between the procurement and inventory systems that would provide an effective and efficient means of entering new ADP property into the INOMS database.
- Establishing a central control point for inventory purposes and the assignment of products to individuals for accountability purposes.

**Assessment of Cause**

The current INOMS database lacks the capability to perform a number of functions needed to maintain an accurate and complete inventory in a timely fashion.

**Corrective Action #7**

IS established the Asset Management Modernization Project Office to modernize the IRS Asset Management Program. The prime vendor responsible for the IRS modernization initiative is addressing the above concerns and inventory management processes in its deliverables. IS expects incremental enhancement of INOMS including new scanner technology by September 2000. The prototype delivery date for the modernized system-Information Technology Asset Management System (ITAMS) is March 2002.

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**Implementation Date of Corrective Action #7**

**Completed:**

**Proposed:** March 1, 2002  
Implement the modernized system-  
Information Technology Asset  
Management System (ITAMS)  
prototype.

**Responsible Officials for Corrective Action #7**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #7 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until it is complete.

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**Recommendation #8**

The Chief Information Officer should re-evaluate the current annual inventory process and incorporate the following procedures:

- The annual inventory should include searching for unknown/unidentified equipment, as opposed to verifying the existing inventory.
- The annual inventory should include identification of obsolete or unused equipment and the appropriate means of removal.

**Assessment of Cause**

Current inventory processes may not incorporate adequate procedures for searching and identifying unknown, unidentified, and obsolete equipment.

**Corrective Action #8**

The new Single Point Automated Data Processing (ADP) Property Management Guidelines will transition the IRS to the new ADP property management process. IS will update the guidelines to ensure that the annual inventory includes not only the floor to book review (existing inventory) but the book to floor review. In doing so, IS will ensure identification of all obsolete or unused equipment and proper marking in INOMS. Additionally, updates to the existing IRS inventory and property management documents will reflect the newly developed organization and policies. The guidelines and procedures contained in the document will address the following areas:

- Employee Responsibilities for ADP Property
- Receiving and Distributing ADP property
- Updating Integrated Network and Operations Management System (INOMS) Data Records
- Excessing and Disposing ADP Property
- Conducting Physical Inventories and Reconciling Data
- Quality Assurance
- Ensuring Annual Certification of ADP Property

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**Implementation Date of Corrective Action #8**

**Completed:**

**Proposed:** April 1, 2001

Complete Implementation of the new Single Point Automated Data Processing (ADP) Property Management Guidelines to ensure that the annual inventory includes not only the floor to book review (existing inventory) but also the book to floor review.

**Responsible Officials for Corrective Action #8**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #8 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until it is complete.

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**Recommendation #9**

The Chief Information Officer should require topology map documentation be created and maintained on a regular basis. These maps are necessary for several reasons including inventory change management, disaster recovery, and security.

**Assessment of Cause**

The IRS does not have a topological mapping approach to help maintain an accurate inventory. Inventory mapped only on a high level may not accurately reflect where and how the inventory is in use. However, the IRS agrees that such an approach would be useful.

**Corrective Action #9**

The Director, Enterprise Operations Division will review the recommendation and advise the CIO as to how the IRS will proceed.

**Implementation Date of Corrective Action #9**

**Completed:**

**Proposed:** March 1, 2000  
Implement decision on topology mapping process.

**Responsible Officials for Corrective Action #9**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #9 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until it is complete.

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**Recommendation #10**

The CIO should develop documentation standards for capturing system information, such as installed operating systems, COTS products, and applications. This information should be reviewed and reconciled with the INOMS.

**Assessment of Cause**

Auditors were unable to identify whether written documentation standards for inventory management existed.

**Corrective Action #10**

Documentation standards for capturing system information are in the Inventory Management Users Guide July 1999 for commercial-off-the-shelf (COTS) property and the Application Program Registry (APR) July 1999 for the in-house developed applications. IS updates them as needed. The standards facilitate the reconciliation of INOMS during the Wall-to-Wall inventory or other inventory activities. Various system validity checks will enforce the standard.

**Implementation Date of Corrective Action #10**

**Completed:** July 1, 1999

Issued documentation standards for capturing system information in the July 1999 Inventory Management Users Guide for Commercial-Off-the-Shelf (COTS) Property and the Application Program Registry.

**Proposed:**

**Responsible Officials for Corrective Action #10**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #10 Monitoring Plan**

Not applicable.

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**Recommendation #11**

The CIO should ensure personnel involved in the inventory process are trained to properly perform their respective functions.

**Assessment of Cause**

IS did not adequately train personnel in the use of the INOMS database, causing inconsistencies and erroneous data entry.

**Corrective Action #11**

In FY 1999, IS trained over 500 INOMS end users trained in a 2.5-day class. This class is still given on an as needed basis. As part of the transition plan to implement the Single Point Inventory Function (SPIF) concept, IS will develop and offer training courses to various personnel involved in the inventory process. IS has initiated a cross-functional group to develop SPIF training requirements.

**Implementation Date of Corrective Action #11**

**Completed:**

**Proposed:** April 1, 2001

Develop and complete implementation of new SPIF training courses.

**Responsible Officials for Corrective Action #11**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Enterprise Operations Division IS:E

**Corrective Action #11 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings while still being held. IS: E will concurrently and subsequently track the progress through the Enterprise Operations Division Executive Steering Committee until it is complete.



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**Recommendation #12**

Tier 2 managers should perform annual reviews to identify the COTS products associated with their systems and reconcile with INOMS and confirm in writing the accuracy of the details (e.g., model/version, location, etc.).

**Assessment of Cause**

IS must reevaluate and recertify the INOMS database on an annual basis to maintain database integrity because of changes from updates, additions and deletions.

**Corrective Action #12**

IS will perform an annual review of the Tier 2 (minicomputer) platforms to ensure the accuracy of INOMS as it relates to the COTS products. IS will employ an automated tool such as Tivoli, perform a process to dump inventory listings from the tier 2 platforms and reconcile them with INOMS, or use a combination of both methods where necessary.

**Implementation Date of Corrective Action #12**

**Completed:** December 1, 1999

Systems Support Division has agreed to perform an annual review of a selected "sample" of the Tier 2 platforms to ensure the accuracy of INOMS as it relates to the COTS products.

**Proposed:**

**Responsible Officials for Corrective Action #12**

Chief Information Officer IS  
Deputy Chief Information Officer (Systems) IS  
Director, Systems Support Division IS:SS

**Corrective Action #12 Monitoring Plan**

Not applicable.

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**Recommendation #13**

The Chief Information Officer should analyze the INOMS data to find any server hardware that does not have a corresponding Network Operating System (NOS) record once the INOMS inventory has been updated with the results of the latest inventory efforts.

**Assessment of Cause**

Confusion as to how a NOS record should be identified on INOMS contributes to incorrect data entries and instances of NOS records with no corresponding server associated with them.

**Corrective Action #13**

IS will query the INOMS database at two service centers and two district offices, that have completed the certification work, to determine the ratio of NOS records to corresponding servers. IS will then determine if the issue of NOS records vs. servers requires additional action.

**Implementation Date of Corrective Action #13**

**Completed:**

**Proposed:** March 1, 2000

Determine if the issue of NOS records vs. servers needs additional action.

**Responsible Officials for Corrective Action #13**

Chief Information Officer IS  
Deputy Chief Information Officer (Operations) IS  
Director, Telecommunications Division IS:TL

**Corrective Action #13 Monitoring Plan**

IS will track the progress of the recommendation's corrective action at the weekly Century Date Change Information System Progress Report meetings until it is complete.