



LIBRARY OF CONGRESS
Office of the Inspector General



Library-Wide

Information Technology Services
Integrated Support Services

*Improvements Needed to Prevent
Wasteful Procurement and Inefficient
Disposal of IT Workstations*

Audit Report No. 2012-PA-101
September 2012

FOR PUBLIC RELEASE



UNITED STATES GOVERNMENT

LIBRARY OF CONGRESS

Memorandum

Office of the Inspector General

TO: James H. Billington
Librarian of Congress

September 28, 2012

FROM: Karl W. Schornagel
Inspector General

SUBJECT: IT Workstation Management
Project No. 2012-PA-101

This transmits our final report summarizing the results of the Office of the Inspector General's audit of Information Technology (IT) Workstation Management. The Executive Summary begins on page *i*, and our findings appear on page 9.

We believe that senior management action and response are needed to resolve the persistent weaknesses identified in this report.

Based on written comments to the draft report, we consider all of the recommendations resolved. Please provide, within 30 calendar days, an action plan addressing implementation of the recommendations, including an implementation date, in accordance with LCR 2023-9, *Rights and Responsibilities of Library Employees to the Inspector General*, §6.A.

We appreciate the cooperation and courtesies extended by Information Technology Services and Integrated Support Services during this audit.

cc: Acting Associate Librarian for Strategic Initiatives and Chief Information Officer
Chief, Support Operations

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▶▶ EXECUTIVE SUMMARY

Information technology (IT) equipment provides the Library of Congress with a critical means for performing its many and varied activities. Accordingly, that equipment must be diligently managed to ensure the Library continues to effectively serve the Congress and the American people.

We undertook this audit to evaluate the Library's performance in managing the lifecycle of equipment used for the Library's IT workstations. Those workstations include computers, computer monitors, and standard software for Library office functions, among other things. Our work revealed that the Library continues to manage the workstations according to industry standards by upgrading computers to Microsoft Corporation's Windows 7 operating system, using leading system management software, installing hard disk encryption to laptops, and making IT equipment purchases through the FedBid reverse-auction marketplace.

However, notwithstanding the positive work being done, our work showed that senior management must become substantially involved in correcting persistent problems identified in previous Office of the Inspector General reports that affect the Library's new and excess IT equipment. Communication and coordination among Information Technology Services (ITS), Integrated Support Services (ISS), and the service and support units must considerably improve to prevent purchasing new IT equipment items when the same or equivalent items are already available in the Library's inventory.

Further details on our audit's results are as follows.

A Lack of Inventory Controls Has Resulted in Unnecessary Purchases and Aging IT Inventory—The Library is overstocked with IT equipment items in inventory that are aging, and warranty coverage for many of the items has expired. Among other reasons, this situation exists because ITS and ISS were not effectively working in coordination with service and support units on addressing IT equipment needs. As a result, more than \$91,000 in purchases were made for laptops, printers, monitors, and scanners from August 2008 to May 2012 even though the same or equivalent items were available in inventory. Moreover, the Library is in violation of

the *bona fide* needs rule, a statutory rule that restricts the use of appropriated funds, regarding various purchases of IT items. We believe that \$355,190 in IT purchases made with end of the year funding represents wasted funds that could have been put to better use. Among other actions, we recommend that ITS take steps to keep service and support units informed about IT equipment which is available in inventory, and work in consultation with the Office of the Chief Financial Officer's Budget Office and the Office of General Counsel to establish a procedure that ensures ITS purchases of IT equipment conform to *bona fide* needs rule restrictions.

A Significant Element of the Computer Disposal Process Remains Highly Inefficient—Weaknesses in disposing of excess computers described in our March 2009 report, *Inventory Management Problems Continue, Senior Management Attention is Crucial* (Report No. 2009-PA-102) continue to exist. More than 1,100 computers at the end of their lifecycle were sitting idle in the Library's Landover warehouse in May 2012 awaiting sanitization of their hard drives. ISS performed computer disk sanitization in the Madison Building, which meant that computers were transported back and forth between that building and the warehouse twice during excess computer out-processing. The disk sanitization procedure adds time, costs, and risk to an already time-consuming computer disposal process and reduces future utility of the equipment. In response to our audit, ISS began sanitizing hard drives in the Landover warehouse instead of the Madison building in June 2012. We recommend that ISS and ITS work collaboratively to identify and implement an efficient and effective solution for sanitizing the hard disks of excess computers before the computers are initially transported to the Landover warehouse.

Management concurred with our findings. The full text of management's response is included as Appendix B.

▶▶ BACKGROUND



Figure 1: Example of a standard IT workstation.

The Library of Congress relies heavily on its information technology (IT) infrastructure to effectively support the Congress and provide services to the American people. Major parts of the infrastructure are the IT workstations used by Library staff and visitors. These workstations include desktop and laptop/telework computers, computer monitors, and core software such as Microsoft Corporation's Office, the required software used throughout the Library for standard office productivity functions.

The Library's Information Technology Services (ITS) is responsible for providing IT workstation equipment that meets industry standards and, by doing so, makes it possible for the Library to meet its mission. To effectively meet this responsibility, ITS must work successfully in coordination with the Library's various service and support units in managing each workstation's lifecycle.

Managing the IT Workstation Lifecycle

ITS works with many different Library organizations in managing the various stages of an IT workstation's lifecycle. ITS 1) coordinates the procurement of the workstations through the Office of Contracts (OC) and Office of the Chief Financial Officer (OCFO), 2) relies on Integrated Support Services (ISS) to oversee the receipt of new equipment and the disposal of used or obsolete equipment, and 3) continuously works in coordination with service and support units to maintain the workstations that those organizations use.

ITS maintains a PC¹ Store of new IT related equipment in a warehouse in Landover, Maryland. This PC Store is used exclusively to provide standard IT equipment to service and support units throughout the Library. ITS provides one standard computer workstation with monitor for all new employees. Any request for additional or specialized IT equipment may be purchased through ITS to obtain volume discounts but is funded by the requesting service unit. The service unit also may purchase the IT equipment without notifying ITS but must still assure that any computers that

¹ A personal computer (PC) is any general purpose computer.

connect to the Library’s network comply with established security directives.

The End User Computing Group (EUC), under the direction of ITS, provides the equipment and software that make up the workstation systems used locally within the Library’s service and support units. It also provides a range of services (e.g., logistics, maintenance, repair, etc.) in support of those systems.

Additionally, the EUC manages the Workstation Change Control (WCC) process which is used to manage technical changes in workstation requirements, and provide periodic updates and upgrades in workstation software and hardware. Specifically, the WCC reviews all proposed software/hardware configuration changes to ensure that adequate evidence and rationale have been provided to 1) determine the need for the proposed change(s); 2) perform a risk analysis of the proposed change on the workstation configuration; and/or 3) perform an evaluation of the opportunity associated with the proposed change.

Proposed changes affecting workstation configuration are discussed in monthly WCC Committee meetings. Moreover, advance approval by the committee is required before software applications may be installed on end-user workstations.

Mitigating the Impact of Funding Reductions

The appropriations funding level for the Library substantially declined over the last two fiscal years (FYs) as illustrated in Table 1. For FY 2012, the level was almost \$56 million less than it was for FY 2010. These funding reductions have made it especially important for the Library to carefully plan for and manage its IT investments.

Reduction of Appropriated Funding			
	FY 2010	FY 2011	FY 2012
Appropriation	\$643,337,000	\$628,677,000	\$587,344,000
Reduction		(14,660,000)	(41,333,000)

Table 1: Library of Congress Appropriations for FY 2010 to 2012.

The Library has mitigated the impact of the recent funding reductions to some extent by using a procurement strategy followed by many other federal agencies. Specifically, the Library has made purchases of IT equipment and other goods and services through the FedBid reverse-auction marketplace.

By implementing this strategy, the Library realized net savings² exceeding \$877,000 for FY 2011, and exceeding \$148,000 for FY 2012, through July 9, 2012.

Windows 7 Upgrade

With the exception of the Congressional Research Service (CRS),³ Library organizations use Microsoft Windows XP operating system and Office 2003 software for their workstation computers. However, because Microsoft has announced that it will no longer support Windows XP and Office 2003 with new security and non-security updates after April 8, 2014, the EUC is in the process of replacing the operating systems and software for the Library's workstations with Windows 7 and Office 2010. During the audit period, we made inquiries into the total funding and cost of the Windows 7 migration project. OCFO and ITS were unable to provide us with financial project data since both lacked a methodology for tracking project costs.

ITS began planning migration to Windows 7 during the second half of FY 2011, and tentatively expects to have the entire Library migrated to the new operating system and software by May 2014, unless unforeseen issues arise.

We identified five federal agencies that are similar to the Library in size, and performed a benchmarking analysis of the systems that those agencies use for their IT workstations. We determined that two of the five agencies had installed the Windows 7 operating system for their workstation computers in the past year and another agency is expected to be completed by March 2013. Details on the results of our benchmarking analysis are presented in Appendix A.

Systems Management

Since March 2011, ITS has used Microsoft's System Center Configuration Manager (SCCM) software to manage the Library's Windows-based computer systems. SCCM, considered an industry standard, provides remote control

² The cited net savings were calculated as the difference between the Library's independent government cost estimates and the actual award amounts.

³ Workstation computers of the CRS were upgraded to the Microsoft Windows 7 operating system from April to October 2011.

access, software patch management, automated deployment of software and operating systems, network access protection, and hardware/software inventory capabilities. SCCM replaced Symantec's LiveState Delivery (LSD), which ended all customer support in February 2010.

Currently, ITS supports more than 1,260 software applications that run on the Library's Windows XP operating systems. Many of those applications have duplicative or overlapping functionality and may be incompatible with the Windows 7 operating system environment. To assure software applications used throughout the Library are compatible, ITS is working to package these applications to less than 500 for SCCM distribution. Application packaging can help manage growing volumes of software for desktop and server systems efficiency. It involves the preparation of standard, structured software installations targeted for automated deployment. By streamlining software configuration and deployment, application packaging can help reduce application management costs.⁴ Once ITS completes the migration to Windows 7, only WCC Committee-approved applications will be authorized for installation on end-user computers. Any applications not resident in SCCM will require WCC approval and installation by ITS. Using SCCM gives ITS better control over preventing the installation of unauthorized applications.

Virtual Computing

Over the last few years, there has been a growing emphasis on cloud computing and IT virtualization. Cloud computing is a form of computing where users have access to on-demand capabilities that are provided through Internet-based technologies. Conceptually, it is a way of providing IT services quickly and at low cost. It takes advantage of several broad evolutionary trends in IT, including the use of virtualization.⁵

⁴ *The Basics of Application Packaging: Best Practices for Enabling Reduced Software Management Costs*, Dell Power Solutions, November 2005.

⁵ Virtualization is a technology that allows multiple, software-based machines, with different operating systems, to run in isolation, side-by-side, on the same physical machine. Virtual machines can be stored as files, making it possible to save a virtual machine and move it from one physical server to another. Virtualization is often used as part of cloud computing. Source: GAO-12-756, *Progress Made but Future Cloud Computing Efforts Should be Better Planned*, July 2012.

In December 2010, the Office of Management and Budget issued a “Cloud First” policy that requires federal executive agencies to implement cloud-based solutions whenever a secure, reliable, and cost-effective cloud option exists. Several agencies, such as the Department of Homeland Security, Department of Agriculture, and General Services Administration have implemented cloud solutions to reduce IT spending on e-mail and other services. Additionally, the Census Bureau has begun to implement virtual desktops which will allow its employees to securely access their complete work desktops by using a web browser. Ultimately, this will reduce the high cost associated with providing and maintaining desktop service.

To date, the Library has installed 142 virtual workstations in Library reading rooms. However, the Library remains in the preliminary stages of exploring how virtual computers can provide savings and efficiencies in managing IT workstations throughout the Library.

Previous OIG Reports

Since March 2005, we have issued three reports⁶ highlighting inventory control weaknesses at the Library’s warehouse in Landover, Maryland. The objectives of our prior reports were to assess the economy and efficiency of the Library’s inventory management program, evaluate the system of internal controls, and follow-up on progress made from our recommendations. Some of the findings from those reports included:

- ISS Needs an Inventory Management Systems and Improved Warehousing Policies, Procedures, and Oversight,
- Service Units Need Better Tracking, Planning, Coordination, and Communication with ISS’s Logistics Section to Reduce Unneeded Inventory,

⁶ OIG reports: 1) *Lack of an Inventory System and Ineffective Processes Contribute to Inefficient Warehousing Operations*, Report No. 2004-PA-103, March 2005; 2) *The Landover Warehouse Internal Controls: Progress Made, But Additional Improvements Needed*, Report No. 2005-AT-904, June 2006; and 3) *Inventory Management Problems Continue, Senior Management Attention is Crucial*, Report No. 2009-PA-102, March 2009.

- The Logistics Section Has Not Maintained Physical Accountability of Its Inventory but Enhancements Are Planned,
- Greater Separation of Duties is Necessary to Ensure Integrity of the Computers for Learning Program,
- Despite ISS' Efforts, Excess Inventory is Still Held,
- ISS Needs to Provide More Inventory Guidance and Oversight, and
- ISS is Still Not Processing Excess Computer Equipment Efficiently.

We again reviewed internal controls for managing the inventory of IT-related equipment stored at the warehouse as part of our current audit and found that weaknesses identified in our previous reports continue to exist.

►► OBJECTIVES, SCOPE, AND METHODOLOGY

We conducted this performance audit to evaluate ITS' performance in managing the lifecycle of hardware and software used at Library IT workstations. Those workstations include desktop and laptop computers, monitors, other hardware items, and standard core software used throughout the Library for standard office productivity functions.

Our specific audit objectives were to determine whether ITS:

- 1) considers IT industry standards and best practices in managing workstation hardware and core software;
- 2) consults with applicable service and support units in making IT lifecycle decisions;
- 3) obtains best values in acquiring hardware and software for workstations;
- 4) maintains and controls inventories of IT equipment and software based on genuine needs; and
- 5) disposes of excess IT workstations properly.

Our audit scope included ITS' management activities, and applicable policies and procedures related to the areas identified in our audit objectives. It did not include the inventory controls for the equipment and material in the scopes of our 2005, 2006, and 2009 inventory management reports⁷ that are not IT-related.

To accomplish our objectives, we interviewed Library officials of ITS, ISS, OC, Library Services (LS), and the CRS. For a benchmarking analysis, we compared aspects of the Library's IT workstation management activities with those of five federal agencies that are similar to the Library in size. Finally, we visited the Library's warehouse in Landover, Maryland several times, and made observations of the inventory controls for managing IT equipment in the warehouse on those occasions.

⁷ OIG reports: 1) *Lack of an Inventory System and Ineffective Processes Contribute to Inefficient Warehousing Operations*, Report No. 2004-PA-103, March 2005; 2) *The Landover Warehouse Internal Controls: Progress Made, But Additional Improvements Needed*, Report No. 2005-AT-904, June 2006; and 3) *Inventory Management Problems Continue, Senior Management Attention is Crucial*, Report No. 2009-PA-102, March 2009.

We conducted this audit from April through August 2012 in accordance with generally accepted government auditing standards and Library of Congress Regulation 211-6, *Functions, Authority, and Responsibilities of the Inspector General*. Government auditing standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence we obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

►► FINDINGS AND RECOMMENDATIONS

ITS has planned for and made improvements in the management of the Library's IT workstations. Once completed, the migration to Microsoft's Windows 7 operating system will give end-users better performance, security, and productivity. Additionally, SCCM has helped to streamline the deployment of software and security updates.

Nevertheless, improvements are needed regarding inventory controls for new and excess IT workstations. Effectively managing the acquisition, storage, and distribution of inventory is essential to controlling Library costs, operational efficiency, and mission readiness.

Details on our audit's results are as follows.

I. A Lack of Inventory Controls Has Resulted in Unnecessary Purchases and Aged IT Inventory

Given the fast pace of technological advancement, it is important to keep inventories of IT equipment items at reasonable levels to ensure that the equipment items do not become obsolete while they are in inventory. Notwithstanding this principle, we found that the Library is overstocked with IT equipment items in inventory that are aging, and warranty coverage for many of the items has expired. This situation exists because:

- ISS and ITS do not effectively work in coordination with service and support units,
- ISS and ITS do not distribute IT equipment from inventory according to the first-in, first-out (FIFO) method, in which the oldest items of inventory—those put into inventory first—are the ones that are distributed first, and
- ITS does not have a systematic or written methodology for purchasing standard IT equipment items in quantity, or for ensuring that IT purchases conform to restrictions of the statutory *bona fide*⁸ needs rule on the use of appropriated funds.

⁸ 31 U.S.C. § 1502(a) states appropriations made for a definite period of time may be used only for expenses properly incurred during that time.

As a result, unnecessary purchases of IT equipment were made while new equipment was on hand in inventory. Moreover, the Library may be in violation of the *bona fide* needs rule regarding various purchases of IT items.

IT Equipment is Overstocked in Inventory

During an audit visit to the Landover warehouse, we observed that many IT items were stored in inventory from one to four years. Warranty coverage periods for the items' hardware and support, provided by the equipment manufacturers, had expired for most of those items, and was nearing expiration for the others. One particularly troublesome observation involved 484 flat-panel monitors, manufactured by the Dell Corporation, that have sat undistributed since they were

received at the warehouse between July and December 2008. Warranty periods for all of those monitors have expired. Data regarding our complete observation are summarized in Table 2.

Summary of Cost and Warranty Remaining for Inventory On Hand				
Item	Qty	Cost	Yrs on Shelf	Warranty Yrs Left
Dell OptiPlex 360	10	\$7,476	2.5	0.5
Dell laptop E5500	67	65,425	2.5	0.6
Dell laptop 5510	81	83,658	1.5	1.5
Dell 19" monitor	484	Unknown ⁹	3.8	Expired
Acer 24" monitor	224	59,210	1.9	1.1
HP 8300 scanner	34	13,276	3.7	Expired
HP 5550dn printer	11	28,872	1.4	Expired
HP LaserJet	5	7,287	1.4	Expired
Total		\$265,204		

Table 2: IT Inventory Cost and Warranty Remaining as of April 20, 2012.

To its credit, ITS and ISS has made it a point to distribute older IT equipment items from inventory since we visited the warehouse on April 20, 2012, and the number of older IT items in inventory has been reduced.

This finding is very similar to one that is included in our report, *Inventory Management Problems Continue, Senior Management Attention is Crucial* (Report No. 2009-PA-102, March 2009). During that audit, we noted various items, such as new computer monitors in unopened boxes, which were going unused while sitting in storage at the Landover warehouse. In addition to the unnecessary storage costs inherent in such a situation, storing equipment items beyond immediate needs increases exposure to damage and theft.

⁹ ITS was unable to provide us with documentation on the purchase price of 1,000 Dell desktop computers and monitors made in 2008 through an interagency agreement.

Unnecessary Purchases of Items Already On Hand

We determined that purchases totaling more than \$91,000 were made August 2008 to May 2012 for new laptops, printers, monitors, and scanners even though the same or similar

Summary of Unnecessary IT Purchases				
	Laptops	Printers	Monitors	Scanners
On Hand	148	175	484	34
Unnecessary Purchase	37	26	142	2
Cost	\$40,688	\$20,147	\$29,585	\$840
			Total	\$91,260

models of equipment items were available in inventory at the Landover warehouse. A summary of these unnecessary purchases is presented in Table 3.

Table 3: Cost of Unnecessary IT Purchases Already On Hand.

We note that the inventory levels of the items presented in Table 3 have slightly declined since we visited the warehouse on April 20, 2012.

A Lack of Effective Coordination with Service and Support Units

ITS and ISS have not effectively coordinated with service and support units to prevent unnecessary purchases of IT items. On an annual and quarterly basis, EUC sends a data call requesting service and support units to submit requests for IT equipment available in Landover (PC Store) for the upcoming fiscal year. With this data, ITS makes budget projections to fulfill requests based on its funding. During FY 2012, ITS did not send a data call to service and support units due to budget constraints. Additionally, service and support units are not required to notify ITS of all their IT related purchases which can lead to unnecessary purchases.

Distribution of IT Equipment in Inventory

ISS is not consistent with the methodology it uses to manage IT equipment received into and distributed out of inventory. ISS custodial personnel use a standalone system, IntelliTrack, mainly as a perpetual IT inventory system. The system does not interface with any Library system, is not automatically backed up, nor does it provide detail of the aging of inventory. When a new IT item arrives at the Landover warehouse, ISS personnel place it on a pallet. Such a pallet frequently holds many more units of the same item that just arrived. Because ISS does not have a standard method for arranging items on a pallet, a newly arrived IT item could be placed anywhere on a pallet. Furthermore, when an IT item is distributed out of inventory from the warehouse, the item selected could be any

one of the items on a pallet. As a result, older equipment items could take longer to distribute than those that are subsequently received into inventory, or could remain in inventory undistributed. We noted 484 new Dell flat panel monitors that were shipped to Landover between July and December 2008 which were never distributed and have since expired in warranty (see Figure 2).

In our view, ISS could address this situation by consistently using the FIFO method of distributing IT equipment from inventory. Such methodology is a best practice, and at a minimum, its implementation by ISS would help prevent sizable accumulations of older IT equipment items in storage.



Figure 2: Example of new IT equipment that has remained in storage since December 2008.

A Lack of Policies and Procedures for Purchasing IT Equipment

ITS has not established policies and procedures on purchasing IT equipment items for the Library’s computer workstations, or on maintaining appropriate numbers of those items in inventory. As such, it does not have control procedures which would prevent the Library from violating a key provision of the statutory *bona fide* needs rule.

The *bona fide* needs rule states that annual appropriations are available only to meet *bona fide* needs of the fiscal year for which they were appropriated. According to Volume I of the Third Edition of *Principles of Federal Appropriations Law*, published by the Government Accountability Office, “... where an obligation is made toward the end of a fiscal year and it is clear from the facts and circumstances that the need relates to the following fiscal year, the *bona fide* needs rule has been violated.” It further states that the *bona fide* needs rule “... does not prevent maintaining a legitimate inventory at reasonable and historical levels, the “need” being to maintain the inventory level so as to avoid disruption of operations.”

Two situations involving IT equipment items purchased by ITS suggest that the Library is in violation of the *bona fide* needs rule. In the first instance, ITS used appropriated funds to purchase laptop computers at the end of FYs 2009, 2010, and 2011. Those purchases are summarized in Table 4. We confirmed that all of the computers summarized in that table were in inventory as of April 2012.

Summary of Purchases Made at End of Fiscal Year			
	Purchase Award Date	Quantity On Hand 4/20/12	Inventory Value
Dell Latitude E5500	9/25/09	67	\$65,425
Dell Latitude E5510	9/30/10	61	61,265
Dell Latitude E5520	9/30/11	213	228,500
Total			\$355,190

Table 4: IT Purchases Made at the End of the Fiscal Year.

Therefore, because the Library obviously did not need the computers in the respective fiscal years in which they were purchased, we believe that the Library is in violation of the *bona fide* needs rule with regard to those year-end purchases. Furthermore, we believe that the \$355,190 represent wasted funds that could have been put to better use.

In the second situation, ITS used reallocated appropriated funds¹⁰ at the end of FY 2011 to purchase laptop computers manufactured by the Dell Corporation to replace desktop computers that LS was using as telework computers. However, we learned that the laptop computers that ITS purchased for LS have not been deployed. LS decided to delay deployment of the computers until completion of the telework enhancement project,¹¹ which is scheduled for September 2012. But, because LS will have to configure all of the new laptops according to the Office of Strategic Initiatives' specifications after the telework project is completed, the computers most likely will not be fully deployed until FY 2013.

Similar to the first situation, we believe that the Library is in violation of the *bona fide* needs rule because the Library obviously did not need the computers in the fiscal year in which they were purchased.

Recommendations

We recommend that ITS:

1. improve its communications and transparency with service and support units by keeping them informed about IT equipment which is available in inventory,
2. ensure that ISS distributes IT equipment items based on first-in, first-out methodology, and

¹⁰ Reallocation of funding occurs when unobligated funds, set to expire if not used by the end of a fiscal year, are reassigned before year-end to increase the likelihood that they will be obligated for legitimate purposes before the end of the fiscal year.

¹¹ The telework enhancement project began in August 2011 and involves implementing hard disk encryption and virtual private network (VPN) remote access. A virtual private network (VPN) is a connection established over the Internet that is secured through authentication and encryption methods. VPNs provide remote users access to files and network applications.

3. work in consultation with the Budget Office and the Office of the General Counsel to establish a procedure that ensures that ITS purchases of IT equipment will conform to restrictions of the *bona fide* needs rule.

Management Response

Management concurred with our recommendations.

II. A Significant Element of the Computer Disposal Process Remains Highly Inefficient

During a visit to the Landover warehouse in May 2012, we observed that an inefficient ISS procedure was still in use that we reported in our March 2009 audit, *Inventory Management Problems Continue, Senior Management Attention is Crucial* (Report No. 2009-PA-102). We noted over 1,100 computers declared excess property that were to be donated to the Computers for Learning program¹² were sitting idle in the warehouse awaiting hard disk sanitization¹³ (Figure 3).

The procedure, which essentially remains the same as we described in 2009, pertains to the many steps that ISS takes to sanitize computer hard disks. It begins when a service or support unit submits a request to the ISS Logistics Section (ISS/Logistics) to have a computer, deemed excess property, removed from the unit. ISS/Logistics picks up the computer and delivers it to the Landover warehouse, where it sits idle until additional help, usually from summer interns, is available to assist in the sanitization process. As a result, hundreds of excess computers accumulate throughout the year. After ISS' Automation Team trains temporary personnel to assist with the sanitization process, ISS delivers all of the excess computers from Landover back to the Madison Building on Capitol Hill where the disk sanitization process takes place. Once sanitized, the computers are delivered back to Landover where they again sit for a few months before finally being released to their final destinations. This lengthy



Figure 3: Excess computers awaiting hard disk sanitization before donation to the Computers for Learning program.

¹² The Computers for Learning program evolved as a guide for implementing Executive Order 12999, *Education Technology: Ensuring Opportunity for All Children in the Next Century*, signed April 17, 1996. As part of the legislative branch, the Library is not subject to the Executive Order. However, the Library has elected to participate in this program.

¹³ Hard disk sanitization is a process to remove information such that data recovery is not possible.

process reduces the future utility of useful equipment to schools and nonprofit organizations.



Figure 4: Example of excess IT equipment left in public hallway.

ISS' procedure is inefficient, given the handling and transportation costs involved with moving the computers back and forth between Capitol Hill and Landover, and adds additional security risk to ISS' overall process of preparing the excess equipment for its ultimate disposal. Unsanitized computer hard disks can store sensitive information used in Library of Congress programs and activities, and that information could be used for unauthorized purposes. Although ISS stores excess computers in a secure cage when they are at the warehouse, security for the machines is less than certain during the times that they are in-transit. We also noted that service units often leave excess IT equipment in a public hallway of the Madison building near the entrance to the IT Helpdesk as noted in Figure 4.

In June 2012, ISS began sanitizing hard drives in the Landover warehouse instead of the Madison building. However, the new procedure does not remedy the untimely sanitization of excess computers and still violates ISS Directive ISS/ADMIN 2-1, which states that all computer hard disks are to be cleansed of all stored data before being moved to surplus or donated through the Computers for Learning Program.

We discussed responsibility for sanitizing computer hard disks with representatives of both ISS and ITS. ISS believes that ITS should sanitize the disks of computers declared excess property while responsibility for the machines still belongs to that organization. If that was the case, the disks would be sanitized before ISS would take possession of the computers. ISS would no longer be involved in the disk sanitization process other than transporting computers to the warehouse after the hard disks are sanitized.

ITS does not agree that hard disk sanitization should be part of its customer service responsibilities. ITS explained that ISS has owned responsibility for this activity as part of its surplus property procedures since the first personal computers were deployed at the Library in the early 1990s. Moreover, ITS stated that it could not assume this responsibility without being allocated the additional staff and space that would be required to carry it out.

We identified programs in our June 2006 and March 2009 reports¹⁴ that might provide efficient means to replace, or reduce efforts associated with the Library's computer disposal process. In one of the programs, the USDA was taking possession of and disposing of the excess computers of another federal agency, which yielded considerable savings for the other agency in terms of storage and handling costs. In another program, the Dell Corporation was making opportunities available to recycle or resell outdated computer equipment. Accordingly, that program had the potential for eliminating costs related to storing excess computers.

During our audit, ISS provided ITS with research on a software utility which could be used to remotely sanitize computer hard disks before the computers are physically removed and delivered to the Landover warehouse as excess property. ITS determined this was not a feasible option since the preference is to perform hard disk sanitization via a compact disc thereby reducing the risk of accidentally wiping someone's hard drive remotely.

Recommendations

We recommend that ITS and ISS work in collaboration to:

1. sanitize the hard disks of all Library computers declared to be excess property, and ensure that the computers are subsequently donated to the Computers for Learning program in a timely manner, and
2. identify and implement an efficient and effective solution for sanitizing the hard disks of excess computers before the computers are delivered to Landover for further out-processing.

Management Response

Management concurred with our recommendations.

¹⁴ OIG reports: *The Landover Warehouse Internal Controls: Progress Made, But Additional Improvements Needed*, Report No. 2005-AT-904, June 2006 and *Inventory Management Problems Continue, Senior Management Attention is Crucial*, Report No. 2009-PA-102, March 2009.

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▶▶ APPENDIX A: BENCHMARKING

Agency IT Workstation Practices					
Agency	Desktop Lifecycle	Laptop Lifecycle	Monitor Lifecycle	Disposal Turnaround	Upgraded to Windows 7
Small Business Administration	7 yrs	7 yrs	7 yrs	5-7 months	2012
National Archives and Records Administration	3-5 yrs	3-5 yrs	5 yrs	6 months	Completion planned March 2013
Pension Benefit Guaranty Corporation	-	3 yrs	As needed	-	2012
Government Accountability Office	3-4 yrs	3-4 yrs	8-10 yrs	2 months	Planned
Smithsonian	4 yrs	-	-	1 month	Completion planned FY 2014
Library of Congress	As needed	As needed	As needed	Unknown	Completion planned May 2014

Table 5: Results of Benchmarking with Agencies Similar to the Library of Congress in Size.

» APPENDIX B: MANAGEMENT RESPONSE

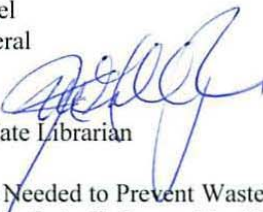
THE LIBRARY OF CONGRESS
101 INDEPENDENCE AVENUE, S.E.
WASHINGTON, D.C. 20540-1300



OFFICE OF THE ASSOCIATE LIBRARIAN
FOR STRATEGIC INITIATIVES

Date: September 27, 2012

To: Karl Schornagel
Inspector General

From: Jim Gallagher 
Deputy Associate Librarian

Subject: Improvements Needed to Prevent Wasteful Procurement and Inefficient Disposal of IT Workstations Draft Audit Report No. 2012-PA-101

I have attached comments to the recommendations contained in the subject report, as requested in your email dated September 13, 2012. These responses have been coordinated with the Deputy Librarian and the Office of Support Operations, Integrated Support Services (ISS).

Please let me know if you have any questions on the comments.

I. A Lack of Inventory Controls Has Resulted in Unnecessary Purchases and Aged IT Inventory

We recommend that ITS:

- 1. improve its communications and transparency with service and support units by keeping them informed about IT equipment which is available in inventory;***

Agree. ITS will leverage existing, well established technology focused groups such as the Workstation Change Control (WCC) Committee to enhance existing communications with service and support units on IT equipment inventories and will implement new communications mechanisms as appropriate.

- 2. ensure that ISS distributes IT equipment items based on first-in, first-out methodology;***

Agree. ITS will work with ISS to ensure that IT equipment stored at the Landover warehouse is retrieved and deployed utilizing a first-in, first-out inventory methodology.

- 3. work in consultation with the Budget Office and the Office of the General Counsel to establish a procedure that ensures that ITS purchases of IT equipment will conform to restrictions of the bona fide needs rule.***

Agree. ITS will work with OCFO and OGC to develop a policy and procedure to facilitate compliance with the bona fide needs rule.

II. A Significant Element of the Computer Disposal Process Remains Highly Inefficient


We recommend that ITS and ISS work in collaboration to:

- 1. sanitize the hard disks of all Library computers declared to be excess property, and ensure that the computers are subsequently donated to the Computers for Learning program in a timely manner, and***

ITS agrees to support the Library policy on the processing of excess computers.

- 2. identify and implement an efficient and effective solution for sanitizing the hard disks of excess computers before the computers are delivered to Landover for further out-processing.***

ITS agrees to support the Library policy on the processing of excess computers.

LIBRARY OF CONGRESS 
Integrated Support Services
Office Support Operations

Memorandum

DATE: September 28, 2012
TO: Karl Schornagel
Inspector General
FROM: Elizabeth Scheffler
Director, Integrated Support Services
SUBJECT: Response to Draft Audit Report 2012-PA-101

Thank you for the opportunity to comment on Audit Report 2012-PA-101. We welcome the opportunity to work with ITS to improve IT inventory control and the process for disposal of surplus PCs and laptops. In the last year ISS implemented inventory improvements with a new Asset Management Tracking System (AMTS) module of the ISS Facility Asset Management Enterprise (FAME). Upon receipt at the warehouse, fixed assets are entered into AMTS, enabling the tracking of their physical location and disposition. ISS meets regularly with Service Units to review current warehouse storage capacity and planned changes in space utilization. During 1st quarter FY13, ISS will initiate activities focused on inventory and tenant improvements at the Landover Center Annex.

Based on your report, ISS will implement the following recommendations to improve inventory operations:

1. Ensure that ISS distributes IT equipment items based on a first-in, first-out methodology.

We agree. Beginning FY13, ISS will provide quarterly inventory reports to ITS listing all equipment stored at the Landover warehouse. ISS will transfer ITS hardware requests based on a First In/ First Out (FIFO) inventory method.

2. Sanitize the hard disks of all Library computers declared to be excess property, and ensure that the computers are subsequently donated to the Computers for Learning program in a timely manner.

ISS and ITS are in agreement to work jointly to identify more efficient options for PC Cleaning management. Beginning FY13, ISS will only clean and offer to the Computers for Schools Program PCs that are under three years of age and support Windows 7.

PCs and laptops that do not meet newer operating system requirements will have their hard drives degaussed and destroyed.

3. Identify and implement an effective solution for sanitizing the hard disks of excess computers before the computers are delivered to Landover for further out-processing.

We agree. Identifying a more effective solution and focusing hardware cleaning to newer PCs and laptops will significantly reduce and improve the management of hardware cleaning.

Thank you again for the opportunity to respond.

cc: Deputy Librarian
Chief, Support Operations
James Gallagher
Mike England

▶▶ APPENDIX C: ACRONYMS USED IN THIS REPORT

CRS	Congressional Research Service
EUC	End User Computing
FIFO	First-In, First-Out
FY	Fiscal Year
ISS	Integrated Support Services
IT	Information Technology
ITS	Information Technology Services
LCR	Library of Congress Regulation
LS	Library Services
LSD	LiveState Delivery
OC	Office of Contracts
OCFO	Office of the Chief Financial Officer
OIG	Office of the Inspector General
PC	Personal Computer
SCCM	System Center Configuration Manager
USDA	United States Department of Agriculture
WCC	Workstation Change Control