



August 2, 2016

MEMORANDUM FOR: Michelle K. Lee
Under Secretary of Commerce for Intellectual Property
and Director of the U.S. Patent and Trademark Office

FROM: Richard Bachman
Assistant Inspector General for Financial
and Intellectual Property Audits

SUBJECT: *USPTO Should Improve Controls Related to Equipment Used by Full-Time Teleworkers*
Final Report No. OIG-16-039-A

This report provides the results of our audit of the effectiveness of U.S. Patent and Trademark Office's (USPTO's) controls over information technology equipment issued to employees participating in the Patents Hoteling Program (PHP). This program allows eligible employees to perform officially assigned duties at an alternate work site, such as the employee's home or another location approved by USPTO on a full-time basis. USPTO is responsible for providing the IT equipment—such as computers, monitors, and printers—and the employee is responsible for obtaining broadband Internet access. As of June 2015, USPTO had more than 5,200 employees who participated in the program and have issued 26,838 equipment items valued at approximately \$17.7 million.

We found that, generally, USPTO offices¹ had controls in place over safeguarding of laptops and other accountable equipment, but noted that improvements could be made to enhance effectiveness. Specifically, we found that USPTO was not conducting physical inventories of hoteling employees' equipment, and was not consistently

- ensuring adequate segregation of duties over the quarterly inventory certification process and
- ensuring required 'Separation Clearance Forms' were completed properly.

Introduction

USPTO began its teleworking program with 18 participating employees in 1997 and, by 2014, had expanded to 9,650 employees. PHP is a subset of the overall USPTO telework program. The PHP allows patent examiners and other Patent Office staff to work full-time from home with limited biweekly reporting requirements. Employees who participate in the PHP are

¹ The offices primarily responsible for property management at USPTO are the Office of Administrative Services (OAS), the Office of the Chief Administrative Officer (OCAO), the Office of Finance (OF), and the Office of the Chief Information Officer (OCIO).

provided all of the equipment necessary to work from home. The program permits a more flexible work schedule, reducing the amount of leave employees have to use to take care of personal matters. Eligibility requirements for the PHP are determined by each business unit within USPTO but are generally positions involving tasks that are suitable to be performed away from the traditional worksite. Employees must meet certain requirements, such as maintaining a fully successful rating, participating in USPTO telework training, and having high speed Internet access. USPTO's *FY 2014 Telework Annual Report* states that, in 2014, 91 percent of USPTO employees were eligible to telework which includes personnel from across all of the different business units.

All hoteling equipment is tracked in the agency's Enterprise Asset Management System (EAMS). Generally, equipment for use by USPTO employees is first received at the USPTO warehouse. Once received, the equipment is inspected for deficiencies, barcoded, and entered into EAMS. Once properly entered into EAMS, the equipment is delivered to the user location for installation. When a user no longer needs equipment, the property custodian (PC) requests a transfer of the property. The PC can initiate a transfer of the equipment to (1) the warehouse for storage, (2) another user in the form of redistribution, or (3) be taken out of use permanently.

The quarterly inventory certification process is the key control developed by OAS, OCAO, and the Asset Management Team (which is made up of representatives from all business units at USPTO) to track hoteling equipment. During this process, a report is automatically produced by EAMS and sent to the PC for the hoteling employee listing the equipment assigned to them. The employees are required to review the report and notify their assigned PC of any discrepancies. The PCs and property accountability officers (PAOs) review the inventory reports for accuracy, submit needed changes, and certify (via signature) that the information is correct.

Summary of Objective, Scope, and Methodology

The objective of our audit was to assess the effectiveness of USPTO's controls over hoteling employees' laptops and other accountable equipment. To accomplish our audit objective, we first obtained an understanding of the bureau's oversight process by reviewing policies and procedures related to hoteling employees' equipment and interviewing key personnel. We then tested the effectiveness of these controls by reviewing the quarterly inventory certification process, analyzing the equipment assigned to hoteling employees, evaluating user roles in EAMS, and determining whether separated employees returned all government-owned equipment as required. We conducted our review from June to October 2015 in accordance with generally accepted government auditing standards. (See appendix A for more details regarding our scope and methodology.)

Findings and Recommendations

We assessed the effectiveness of USPTO's controls over hoteling employees' laptops and other accountable equipment and determined that USPTO does have controls in place to ensure accountability and safeguarding of hoteling equipment. Our conclusion was based on a review of a listing of the 26,838 equipment items assigned to hoteling employees. We reviewed this list to

determine (1) the average number items assigned to each employee, (2) whether employees had excess equipment assigned, and (3) whether adequate separation of duties existed for PCs in the inventory system. From the total of 5,283 hoteling employees reviewed, identified in its listing of hoteling employees we found that 101 employees (1.9 percent) had either more than one laptop or had eight or more pieces of equipment. However, even though USPTO does have controls in place to ensure accountability and safeguarding of hoteling equipment, we found that improvements to these controls could be made to enhance effectiveness. Specifically, we found that USPTO was not conducting physical inventories of hoteling employees' equipment; we also found that USPTO was not consistently ensuring adequate segregation of duties and correct completion of employee separation forms.

I. *USPTO Was Not Conducting Physical Inventories of Hoteling Employees' Equipment*

The Department of Commerce's (DOC's) *Personal Property Management Manual* (the *Manual*) establishes policies and general requirements for the accountability and control over property, which USPTO has adopted for property management. The *Manual* requires that physical inventories be completed at regular intervals, generally at least once per year.² The *Manual* states that property management and financial accounting activities should coordinate the scheduling of the inventory procedures for all classes of property. In addition, any adjustments are required to be documented and promptly posted to the inventory records. The *Manual* also requires all property that is no longer needed by an office be turned in for redistribution or disposal.³

Through interviews of OAS staff and a review of USPTO's process memorandum⁴ related to inventory, we determined that USPTO did not conduct a physical inventory of hoteling employees' equipment as required by the *Manual*. Based on the Government Accountability Office's (GAO's) *Best Practices in Inventory Counts*, GAO-02-447G, a physical inventory should be conducted by personnel independent from the employee and involves a physical verification of the equipment and confirmation that it is properly recorded in the inventory records. Instead, OAS, OCAO, and the Asset Management Team elected to do a paper-based review of inventory, which required employees to self-certify their individual inventory report (produced from EAMS) with the actual property on hand. These reports were then submitted to the PCs and PAOs for review, but were generally approved and certified without any physical verification.

We found that some employees were assigned excessive amounts of equipment.⁵ For example, we analyzed the data and determined that the average employee was issued five

² DOC's *Personal Property Management Manual* (October 2007), §3.807 states, "Physical inventories must be completed at regular intervals, generally at least once a year or a cycle commensurate with the value of the personal property and the complexity of operations of the Operating Unit."

³ DOC's *Personal Property Management Manual* (October 2007), §3.707 states, "All property (whether accountable or not) that is no longer needed by an office should be turned in to the PC, together with Form CD-50 (or its electronic equivalent), 'Personal Property Control' or CD-509, 'Property Transaction Request' for redistribution or disposal."

⁴ USPTO's *Property, Plant, and Equipment Spending and Maintenance Process Memo FY 2015*.

⁵ For purposes of this report, excess equipment is defined as equipment above the computed average of five items per employee.

equipment items: two monitors, a laptop, a printer, and a router. Using this typical arrangement as a baseline, we then further analyzed the data for exceptions and found that

- 81 employees had 2 or more laptops assigned;⁶
- 20 employees had 8 or more equipment items assigned;
- 2 employees had a laptop, 4 monitors, 3 routers, and a printer assigned; and
- 3 employees had a laptop, 4 monitors, 2 printers, and 2 routers assigned.

According to OAS staff, they did not perform a physical inventory of hoteling employees' equipment because they believed their quarterly inventory process was sufficient. They also stated that hoteling employees (1) worked from home and were geographically dispersed throughout the country, making it both difficult and expensive to conduct a physical inventory; and (2) were members of various unions and it would be problematic for USPTO management to get the unions to agree to open up personal residences for inventory purposes. Despite their concerns, this does not eliminate the requirement to conduct some type of physical inventory or equivalent alternative procedure for verifying assigned equipment. We also found that OAS did not have proper control procedures over monitoring hoteling employees' assigned equipment. Although the PCs and PAOs reviewed the equipment listings, they did not require employees to return any excess equipment.

Not performing some type of physical inventory or equivalent procedure could put hoteling inventory—such as laptops containing sensitive and confidential information—at risk of theft or loss. Also, by not independently verifying the inventory, there is a greater risk that data contained in EAMS is inaccurate. Inaccurate data makes it difficult to determine whether hoteling employees have been issued the appropriate equipment or whether employees have excess equipment that needs to be returned.

We reported our findings to OAS during the course of our audit and it took prompt action to address the excess equipment issue. As of December 8, 2015, it noted that 64 of the 81 (79 percent) employees with multiple laptops have since returned the extra computers.

II. *USPTO's Control Procedures Were Not Sufficient to Ensure Adequate Segregation of Duties*

As part of our testing of employees' users roles and access controls, we obtained the listing of all EAMS users as of September 17, 2015. The list contained the user's name, title, employee/contractor designation, and type of access to EAMS, such as read or read/write access. We found that one employee had the ability to both authorize and make changes in EAMS. As a result, there is an increased risk that inadequate separation of duties could result in the removal of property from the system without independent review or approval, and such actions would unlikely be detected under these conditions. In addition, we found that the same employee had PC responsibilities while simultaneously serving on the Property Board of Review (PBR).⁷ In both instances, even though these roles should have

⁶ Two of the 81 employees had three laptops assigned to them.

⁷ The PBR reviews the case files pertaining to lost, stolen, and damaged property, and determines any personal liability placed on the employee.

been segregated, the employee had control over all aspects of the equipment accountability process. This occurred because OAS management gradually added responsibilities to this employee but did not realize they had created a segregation of duties issue when the employee was given PC responsibilities while still a member of the PBR. As a result, this particular staff member was directly responsible for property control and served on the board that decides financial responsibility for lost or damaged property.

GAO's *Standards for Internal Control in the Federal Government* require that management segregate key duties and responsibilities to reduce the risk of error, misuse, or fraud. This includes separating the responsibilities for authorizing, processing, recording, and reviewing transactions.⁸ The GAO standards also require that management design appropriate types of control activities for coverage of operational processes,⁹ such as application controls. These controls are incorporated directly into computer applications to achieve validity, completeness, accuracy, and confidentiality of transactions and data during application processing.¹⁰ Lastly, to avoid potential conflicts of interest, DOC's *Personal Property Management Manual* requires that PAOs and PCs shall not serve on a PBR, although PAOs may act in an advisory capacity.¹¹

III. 'Separation Clearance Forms' Were Incomplete

USPTO Agency Administrative Order 202-299, "Employee Accountability Upon Separation," requires that employees separating from USPTO complete a PTO-2116 "Separation Clearance Form" (the form). This form is a bureau requirement and serves as evidence that all government-owned property has been returned by the employee prior to leaving the bureau. We obtained the list of all hoteling employees who had separated from the bureau during a 12-month period (July 1, 2014, through June 30, 2015). We then judgmentally selected five employees from this list to (1) review their forms for completeness and (2) ensure assigned government-owned property—such as laptops, printers, and monitors—had been turned in as required.

We found several instances where the forms were not completed as required. Specifically, we found

⁸ GAO's *Standards for Internal Control in the Federal Government*, principle 10.03, page 47, states, "Management divides or segregates key duties and responsibilities among different people to reduce the risk of error, misuse, or fraud. This includes separating the responsibilities for authorizing transactions, processing and recording them, reviewing the transactions, and handling any related assets so that no one individual controls all key aspects of a transaction or event."

⁹ GAO's *Standards for Internal Control in the Federal Government*, principle 11.06, page 53, states, "Management designs appropriate types of control activities in the entity's information system for coverage of information processing objectives for operational processes."

¹⁰ GAO's *Standards for Internal Control in the Federal Government*, principle 11.08, page 53 states, "Application controls, sometimes referred to as business process controls, are those controls that are incorporated directly into computer applications to achieve validity, completeness, accuracy and confidentiality of transactions and data during application processing."

¹¹ DOC's *Personal Property Management Manual* (October 2007), §3.903.

- four of five employees did not properly complete their forms which resulted in missing documentation, such as lack of (1) PC information, and (2) evidence of property being returned;
- two of five employees did not certify that they no longer had government property in their possession; and
- two of five employees did not return government property that were in their possession.

Our results are summarized in table I, below:

Table I. Results of Separation Clearance Form Test

Separated Employee	Separation Clearance Form Properly Completed?	Employee Certified All Government Property Returned Upon Separation?	All Government Property Returned to USPTO?
1	Yes	Yes	No ^a
2	No	Yes	No ^b
3	No	Yes	Yes
4	No	No	Yes
5	No	No	Yes

Source: OIG analysis of USPTO Separation Clearance forms tested.

^a The separation clearance form indicated that the router was not found.

^b Supporting documentation provided by USPTO indicated that the router was lost.

According to OAS officials, the human resources team determined whether employees had outstanding government property or any potential personal liability by directly contacting the appropriate offices.¹² Although in most cases the human resources team received evidence in the form of tracking numbers indicating equipment was returned, they did not document the information on the forms.¹³ OAS officials asserted that the omissions OIG located occurred because this administrative process is extremely time-consuming and burdensome. The errors associated with the current process could result in loss of government property and inaccurate calculations of employee liability related to lost equipment.

¹² Separation Clearance Form, Section II, titled “Administrative Clearances,” lists the offices that are required to certify (via signature) that the employee has returned any government equipment items. Examples of the listed offices include the Property Custodian, Office of Human Resources, Office of Procurement, and Office of Security.

¹³ Per USPTO Office of Human Resources (OHR) employee: “In processing separation clearance forms for these former full-time teleworkers, the OHR team had to reach out to each clearing office directly to determine if the employees had anything outstanding. Once they received proof of tracking numbers indicating equipment was being shipped back, or confirmation [of receipt of returned equipment] from someone of authority within their office, they attached the documentation to the separation clearance package without writing that information in section II of the form.”

Recommendations

We recommend that the Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office do the following:

1. Improve the inventory certification process by conducting a physical inventory or equivalent alternative procedure of hoteling equipment, at least annually.
2. Improve the process for analyzing equipment assigned to each hoteling employee, and facilitate the return of all unnecessary equipment.
3. Install practices that ensure compliance with DOC's *Personal Property Management Manual* procedures when adding responsibilities to employees to ensure adequate segregation of key duties and responsibilities within the property system.
4. Improve the process for completing 'Separation Clearance Forms' to adequately track and validate that USPTO property was returned by the employee prior to leaving the bureau.

Summary of Agency Response and OIG Comments

On July 19, 2016, OIG received USPTO's response to the draft report, which we include as appendix B of this report. USPTO agreed with our findings, noting that it has either already implemented, or is in the process of implementing, corrective action to address OIG's recommendations. This final report will be posted on OIG's website pursuant to Section 8M of the Inspector General Act of 1978, as amended, 5 U.S.C. App.

In accordance with Departmental Administrative Order 213-5, please provide us your action plan within 60 days of this report. The plan should outline the actions you propose to take to address each recommendation.

We appreciate USPTO's cooperation throughout the audit process. Please direct any inquiries regarding this report to me at (202) 482-2877 or Susan Roy at (404) 730-2063.

cc: Frederick Steckler, Chief Administrative Officer, USPTO
Wynn Coggins, Deputy Chief Administrative Officer, USPTO
Tony Scardino, Chief Financial Officer, USPTO
Welton Lloyd, Audit Liaison, USPTO
Robert Fawcett, Back-up Audit Liaison, USPTO
Katrina Anwar, Office of Planning and Budget, USPTO

Appendix A. Objective, Scope, and Methodology

The objective of our audit was to assess the effectiveness of USPTO's controls over hoteling employees' laptops and other accountable equipment. To meet our objective, we validated whether key controls were in place and operating for the safeguarding and control of IT hoteling assets; ensured employee equipment was accurately recorded in USPTO's inventory tracking system; and assessed USPTO's controls surrounding missing, lost, and/or stolen equipment assigned to employees.

To satisfy our objective, we conducted the following activities:

- reviewed policies and procedures pertaining to property management including the Department's *Personal Property Management Manual*, GAO's *Standards for Internal Control in the Federal Government*, USPTO's telework policy, and USPTO's *Property, Plant, and Equipment Spending and Maintenance Process Memo FY 2015*;
- obtained an understanding of the internal control structure and key USPTO controls;
- reviewed user roles and access controls for the inventory tracking system;
- reviewed USPTO's quarterly inventory process;
- analyzed the equipment assigned to each hoteling employee;
- analyzed the additions, deletions, and transfers to determine if the system properly accounted for these transactions;
- judgmentally selected a sample of employees separated from USPTO to determine if all property was turned in as required;
- assessed USPTO's controls surrounding missing/lost/stolen equipment; and
- interviewed USPTO officials responsible for asset management of hoteling employees' equipment.

We conducted our audit from June to October 2015, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence that provides a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

We conducted our fieldwork under the authority of the Inspector General Act of 1978, as amended, and Department Organizational Order 10-13, dated April 26, 2013. We performed our work at the USPTO office in Alexandria, Virginia, and the Department of Commerce OIG office in Atlanta.

Appendix B. Agency Response



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

JUL 19 2016

MEMORANDUM FOR: Richard Bachman
Assistant Inspector General for Financial
and Intellectual Property Audits

FROM: Michelle K. Lee *Michelle K. Lee*
Under Secretary of Commerce for Intellectual Property
and Director of the United States Patent and Trademark Office

SUBJECT: Response to Draft Report: *USPTO Should Improve Controls Related
to Equipment Used by Full-Time Teleworkers* (June 2016)

Executive Summary

We appreciate the effort you and your staff made in reviewing the United States Patent and Trademark Office's (USPTO's) controls related to equipment used by full-time teleworkers. We are very proud of the success of our telework and asset management programs as both are models of success across the government. However, we recognize there is always room for improvement and we are cognizant of opportunities to make changes to better our program and audit capabilities.

Our response to each recommendation is discussed in detail below.

Response to Recommendations

- (1) *Improve the inventory certification process by conducting a physical inventory or equivalent alternative procedure of hoteling equipment, at least annually.*

USPTO Response:

The USPTO concurs with this recommendation and will conduct an equivalent alternative procedure annually. We fully agree with the need to maintain an accurate inventory and control of all USPTO assets assigned to our full-time teleworking employees; however, given the geographic dispersion of the USPTO's more than 5,000 full-time teleworkers, conducting an annual physical inventory would be neither practical nor cost effective. The USPTO has been working to find a solution to this problem and is in the process of completing an upgrade to its asset management system that will enable remote, real-time confirmation of the assets deployed to our teleworking employees within the next 12 months.

- (2) *Improve the process for analyzing equipment assigned to each hoteling employee, and facilitate the return of all unnecessary equipment.*

USPTO Response:

The USPTO concurs with this recommendation. During the summer of 2015, the USPTO recognized this issue and began looking at the potential causes of the extra equipment assigned to teleworkers. In the fall of 2015, changes were implemented in the data quality and reporting portion of the asset management system to improve our identification of users who do not have a typical configuration at home of one (1) laptop, one (1) router, one (1) printer and two (2) monitors. This report is run weekly and identifies which individuals do not have typical equipment. The report is monitored by inventory support.

Additionally, we engaged the Office of the Chief Information Officer (OCIO), who is responsible for shipping equipment to teleworkers, to determine how the process for following up with teleworkers who need to return equipment could be improved. Some changes have been made including a Mandatory Telework Recertification training to all teleworking employees that confirms that telework equipment must be returned to the USPTO within five (5) business days of separation or receipt of new/replacement equipment. With these changes, the USPTO has significantly enhanced its ability to track and enforce the timely return of this equipment.

- (3) *Install practices that ensure compliance with DOC's Personal Property Management Manual procedures when adding responsibilities to employees to ensure adequate segregation of key duties and responsibilities within the property system.*

USPTO Response:

The USPTO concurs with this recommendation. Upon notification by the OIG in September 2015 that we were in conflict with DOC's Personal Property Management Manual procedures with regards to ensuring adequate segregation of key duties and responsibilities within the property system, the Director of the Office of Administrative Services (OAS) designated a new property custodian to assume the duties which caused the conflict. In addition, we reviewed the membership of the Property Board of Review (PBR) to confirm that there were no additional conflicts.

- (4) *Improve the process for completing 'Separation Clearance Forms' to adequately track and validate that USPTO property was returned by the employee prior to leaving the bureau.*

USPTO Response:

The USPTO concurs with this recommendation. The asset management portion of the Separation Clearance Form currently consists of the signature by the Property Custodian (PC) certifying an employee has returned (or has shipped if a teleworker) all assets before leaving the agency. A project team under the leadership of OCIO and Office of the Chief Administrator was assembled and first met on January 14, 2014, to automate the separation and clearance process. The team completed all the work, including developing the necessary workflow to automate the separation and clearance process. The automated separation process is currently undergoing testing with an expected deployment date of January 2017. In the interim, we have trained the Property Custodians, the Business Unit Telework Coordinators and the Asset Management Team members on tracking equipment return upon separation.

Conclusion

In closing, the USPTO thanks the Principal Assistant Inspector General for Financial and Intellectual Property Audits for providing us with this report. The USPTO has made several improvements since the audit began and is working to implement additional improvements in our controls. The USPTO is confident in our abilities to meet the recommendations in a timely manner, and we look forward to working with your office in the future in our efforts to improve the process by which we control equipment used by full-time teleworkers.