



INVESTIGATIVE REPORT

U.S. Patent and Trademark Office

Analysis of Patent Examiners' Time and Attendance

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*COVER: Detail of fisheries pediment,
U.S. Department of Commerce headquarters,
by sculptor James Earle Fraser, 1934*

I. Introduction

In August 2015, the Office of Inspector General (OIG) released an investigative report outlining extensive time and attendance abuse by “Examiner A,” a patent examiner at the U.S. Patent and Trademark Office (USPTO) who received \$25,500 by falsely claiming to work at least 730 hours in fiscal year 2014. The OIG raised questions about the adequacy of USPTO internal controls, given the extent of Examiner A’s abuse, and management’s inability to prevent, detect, or stop it.¹

The OIG’s findings in the Examiner A Report, other related matters, and Congressional interest, suggested the need to determine whether time and attendance abuse is a prevalent and persistent problem within the USPTO. With that in mind, the OIG undertook a comprehensive review of data related to more than 8,400 of USPTO’s approximately 10,000 patent examiners who worked at USPTO at any point during the scope of the investigation, to determine the overall level of unsupported work hours, which in turn might identify the extent of time and attendance abuse. This effort involved comparing the hours that patent examiners claimed to work over both a 9- and 15-month overlapping periods, on the one hand, with multiple datasets that provided evidence of actual work, on the other.

The resulting analysis provides an overview of potential time and attendance abuse within the patent examiner ranks and key insights to assist USPTO’s management to prevent and detect future abuse, including recommendations that address the concerns raised by these findings.²

¹ Office of Inspector General, Department of Commerce, Investigative Report No. 15-0076, *U.S. Patent and Trademark Office Time and Attendance Abuse by Patent Examiner A* (Examiner A Report), available at <https://www.oig.doc.gov/OIGPublications/OIG-15-0076-I.pdf> (last visited Aug. 19, 2016). Examiner A’s abuse came to light when an anonymous note was left in the offices of his supervisors.

² The OIG has not conducted a criminal investigation (or referred this matter to the U.S. Department of Justice for further investigation) and is not recommending that USPTO pursue administrative action against any of the individual examiners analyzed in this review, due to possible implications of the Computer Matching and Privacy Protection Act of 1988 (CMPPA), Pub. L. No. 100-503, 102 Stat. 2507. In general, the CMPPA imposes certain restrictions on federal agencies’ comparison of multiple datasets to identify misconduct and pursue either criminal or administrative action. Out of an abundance of caution, the OIG designed this analysis to avoid implicating the CMPPA.

II. Summary of Results

The OIG conducted a minute-by-minute review of data for virtually all (94%) USPTO patent examiners' claimed work hours to determine whether the evidence supported work performance. The OIG's analysis focused on two overlapping periods: a 9-month period (Feb. 22, 2015 thru Nov. 28, 2015), following the USPTO's implementation of the February 22, 2015 *Policy on Work Schedule Notification, Communication, and Collaboration (Full-Time Teleworker Policy)*,³ and a 15-month period (Aug. 10, 2014 thru Nov. 28, 2015) consisting of the six months before and the nine months after the *Full-Time Teleworker Policy*'s implementation.

For the 9-month period, the OIG reviewed specific work activities of approximately 8,100 patent examiners and identified 137,622 unsupported hours. This equates to a one-year average of nearly 180,000 unsupported hours. For the 15-month period, the OIG analyzed work activities for roughly 8,400 examiners and identified 288,479 unsupported hours.

The OIG adopted a conservative approach in considering the evidence. These considerations resulted in the OIG excluding a significant amount of unsupported hours in order to ensure that the methodology did not assume unfairly that a particular examiner was not working.⁴ Based on certain examiner records, however, the OIG found that the total unsupported hours over the 9- and 15-month periods could be twice as high as reported in this investigation.⁵

The OIG's analysis further determined that for the 9-month period:

- The 137,622 unsupported hours equate to nearly \$8.8 million in potential waste.⁶
- Approximately 28% of the total unsupported time consisted of overtime hours. The overtime hours equate to over \$2.1 million in potential waste.
- 296 of all examiners covered in this analysis had 10% or more unsupported hours and accounted for 39% of the total unsupported hours. The USPTO paid over \$1.4 million in bonuses to these examiners.
- 226 of those 296 examiners accounted for over 42,000 unsupported hours and also received above-average annual performance ratings.
- 36 of the same 296 examiners claimed unsupported hours equivalent to three days for every 80 hours of computer-related work time.
- The total unsupported hours could have reduced the patent application backlog by 7,530 cases.

³ See App. C, *infra*.

⁴ More information on the exclusions can be found in Section III, *infra*, and Appendix A, *infra*.

⁵ See Section IV.A.4, *infra*.

⁶ The potential waste includes wages and benefits.

For the 15-month period:

- The 288,479 unsupported hours equate to over \$18.3 million in potential waste.⁷
- Approximately 28.5% of the total unsupported time consisted of overtime hours. The overtime hours equate to over \$5.4 million in potential waste.
- 415 of all examiners covered in this analysis had 10% or more unsupported hours and accounted for 43% of the total unsupported hours. The USPTO paid approximately \$7.8 million in bonuses to the 415 examiners.
- 310 of those 415 examiners received above-average annual performance ratings and accounted for nearly 98,000 unsupported hours.
- 56 of the same 415 examiners claimed unsupported hours equivalent to three days for every 80 hours of computer-related work time.
- The total unsupported hours could have reduced the patent application backlog by approximately 15,990 cases.

The OIG also found that the USPTO policies limit the agency's ability to prevent and detect time and attendance abuse. For example:

- The USPTO does not require teleworkers to log in to their computers on workdays if they do not telework full-time.
- Although the majority of examiners with unsupported hours received average or better performance ratings, the USPTO requires that only poor performers provide their supervisors with work schedules.
- The USPTO does not require that on-campus examiners use their USPTO-issued ID badges to exit through the access control turnstiles during weekday working hours.
- The data suggest that USPTO's production goals are out of date and do not reflect current efficiencies.

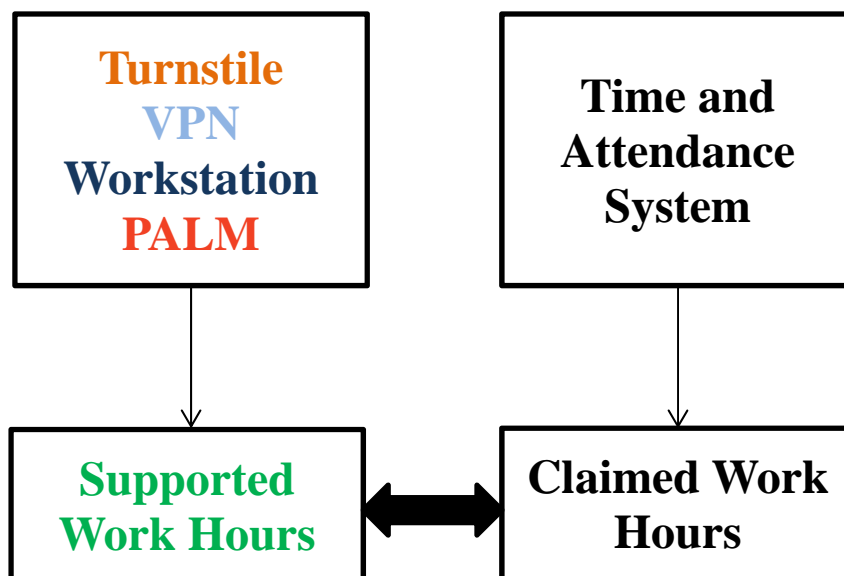
⁷ The potential waste includes wages and benefits.

III. Statistical Methodology Summary

The OIG’s analysis was a minute-by-minute review of data for virtually all USPTO patent examiners over two overlapping periods: a 9-⁸ and 15-month period.⁹

The OIG’s methodology started with four primary data sources: turnstile records, virtual private network (VPN) records, computer workstation records, and Patent Application Locating and Monitoring (PALM) data.¹⁰ The OIG reviewed the millions, and in some cases, billions of records contained in these datasets to calculate the hours during which patent examiners were present on the USPTO campus, connected to the USPTO network, or logged on to their USPTO-issued laptops. The OIG then compared those hours with each examiner’s daily time and attendance records in WebTA (the time and attendance system used by USPTO employees) to determine whether there were discrepancies between the time reported and the time supported by the records. In doing so, the OIG focused on 66 WebTA activity codes.¹¹

Figure 1: Overview of Statistical Architecture



The use of these 66 codes is significant for three reasons. First, these codes were identified by USPTO as being dependent on computer activity for each patent examiner over the review periods. Second, in using these codes to record their work hours, the examiners were affirmatively representing that they were working during that time. Third, the OIG’s analysis

⁸ The 9-month period began on Feb. 22, 2015 and ended on Nov. 28, 2015.

⁹ The 15-month period began on Aug. 10, 2014 and ended on Nov. 28, 2015.

¹⁰ PALM data consists of timestamps reflecting discrete events related to reviews of patent applications.

¹¹ See App. B, *infra*.

examined only those working hours and excluded sick leave, annual leave, and most types of training.¹²

The OIG generally interpreted the data in the light most favorable to the employees. Due to the conservative assumptions made by the OIG, the analysis found many days where the evidence of computer-related work activity appeared to exceed the time claimed for that day. However, the analysis does not determine the maximum number of hours the employees *actually* worked, but rather determines the maximum *possible* hours worked. The OIG fashioned the methodology in this way to give each examiner the best chance to meet their claimed hours. Thus, the analysis capped the daily hours worked at the amount of daily hours claimed by the examiner.

Any instances where it appears an examiner worked more hours than they claimed is likely due to how the OIG interpreted the data. For example, the USPTO does not require employees to use their badge to exit the USPTO facilities between 5:30 a.m. and 10:00 p.m., so the OIG assumed that the examiners were working from the time of their first badge-in until 10:00 p.m. or a badge-out between 10:00 p.m. and 5:30 a.m. In a typical case, an examiner could badge into a USPTO facility at 9:00 a.m. and not have a badge-out record. In that instance, the OIG assumed that the examiner worked until 10:00 p.m. or until such time that supported all claimed hours for that day. This does not mean that an employee who badged-in at 9:00 a.m. actually worked until 10:00 p.m., but it ensures that if an employee claimed twelve hours of work, the OIG assumed that they were working for those twelve hours. A less conservative badge-out methodology may have increased the total unsupported hours by an additional 327,000 unsupported hours.¹³ Similarly, the OIG assumed the examiner was working anytime he or she was connected to VPN, regardless of whether the examiner was actually performing work.¹⁴ Employees on VPN frequently remain logged in for 24 hours at a time. This does not mean that those employees actually worked 24 consecutive hours. Thus, the OIG assumed that those examiners worked the full amount of time claimed for that day rather than 24 hours.¹⁵ In making this assumption, the OIG notes that each examiner attested under penalty of perjury that their claimed hours were accurate, and both supervisors and timekeepers approved and certified those hours. Further, the

¹² All training was excluded except for “IT Security Training,” “No Fear Act Training” and time related to e-learning (“Develop or attend e-learning”). The USPTO included these training codes on a list of examiner activities that were dependent on computer activity. *See App. B, infra*.

¹³ The 327,000 unsupported hours are in addition to the 288,479 unsupported hours already identified in the 15-month period. When the OIG used each on-campus examiner’s final workstation or PALM event to determine when the examiners ended their workday, it found that the examiners worked an average of 4.4 hours less than when the OIG relied solely on turnstile data. This statistic only pertains to examiners who were working at the Alexandria campus and does not include teleworkers.

¹⁴ The OIG also assumed that the employees were working from the time of computer login or computer screen unlock to the time of computer logoff or the locking of the computer screen. If there were multiple occurrences of workstation use in a given day, the analysis generally assumed that the examiner was working from the first instance of workstation data until the last instance of workstation data.

¹⁵ Whenever a government-issued computer connects to the USPTO network, either at the USPTO headquarters or remotely through the VPN, the network records and preserves the date, time, and type, for numerous computer-related events. The OIG focused on four events that a user can perform on his or her government-issued computer: (1) logging on to a computer with a username and password; (2) logging off the computer; (3) locking the computer; and (4) unlocking the computer. A more detailed explanation of workstation records, and how they were used in this investigation, can be found in Appendix A.

OIG reviewed every possible data source to ensure that they received credit for as much time as reasonably possible.

In addition, the OIG combined data from turnstile records, VPN, and computer workstations for each examiner for each day to calculate the total number of claimed hours supported by the data. Thus, if examiners did not badge into a building on USPTO's campus, but had workstation data indicating that they were working, the lack of turnstile data did not count against them. Likewise, if an examiner's workstation and VPN intervals overlapped, the OIG interpreted the data to support the employee's time from the beginning of the workstation data until the time the VPN was disconnected.

The OIG also compared the PALM data, consisting of 24 million individual timestamps showing examiner activity on patent applications, with the turnstile, VPN, and workstation intervals to determine whether the methodology captured each examiner's activity in a given day. The comparison found that only 0.3% of examiner days had unsupported time and at least one PALM data timestamp outside of the supported time intervals for that day.¹⁶ This result suggests that the methodology accurately identifies overall trends. The rare instances where PALM data fell outside of turnstile, VPN, and workstation intervals appeared to occur for various idiosyncratic reasons. As the timestamps reflect discrete events rather than a period of time over which work was performed, the OIG did not attempt to recreate an interval of time worked based on the timestamps available in the PALM data.¹⁷

The OIG identified approximately 2,100 examiner days (0.2% of all examiner days, excluding part-time telework) where there were PALM data timestamps but no turnstile, VPN, or workstation records. In these cases, the OIG assumed that the examiner worked for the entire day based on the existence of the PALM data to ensure that the examiners were not impacted negatively due to the USPTO's lack of turnstile, VPN, or workstation data.¹⁸

The OIG also excluded certain groups of examiners to ensure that this data did not negatively impact the percentage of supported hours:

- Examiners with fewer than 160 hours (approximately four weeks) of claimed hours within the analytical periods.
- Examiners who transitioned to or from supervisory duties at any point during the 9- and 15-month periods, either employees who transitioned from non-supervisory to supervisory or vice versa, in order to eliminate any potential impact on unsupported hours due to the transition.

¹⁶ The OIG identified approximately 3,900 examiner days where the evidence did not support all of the examiners' claimed hours and at least one PALM data timestamp occurred outside of the supported work intervals based on the available workstation, turnstile, and VPN data.

¹⁷ However, even if the OIG assumed that each examiner worked the entire day in this situation—the most conservative approach possible—it would have only reduced the total unsupported hours by approximately 14,000 hours over the 9-month period, and 22,000 over the 15-month period. The use of a less conservative approach would have even less impact on the total unsupported hours.

¹⁸ The lack of turnstile, VPN, and workstation data in these situations is likely due to a USPTO system error.

- Examiners assigned a new user ID to login to USPTO's systems during the periods of review.
- 151 examiners without turnstile records during the analytical periods. Based on the OIG's analysis of the turnstile data, it is likely that many of these examiners have turnstile data associated with their employee ID during the relevant time frames but the data cannot be accessed because an incorrect employee ID was entered into the turnstile database by USPTO personnel.
- 46 examiners who did not have any workstation data during the 9- and 15-month periods.

The OIG assumed that examiners were working during blocks of time associated with 22 information technology incidents, even though each incident prevented certain groups of examiners from connecting to the USPTO network.¹⁹ The methodology also excluded the telework days for examiners in part-time telework programs (*e.g.*, Patents Telework Program (PTP)-10, PTP-20vpn, PTP-20novpn, and PTP-32). The OIG's methodology did not consider whether the examiner took a non-compensable lunch break. Accounting for the 30-minute lunch break would have increased the total number of unsupported hours.

To test the accuracy of the methodology, the OIG ran this methodology over Examiner A's data for fiscal year 2014, the period covered in the Examiner A Report, and found that the unsupported hours were similar to those reported in the Examiner A Report.

Once the OIG determined the volume of unsupported hours, the OIG calculated the average hourly wage and benefits provided to each examiner during the 9- and 15-month periods, and multiplied the number of unsupported hours for each examiner by his or her respective average hourly wage and benefit rate. For the case backlog estimates, the OIG divided the number of unsupported hours associated with each grade level by USPTO's estimation of the number of hours needed to review an application by grade.

Although the methodology made numerous assumptions in favor of the examiners, the OIG believes that the data USPTO provided is sufficiently reliable for identifying trends in the overall number of unsupported hours. Additionally, the data reliably describes the general characteristics of examiners with a large amount of unsupported hours. However, the precise number of unsupported hours and ratio of unsupported time for a specific employee could be affected by a USPTO system breakdown. For example, USPTO may not have collected workstations logs for an individual on a given day. Moreover, some employees may be exceptions because of errant data entry or atypical work circumstances. The OIG ran numerous tests to ensure that data provided by USPTO was accurate and complete, and excluded entries that appeared inaccurate. In light of the various categories of excluded examiners and excluded days, and the OIG's interpretation of data in favor of the examiners, this analysis likely understates the volume of unsupported hours.

¹⁹ See App. E, *infra*.

On March 31, 2016, the OIG presented its preliminary findings to USPTO senior management. In the weeks after the OIG presented the findings, the investigation team also provided the raw data to the USPTO with the algorithms used by the OIG, thereby allowing the USPTO to replicate the analysis on its own. After a review of the algorithms and data, USPTO management provided comments to the OIG. The OIG modified its methodology in response to those comments. A more detailed discussion of the OIG's methodology can be found in Appendix A.

IV. Analysis and Findings

The OIG's analysis reviewed two overlapping periods: a 9-month period beginning with the implementation of the USPTO's February 22, 2015 *Full-Time Teleworker Policy*,²⁰ and a 15-month period that includes the six months preceding the *Full-Time Teleworker Policy* and the nine months following the *Full-Time Teleworker Policy*'s implementation. The OIG's analysis established that, over the 9-month period, 8,067 covered examiners claimed 137,622 hours of work associated with computer-related examiner activity that was not supported by relevant evidence.²¹ The average unsupported time over one year amounted to approximately 180,000 hours. The OIG analysis also indicated that unsupported hours could be twice as high as reported in this investigation.

When accounting for all examiner compensation over the 9-month period, the USPTO paid an estimated \$8,777,005 for the unsupported hours.²² The OIG's analysis suggests that the government potentially failed to receive nearly \$8.8 million in work product that would advance its mission and lessen the patent application backlog by an estimated 7,530 cases.²³

Overall, the majority of the patent examiners covered in the OIG's analysis had few unsupported hours. Still, 5,185 of the examiners had at least some unsupported time during the 9-month period. Of those, 4,156 examiners received above-average ratings on their annual performance evaluations and accounted for 81% of the total unsupported hours.²⁴ The analysis also identified 296 examiners who claimed 10% or more unsupported hours during the 9-month period and accounted for 39% of the unsupported hours.

When the OIG expanded the analysis over the 15-month period, the key trends remained the same. In particular, 8,399 covered examiners claimed 288,479 hours of work associated with computer-related examiner activity that was not supported by relevant evidence. The USPTO paid about \$18,313,718 for the 288,479 unsupported hours.²⁵ There were 415 examiners with 10% or more of unsupported time and those examiners accounted for 43% of the unsupported

²⁰ See App. C, *infra*. The *Full-Time Teleworker Policy* requires that “[a]ll full-time teleworkers must remain logged into [the USPTO network] during their working hours when . . . available to the teleworker.”

²¹ This number represents 1.6% of the total computer-related examining time. The total number of hours associated with computer-related activity over the 9-month period is 8,673,490.

²² Compensation for unsupported hours of all covered examiners over the 9-month period included \$7,163,224 in wages, and \$1,613,781 in benefits. The OIG calculated the estimated wage and benefits provided to each examiner during the 9-month period by multiplying the number of unsupported hours for each examiner by his or her respective average hourly wage and benefit rate.

²³ To estimate the reduction in the backlogs in terms of cases, the OIG multiplied USPTO's estimated average output per examiner by grade and by the number of unsupported hours for each grade level. The population of examiners with unsupported hours may have a different average output. The additional time could have reduced either the new application or Request for Continued Examination backlog.

²⁴ List from best to worst, the possible performance rating categories are: “Outstanding,” “Commendable,” “Fully Successful,” “Marginal,” and “Unacceptable.”

²⁵ Compensation for unsupported hours of all covered examiners over the 15-month period included \$14,975,704 in wages and \$3,338,015 in benefits.

hours. The total unsupported hours for the 15-month period would have lessened the patent backlog by an estimated 15,990 cases.

Table 1. Unsupported Hours (Excluding Part-Time Telework Days)

Key Statistics	9-Month Period	15-Month Period
Total Unsupported Hours	137,622	288,479
Unsupported Overtime Hours	38,052	82,224
Number of Examiners with 10% or More Unsupported Hours	296	415
Examiners with 10% or More Unsupported Hours and Ratings of “Outstanding” (5) or “Commendable” (4)	226 ^a	310 ^b
Examiner Compensation for Unsupported Hours	\$8.8 million	\$18.3 million
Bonuses Paid to Examiners with 10% or More Unsupported Hours	\$1.4 million	\$3.7 million

^a 10 out of the 296 examiners with 10% or more unsupported time did not receive a performance rating.

^b 40 out of the 415 examiners with 10% or more unsupported time did not receive a performance rating.

The investigation also identified both weekly and monthly fluctuations in the number of both unsupported regular and overtime hours. Fridays and Saturdays had the largest total number of unsupported examining hours, while Saturdays and Sundays had the largest percentage of unsupported hours (unsupported hours/examining hours). Although the number of unsupported hours fluctuated month-to-month, the OIG found that they peaked in October, a month after the examiners’ fiscal year production deadline.

As described below, the investigation results suggest that USPTO’s internal controls to combat time and attendance fraud require strengthening. Moreover, the significant number of examiners with above-average performance ratings and substantial amounts of unsupported time calls into question the efficacy of patent examiner performance goals.

A. 296 Examiners Claimed 10% or More Unsupported Hours Over the 9-Month Period

The OIG discovered that a small subset of examiners had a large number of unsupported hours. The data showed that there were 296 examiners with at least 10% of their hours unsupported. These 296 examiners accounted for 39% of the unsupported time during the 9-month period. The USPTO paid the 296 examiners \$3,390,015²⁶ in compensation for 53,617 unsupported hours, as well as 860 bonuses totaling \$1,428,348.

²⁶ Compensation for the 296 examiners’ unsupported hours included \$2,774,763 in wages and \$615,251 in benefits.

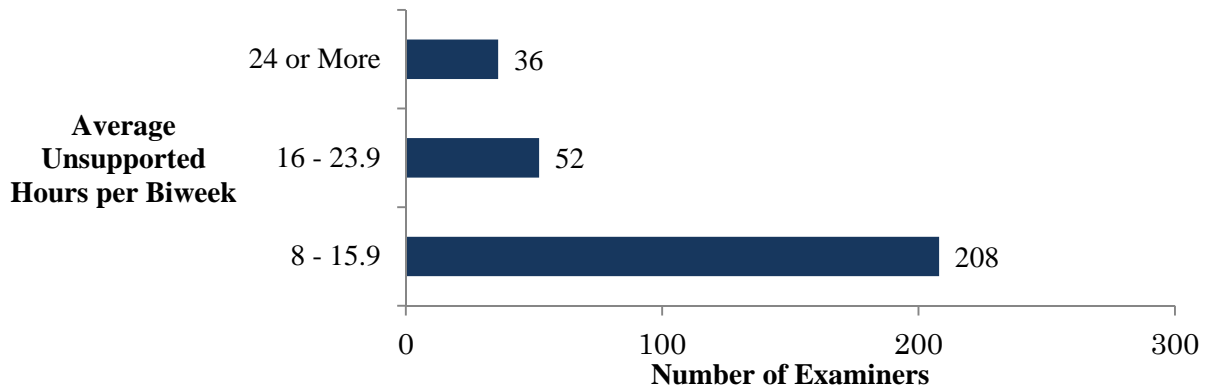
1. *36 of the 296 Examiners Averaged 24 or More Unsupported Hours for Every 80-Hour Pay Period*

Although each of the 296 examiners had at least one full workday unsupported for every 80 hours of computer-related work time (hereinafter referred to as a pay period),²⁷ the evidence established that 36 of the 296 examiners had particularly high rates of unsupported hours (see Figure 2). The data regarding those 36 examiners suggests that they did not work the equivalent of three or more days per pay period. Nineteen of those examiners carried a percentage of unsupported hours similar to Examiner A's ratio from fiscal year 2014, as detailed in the Examiner A Report.²⁸ An additional 52 examiners did not work the equivalent of between two to three days per pay period.

The 296 Examiners with the Highest Percentage of Unsupported Hours

- Accounted for 39% of the unsupported time during the 9-month period;
- Averaged at least eight unsupported hours per pay period;
- Consisted of mainly above-average and high performers; and
- 44% claimed more than 50 unsupported overtime hours.

Figure 2: Hours of Unsupported Time per 80 Hours for Examiners with 10% or More Unsupported Hours



²⁷ That is, for 80 hours of claimed computer-related work time, these examiners had at least eight hours, the equivalent of at least one day, in which the data did not support the work that they claimed.

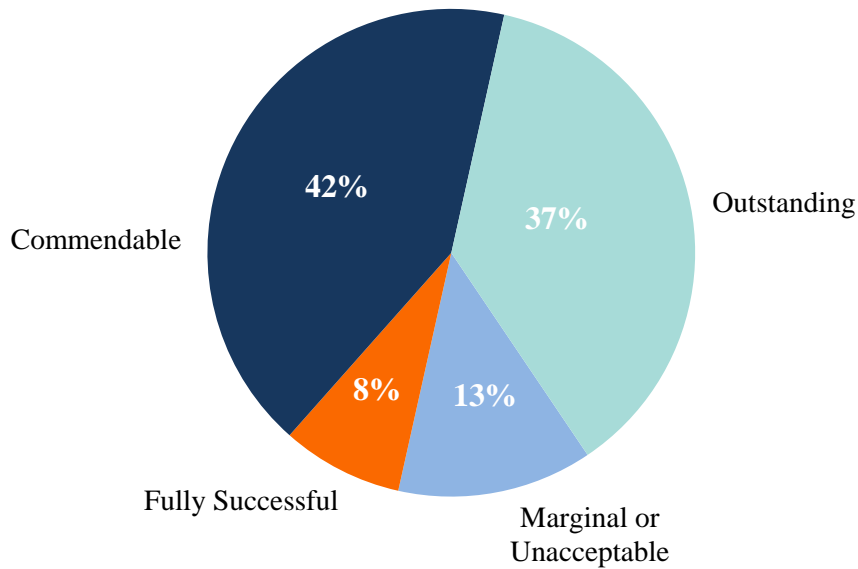
²⁸ The OIG did not investigate the particulars of these employees because the purpose of the analysis was to assess overall trends in potential unsupported time. It is possible that some of these examiners have a high percentage of unsupported time due to peculiar circumstances within the data, while others may actually have significant amounts of unsupported time.

2. *Of the 296 Examiners with the Most Unsupported Hours, Employees with the Best Annual Performance Ratings had the Most Unsupported Hours*

According to their annual performance ratings, the 296 examiners were not uniformly poor performers. In fact, the data suggests that only a small number of those examiners had annual performance ratings that were below average. The OIG received fiscal year 2015 annual performance ratings for only 286 of the 296 examiners; out of the 286 examiners who received ratings during the 9-month period, 120 examiners received a “Commendable” rating and 106 received an “Outstanding” rating,²⁹ yet those groups claimed 22,438 and 19,947 hours, respectively, that were unsupported by any evidence (see Figure 3).³⁰

Examiners with 10% unsupported time and above-average performance evaluation scores accounted for over 42,000 unsupported hours.

Figure 3: Performance Ratings for Examiners with 10% or More Unsupported Time Over the 9-month Period



²⁹ “Commendable” and “Outstanding” ratings indicate that these examiners were above-average performers.

³⁰ Twenty-three “Fully Successful” examiners had 3,753 total unsupported hours. The remaining 7,480 unsupported hours were from examiners with ratings of “Unacceptable” or “Marginal” or missing ratings.

3. *Of the 296 Examiners with the Highest Percentage of Unsupported Hours, Employees with the Best Annual Performance Ratings Also Had the Most Unsupported Overtime*

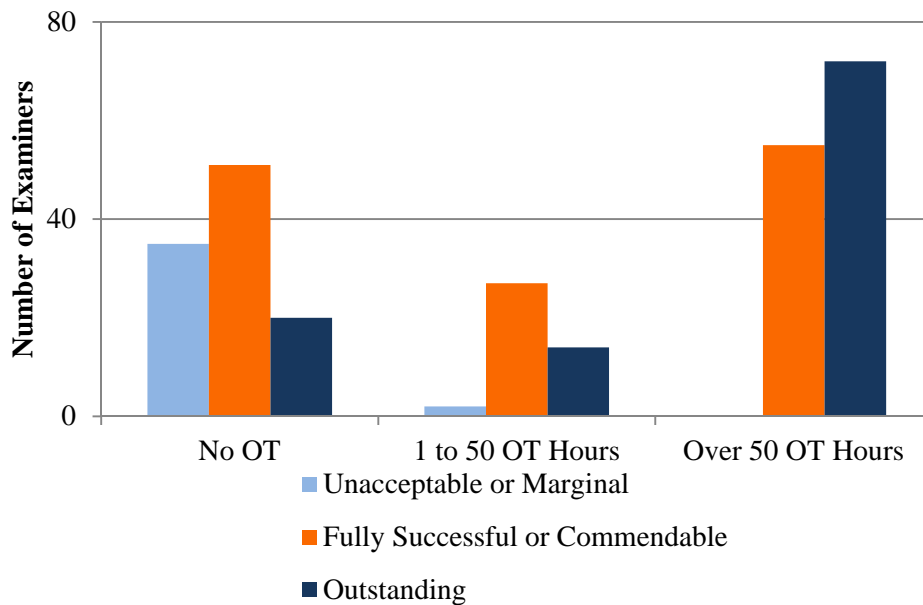
The OIG’s analysis found that the 296 examiners with the highest percentage of unsupported hours also claimed 15,070 unsupported overtime hours.³¹

Approximately 130 of the 296 examiners claimed more than 50 hours of overtime during the 9-month period. Seventy-two of the 296 examiners received an “Outstanding” rating, the highest possible annual performance rating, and claimed over 50 hours of overtime (see Figure 4). Of the 296 examiners in this group, those with above-average ratings claimed 96% of the 15,070 unsupported overtime hours.

Of the 296 examiners with the most unsupported hours, those with “Commendable” or “Outstanding” ratings on their performance reviews accounted for 96% of the unsupported overtime hours.

The existence of highly rated examiners with large unsupported regular and overtime hours indicates that these examiners are likely exceeding their performance goals in less time than allotted and also claiming overtime. Such a result suggests that performance goals may be inadequate and that some examiners are abusing overtime.

Figure 4: Overtime Claimed by Rating for Examiners with 10% or More Unsupported Hours



³¹ The 15,070 unsupported overtime hours represented 28% of the total unsupported hours claimed by the 296 examiners and equated to about \$978,426 (including \$811,488 in wages and \$166,938 in benefits).

4. *Unsupported Hours Could be More Than Twice as High as Reported*

The OIG's analysis of a subset of examiners indicates that there are likely more unsupported hours than reflected in this report. This aspect of the OIG's analysis compared VPN data with a small group of examiners who used a different mechanism to connect to the USPTO network.

Examiners can access the USPTO network securely outside of the USPTO's facilities using a traditional VPN connection. To connect using the traditional VPN connection, the user must initiate the connection and authenticate using a secondary password (*e.g.*, an RSA SecurID token) after logging in to their workstations. The OIG's methodology considered any interval with VPN data as active work time—even if there were no supporting workstation records. That is, the OIG's analysis assumed examiners were working any time their computer was connected to the USPTO network via VPN, even if the USPTO's servers recorded no workstation activity in the claimed time.

However, over the course of the 9-month period, 453 examiners began using Small Office Home Office (SOHO) routers instead of traditional VPN connections.³² In contrast to the traditional VPN connection, a SOHO router constantly maintains a secure connection from the examiner's home to the USPTO, and once the examiner authenticates himself or herself, the examiner can access USPTO's network just as if he or she was on the USPTO's campus.

According to the USPTO's Office of the Chief Information Officer, SOHO workstation records are more reliable than those of other remote users because there is a constant, open connection to the USPTO network.³³ Due to this open connection, the USPTO is able to record all of the workstation records for SOHO users from login to logoff, providing a more accurate recording of computer activity. Consequently, a review of the SOHO participants allowed for a more precise measurement of the time examiners were actually working.

Of the 137,622 unsupported hours over the 9-month period, employees using SOHO routers accounted for only 3,843 hours. However, despite the small number of SOHO hours, the fact that numerous employees transitioned from traditional VPN to SOHO during the relevant period provided an analytical opportunity. The OIG compared the unsupported hours of the relevant examiners one month prior to the use of the SOHO routers with unsupported hours one month after the transition to SOHO by the same examiners. The OIG found that those examiners averaged an *extra* 16 minutes of unsupported time per day in the month following the SOHO transition. The results were statistically significant. The OIG performed the same analysis for the two months before and after the transition to SOHO and found a similar result: 19 additional minutes per examiner per day on average. This was more than double the unsupported time from the two months before—roughly 99% of examiner time was supported prior to SOHO compared with 94% after SOHO. The OIG found a similar result when comparing two weeks prior to SOHO use with two weeks after SOHO use.

³² All examiners in full-time telework programs now use SOHO routers.

³³ When using a traditional VPN connection, workstation data does not transmit until a secure connection to the VPN is established. Thus, any work performed on the workstation prior to connecting to the VPN would not be transmitted to, nor record on, USPTO's servers.

The result of the SOHO/VPN comparison illustrates the effect of a methodology favorable to the examiners—the unsupported hours for VPN users could be twice as high as reported in this investigation. The VPN remains connected without examiner activity for 24 consecutive hours. Without so much as moving a mouse, an examiner can remain connected to the VPN for a full day—examiners need only login one time for the OIG’s analysis to assume the examiner was working. However, when examining only valid, reliable workstation records generated by SOHO users, the unsupported hours doubled, indicating that the number of unsupported hours associated with full-time teleworkers is likely much larger.

5. *No Predictors of Unsupported Hours*

Notably, the OIG did not identify traits for the examiners analyzed that could predict unsupported hours across a sufficiently robust range of characteristics. For example, performance ratings, tenure with the agency, the prior year’s performance scores (such as production, quality, and docket management scores), high rates of returns,³⁴ and end-loading³⁵ were not predictive of unsupported hours when controlling for technology center, grade, and quarterly fluctuations. There was a positive correlation between examiners who received discipline or warnings for misconduct in the prior year, and examiners with unsupported hours, but the results were not substantively significant across characteristics.³⁶ However, a likely reason why these characteristics were not predictive was because methodology overwhelmingly favored the examiners with respect to their time in the office and their time connected to the VPN. It is possible that a less-conservative methodology would show a statistically significant correlation between unsupported hours and certain characteristics.³⁷

B. Key Trends Remained the Same Over a 15-Month Period

The OIG expanded its analysis to a total of 15 months, beginning in August 2014, in order to ascertain a broader picture of the issue. The OIG looked at a 15-month period, including the six months before the USPTO’s *Full-Time Teleworker Policy* and the nine months after the *Full-Time Teleworker Policy*, and compared it with the 9-month period.³⁸ The OIG found that key

³⁴ Administrative staff review specific aspects of all determinations and return incomplete decisions to examiners for correction before the applicants are informed of the decision.

³⁵ End-loading refers to the practice whereby some patent examiners submit a high volume of written decisions at the end of each quarter.

³⁶ These factors account for roughly 1% of additional unsupported time when controlling for other factors.

³⁷ The OIG could not reach a conclusion as to whether examiners in full-time telework programs or on-campus examiners were more likely to claim unsupported hours because the assumptions used in the methodology, which generally favor the examiner, are different for each record type. The calculations of unsupported hours rely largely on turnstile records for examiners who work on the USPTO’s campus and VPN/workstation records for teleworkers. Essentially, if an examiner entered the USPTO facility at some point, the OIG’s analysis assumed those examiners worked all day. On the other hand, the OIG’s analysis assumed that teleworkers worked as long as they were connected to the VPN. Thus, any comparison of teleworking with working on campus would be more a reflection of the methodology applied to the available records than the examiners themselves.

³⁸ See App. C, *infra*. As mentioned above, the USPTO *Full-Time Teleworker Policy* requires that USPTO employees in full-time telework programs, including examiners teleworking full-time, remain logged in to the USPTO network during their working hours.

trends identified in the 9-month analysis remain the same over the 15-month period. The total unsupported hours over the 15-month period represented 2% of the total number of hours associated with computer-related activity over that period, the same percentage as found for the 9-month period. The examiners with 10% or more unsupported hours account for 43% of the total unsupported hours over the 15-month period. In addition, among the examiners with 10% or more unsupported hours, the vast majority still had high performance ratings and accounted for a large number of overtime hours.

1. 288,479 Unsupported Hours Over a 15-Month Period

Over the 15-month period, the OIG found that 8,399 covered examiners claimed 288,479 hours of work associated with computer-related examiner activity unsupported by relevant evidence. The USPTO provided an estimated \$18.3 million in compensation (\$14,975,703.6 in wages and \$3,338,014.86 in benefits) for the 288,479 unsupported hours.

- 415 examiners had 10% or more of unsupported time and accounted for 43% of the unsupported hours. The 415 examiners were paid \$3.7 million in bonuses;
- 56 of the 415 examiners averaged 24 or more unsupported hours per pay period, and 70 examiners averaged between 16 and 24 unsupported hours per pay period;
- 310 of the 415 examiners received above-average 2015 annual performance ratings;
- 37,147 of the 123,480 unsupported hours claimed by the 415 examiners were overtime hours; and
- Of the 8,399 covered examiners, those with above-average performance ratings accounted for 77,779 unsupported overtime hours.

2. Unsupported Hours for Examiners in Full-Time Telework Programs were Lower After the USPTO's Full-Time Teleworker Policy was Implemented

The OIG compared the data before and after the implementation of the *Full-Time Teleworker Policy* for examiners in a full-time telework program to determine if there was a difference in unsupported hours for that group. The OIG found that the unsupported hours for examiners in full-time telework programs (*e.g.*, Patent Hoteling Program (PHP) and Telework Enhancement Act Pilot Program (TEAPP) participants) was approximately three minutes less per examiner per day after the *Full-Time Teleworker Policy* was implemented, and the reduction was statistically significant. However, the OIG could not determine if the difference was due to the *Full-Time Teleworker Policy* itself or other events occurring at this time.

In addition, the OIG found that, between August 10, 2014 and February 22, 2015, there were 5,254 examiner days where examiners in full-time telework programs did not have any evidence of work—meaning that they did not establish a VPN connection, have workstation records, or PALM data timestamps. Additionally, of those 5,254 examiner days, 1,291 were consecutive days where they claimed time in WebTA but had no evidence of work. While both statistics are troubling, the consecutive days without support are more troubling, as they indicate examiners

claim work for two or more full days without logging in to email or using the examiner suite of software necessary to perform the majority of their work.

The OIG acknowledges that the USPTO did not require examiners in full-time telework programs to log in to the USPTO network during working hours until it implemented the *Full-Time Teleworker Policy* on February 22, 2015. Prior to the *Full-Time Teleworker Policy*, a full-time teleworker could telework without turning on his or her computer to access the USPTO network in order to respond to emails or use the examiner suite of software. When analyzing the six months prior to the implementation of the *Full-Time Teleworker Policy*, the OIG did not exclude hours for full-time teleworkers based solely on the possibility that those examiners were permitted to work offline. The OIG recognizes, however, the possibility that examiners may have worked offline and that, as a result, the total number of unsupported hours for full-time examiners could be lower over the 15-month period.³⁹

3. 11% of Examiner A's Hours were Unsupported

Examiner A, the subject of the Examiner A Report, was one of the 415 examiners with 10% or more unsupported hours. Like the OIG's investigation of Examiner A, which established that 43% of Examiner A's claimed work in 2014 was unsupported, this analysis generated similarly troubling results. In particular, during the roughly seven months Examiner A was employed at the USPTO during the 15-month period, 11% of Examiner A's hours were unsupported.⁴⁰

The difference in Examiner A's unsupported hours during the 15-month period, as compared to his unsupported hours in fiscal year 2014 documented in the Examiner A report, stems from several factors. First, Examiner A was employed at the USPTO for less than half of the 15-month period—Examiner A resigned from the USPTO two hours prior to a scheduled interview with OIG investigators in early 2015. Second, Examiner A's work pattern appears to have changed. For example, in fiscal year 2014, there were 65 days in which Examiner A claimed to have worked that lacked any data, which accounted for most of Examiner A's unsupported hours. However, during Examiner A's last seven months at the USPTO, there were only seven days in which Examiner A claimed to have worked that lacked data to support any work taking place. The remainder of Examiner A's unsupported hours were found on days where Examiner A had support for some of the claimed hours.

³⁹ Since the OIG methodology uses VPN and workstation records to support work time for teleworkers, this approach could incorrectly determine that certain hours were unsupported if the examiners were working but did not connect to the USPTO network.

⁴⁰ As indicated in Section III, *supra*, the OIG ran the methodology used in this report over Examiner A's data for fiscal year 2014, the period covered in the Examiner A Report, and found a similar amount of unsupported hours over the same period.

C. The OIG's Analysis Excluded a Significant Number of Unsupported Hours Claimed by Examiners in Part-Time Telework Programs

Although full-time teleworkers are now required to log in to the USPTO network when they are teleworking, the USPTO continues to allow part-time teleworkers to claim work time without logging on to their computers. If examiners in part-time telework programs do not login, it may appear as if at least some were not working when, in fact, they were working offline. Therefore, out of an abundance of caution, the OIG excluded 32,748 unsupported hours over the 9-month period and 70,943 unsupported hours over the 15-month period associated with examiners in part-time telework programs from the total unsupported hours found over both the 9- and 15-month periods.⁴¹

D. Total Unsupported Hours and the Percentage of Unsupported Hours are More Prevalent During Certain Months and Days

1. Quarterly Peaks of Unsupported Hours

The OIG found that there are quarterly peaks of unsupported hours in the months of January, April, July, and October. Examiners are rated by how many patent reviews they complete each quarter. Due to these quarterly production targets, examiners must turn in their work by the end of March, June, September, and December. If they exceed the production targets established by the USPTO, they can receive bonuses.

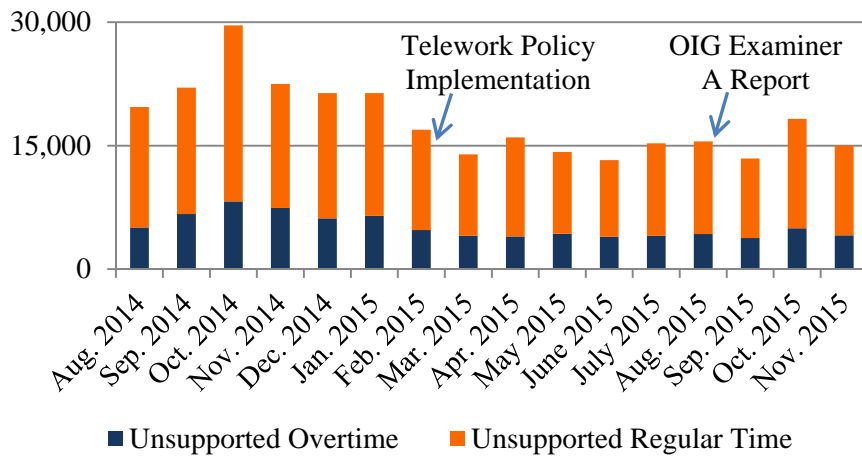
After each examiner production deadline, the OIG observed an increase in the percentage of unsupported hours.⁴² Furthermore, the month of October had some of the highest unsupported hours in the dataset.

The data also showed that unsupported hours dropped in the month following the Examiner A Report. It is unclear whether the report was the cause of the reduction. The decrease in unsupported hours, however, was only temporary, as the unsupported hours for October 2015 and November 2015 were higher.

⁴¹ It is unclear how often examiners in part-time telework programs work offline. During discussions with USPTO prior to the release of this report, the USPTO indicated that examiners in part-time telework programs work offline on telework days, but did not indicate how frequently they do so. On the other hand, junior examiners are not permitted to telework, and, as the OIG noted previously, witnesses stated that few mid-level and senior examiners work offline. *See Examiner A Report.*

⁴² In addition, in all instances but one, there are a higher number of unsupported hours in the months following the production deadlines.

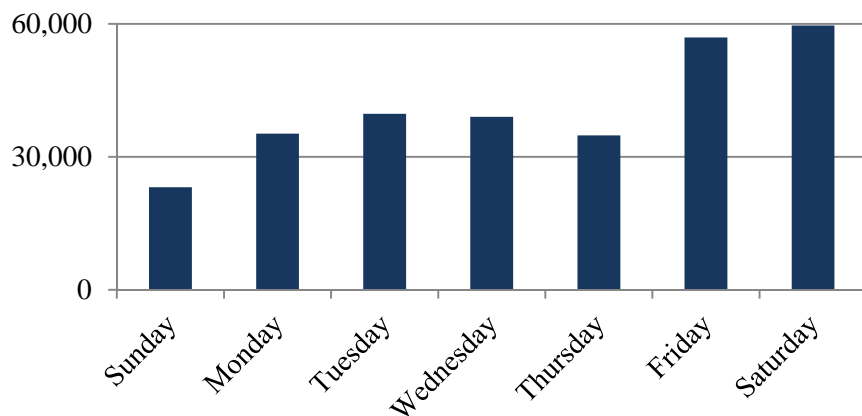
Figure 5: Unsupported Work Hours by Month Including Overtime from August 2014 to November 2015



2. Fluctuation by Day of the Week⁴³

When the OIG examined the amount of unsupported hours on a daily basis over the 15-month period, Sundays had over 23,000 total unsupported hours, the lowest number for any day of the week (see Figure 6). Conversely, Fridays and Saturdays had just under 60,000 total unsupported hours each day. This finding is not surprising, considering that, on average, only 426 examiners claimed work hours on Sundays. By contrast, Fridays averaged 4,706 examiners with claimed work hours.

Figure 6: Total Unsupported Hours by Day of the Week

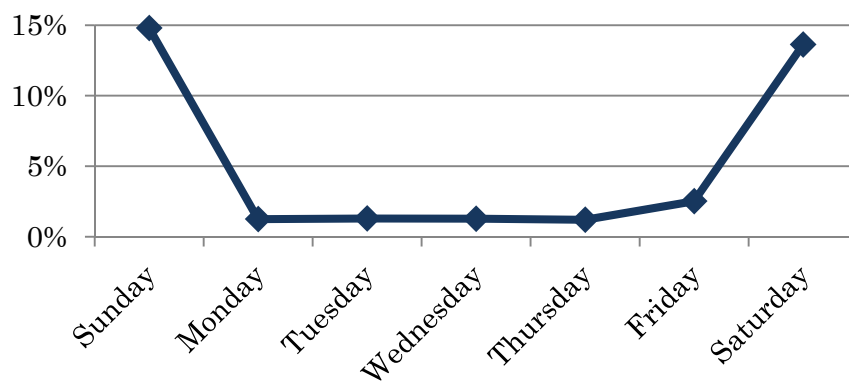


While Fridays and Saturdays had the largest number of *total* unsupported hours, Sundays had the largest *percentage* of unsupported hours over the 15-month period (see Figure 7). Overall, 14-15% of the total claimed hours on Saturdays and Sundays were unsupported by the data—the

⁴³ The 9-month fluctuations are similar to the 15-month findings.

remaining days had 2.5% or less. These results indicate that, even though a small number of examiners work on Saturdays and Sundays, a higher percentage of the time claimed by examiners working over the weekend is unsupported.

Figure 7: Percentage of Unsupported Hours by Day of the Week



V. Additional Findings

A. Results Suggest USPTO’s Internal Controls Remain Deficient in Preventing or Detecting Time and Attendance Abuse

Similar to the OIG’s findings in the Examiner A Report, the sheer volume of unsupported hours suggests that the USPTO’s internal control system used to monitor and prevent time and attendance abuse remains deficient. The OIG identified a number of recommended actions that would bolster the agency’s ability to prevent, detect, and deter such abuse—namely, requiring all examiners to provide their schedules to their supervisors in advance, requiring employees to use their badge to exit a USPTO facility, and requiring part-time teleworkers to log in to the USPTO VPN network during their telework hours.⁴⁴

The first of those recommended changes—requiring examiners to provide their schedules to their supervisors in advance—was included in the Examiner A Report. In response to this recommendation, the USPTO recently informed the OIG that the three unions at USPTO, including the examiners’ union, have reached an agreement that requires examiners to provide their schedules in advance, in certain limited situations. According to the July 6, 2016 USPTO *Policy on Work Schedule Notification (Schedule Policy)*, “increased schedule notification” must be provided when an examiner receives (1) a warning of unacceptable performance; (2) disciplinary action for misconduct related to time and attendance, work schedule, work credit abuse, or telework; or (3) an “Unacceptable” or “Marginal” rating in the most recent quarter.⁴⁵ The increased schedule notification requirement lasts only for the duration of the unacceptable

⁴⁴ See Section VI, *supra*.

⁴⁵ See App. F, *infra*.

performance warning, or for seven pay periods in instances of disciplinary action or poor performance ratings.

The new *Schedule Policy* focuses on the worst performers and problematic employees, and will likely affect only a small group of examiners. USPTO supervisors still face great difficulty in determining the actual work status for the majority of their subordinates, those who did not fall within the thresholds of the *Schedule Policy*, including examiners with 10% or more unsupported time who are above-average to high performers.

Further, the fact that supervisors do not actually know when both teleworking and non-teleworking examiners are working makes it difficult for supervisors to accurately review and approve timesheets.⁴⁶ Advance knowledge of all of the patent examiners' weekly work schedules would allow supervisors to cross-reference those schedules with the examiners' actual work status, regardless of performance. Doing so permits the supervisor to determine accurately when an examiner is not working and whether an examiner's claimed hours are unsupported.

In addition, any time and attendance analysis is more accurate if it can be determined when an employee enters and exits the office. The USPTO previously recorded the date and time that an employee exited campus buildings using their badge, but the agency limited that function to late nights and weekends beginning in May 2008. As a result, it is difficult for the USPTO to detect the time and attendance abuse or deter future abuse because the agency is unable to determine when on-campus employees leave for the day during the workweek. Requiring employees to use their badge to exit the building at all times would be a significant step in preventing time and attendance abuse by its on-campus employees. The OIG made a similar recommendation in the Examiner A Report. However, at the time of drafting this report, the USPTO was still considering whether to require employees to badge-out at all times.

Finally, the USPTO made strides by requiring full-time teleworkers to log-in when teleworking, but the agency stopped short of applying the *Full-Time Teleworker Policy* to examiners in part-time telework programs. It is unclear why the USPTO treats examiners in full-time telework programs differently from examiners in part-time telework programs in this regard. Examiners in both telework programs perform the same type of work, and examiners in both telework programs can, theoretically, review prior art offline while teleworking. Without extending the *Full-Time Teleworker Policy* to examiners in part-time telework programs, it will be difficult for the agency to track when those examiners are working offline, and thus it complicates the process by which the agency monitors time and attendance abuse.

B. Data Suggests USPTO's Production Goals are Out of Date and Do Not Reflect Current Efficiencies

The OIG's analysis—particularly the data regarding examiners who claimed a significant amount of unsupported hours and received high performance ratings—suggests that the

⁴⁶ See Section III, *supra*. The USPTO should not assume that an examiner worked the full amount of time supported by the OIG's methodology. The OIG's methodology was conservative and, in most cases, overinclusive regarding the hours the examiner worked.

USPTO's production goals need revision upwards. As noted above, the majority of unsupported hours identified in the OIG's analysis are associated with examiners who received above-average or exceptional performance ratings. In fact, the vast majority of the 296 examiners with 10% or more unsupported time during the 9-month period received "Commendable" or "Outstanding" ratings on their annual performance evaluations. Therefore, according to the USPTO's rating system, their scores indicate that they are high performers who meet or exceed their production goals on a consistent basis. They also received production bonuses for meeting their goals. Yet those examiners accounted for 42,384 unsupported hours, with 14,416 unsupported hours of that total paid as overtime.

These findings suggest that those examiners met—or even exceeded—their performance goals by completing their work assignments in less time than allotted by their production goals. This, in turn, calls into question the adequacy of those production goals and suggests that a potential abuse of time is possible because the production goals for many of the art units do not reflect efficiencies in work processes. The findings also suggest that USPTO is paying production bonuses to examiners who are possibly defrauding the agency.

Examiner production goals are determined by grade level and set a specified number of hours to complete each patent application. Production goals were last set by art unit in 1976. Since then, the method of examining patents has become more automated with the advent and advances of computers and related programs, and the internet. While USPTO has not reevaluated the production goals for each art unit since 1976, it *increased* the amount of hours allowed for each patent review by an average of 2.5 additional hours per application,⁴⁷ regardless of difficulty of the subject matter.⁴⁸ In April 2016, the USPTO again increased the time allowed for patent application review for certain art units because of a change in how it classifies patents.⁴⁹ However, while advances in technology have increased patent examiner efficiency, a 2004 OIG audit found that the complexity of patents has not materially increased.⁵⁰ Thus, the performance standards have become easier because patent examiners now have additional time to meet their production goals for the same amount of work, despite technological improvements that facilitate patent review.

This additional time leaves room for abuse. For example, an examiner who works 80 hours performing patent examinations and is expected to complete a patent application every 20 hours, must complete four reviews to meet the production goal. If an efficient examiner needs only 65 hours to complete the reviews for which 80 hours have been allotted, that examiner can theoretically do nothing for the excess 15 hours and still achieve a "Fully Successful" rating. Alternatively, that employee could complete five applications in 82 hours and claim 100 hours of work, 18 hours more than the employee worked, in order to receive 20 hours in overtime pay and

⁴⁷ The USPTO refers to these adjustments as "per balanced disposal," rather than "per application."

⁴⁸ Agreement between the USPTO and Patent Office Professional Association to Extend and Modify the 2010 Count System Initiatives (Aug. 31, 2010); Memorandum from Andrew Faile, Deputy Commissioner for Patent Operations, to the Patent Examiner Corps, *FY 2014 Examiner Production Credits and Examiner Expectancies* (Sept. 20, 2013).

⁴⁹ The USPTO migrated from the U.S. Patent Classification System to the Cooperative Patent Classification System.

⁵⁰ United States Department of Commerce, Office of Inspector General, *USPTO Should Reassess How Examiner Goals, Performance Appraisal Plans, and The Award System Stimulate and Reward Examiner Production* (Sept. 2004), available at <https://www.oig.doc.gov/OIGPublications/IPE-15722.pdf> (last visited Aug. 15, 2016).

potentially an above-average rating. The large amounts of unsupported regular and overtime hours claimed by above-average and high performers are an indication that abuse, similar to the hypothetical, is taking place within the examiner ranks.

The U.S. Government Accountability Office (GAO) recently estimated that, based on a web-based survey of 3,336 examiners, 70% of examiners have “less time than needed to complete a thorough examination.”⁵¹ The findings of this investigation, however, suggest that at least some examiners have surplus time. The analysis does not prove whether production goals are too permissive or restrictive, but, given the importance of accurate production goals to USPTO’s business model and the potential for abuse, the agency should update its standards by art unit.

⁵¹ GAO, *Patent Office Should Define Quality, Reassess Incentives, and Improve Clarity*, 25-26 (June 2016), available at <http://www.gao.gov/assets/680/678113.pdf> (last visited Aug. 15, 2016). The OIG takes no position on the accuracy of the GAO estimate.

VI. Recommendations

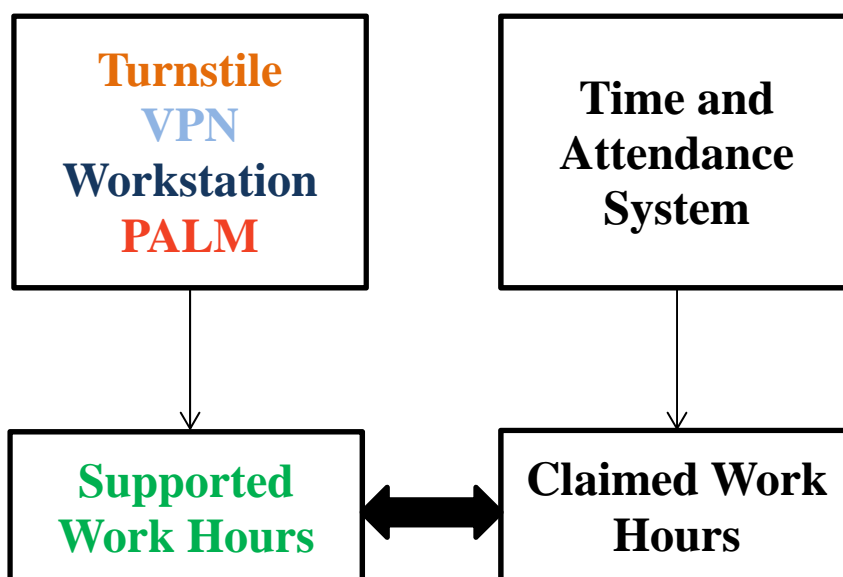
In light of the findings contained in this report, the OIG makes the following recommendations:

1. The USPTO should reevaluate its examiner production goals for each art unit and revise them, to the extent necessary, to reflect efficiencies in work processes from automation and other enhancements.
2. The USPTO management should require all examiners to provide supervisors with their work schedules, regardless of performance and ratings.
3. The USPTO should reinstate the USPTO requirement that employees use their USPTO-issued ID badges to exit the USPTO facilities through the controlled-access turnstiles during weekday working hours.
4. The USPTO should require all teleworkers to remain logged into the USPTO network during their working hours when the network is available to the teleworker.
5. The USPTO should review its policies, procedures, and practices pertaining to overtime hours to identify and eliminate the areas susceptible to abuse.
6. The USPTO should consider deploying SOHO routers by all teleworkers.

Appendix A: Statistical Methodology

The OIG’s research into time and attendance abuse used four primary data sources: turnstile records, virtual private network (VPN) records, computer workstation records, and PALM data. The OIG reviewed each of these datasets to determine the hours during which patent examiners were present on the USPTO campus, connected to the USPTO network, or logged on to their USPTO-issued laptops. The 9-month period began on February 22, 2015 and ended on Nov. 28, 2015. The 15-month period began on Aug. 10, 2014 and ended on Nov. 28, 2015. In total, the OIG analyzed the data for over 11,000 patent office employees, and include over 8,000 patent examiners in the analysis. The OIG then compared the results with time and attendance data showing the number of hours examiners claimed to have worked during the analytical periods. Figure 1 below illustrates the structure of OIG’s methodology.

Figure 1: Overview of Statistical Architecture



Time and Attendance Records

The USPTO maintains a time and attendance system, which employees use to report and certify work and leave hours. This system is commonly referred to as “webTA.” The OIG obtained daily time and attendance entries for all patent examiners during the relevant periods from the USPTO’s Office of Human Resources. The time and attendance data consisted of approximately 1.9 million records.

The OIG reviewed USPTO activity codes used by examiners to determine which ones were relevant to the investigation. The OIG excluded leave hours from the analysis, along with codes associated with information technology-related computer issues. The OIG then

Time and Attendance Records Excluded from the Methodology:

- Leave codes
- Most Training codes
- IT-related codes
- All other codes associated with activity that does not require use of the USPTO network

presented the remaining codes to USPTO’s management and asked that the USPTO identify only those codes that require examiners to log in to the USPTO network in order to complete their work. Once identified, the OIG removed all other codes from the analysis, which resulted in 66 activity codes associated with examiner-related computer activity.⁵²

The OIG then calculated a daily total of hours for each patent examiner over the 9- and 15-month periods based on the 66 activity codes. For example, if an examiner claimed eight hours of work on a given day, but six hours were spent in training and two hours were associated with examiner-related computer activity, the total number of claimed hours for that day was only two hours (*see* Table 1). Thus, the examiner only needed evidence to support two hours of work activity for that day. The 66 activity codes represent 76% of all examiner time and 94% of examiner time excluding leave and holidays.

Table 1. Hypothetical Example of Claimed Hours Versus Tested Hours

Activity Code	Total Hours Claimed by Examiner	Included in the OIG Methodology	Claimed Hours Tested by the OIG
Training ⁵³	6	No	
Patent Examination	2	Yes	2
Total	8		2

The OIG then tested whether there was evidence, such as turnstile records, VPN records, and computer workstation records, to support the hours claimed.

Turnstile (Badge) Records

The USPTO uses controlled-access turnstiles to gain entry into buildings on the USPTO campus in Alexandria, Virginia.⁵⁴ The turnstiles are activated only when an employee swipes a valid identification badge at the card reader. The USPTO’s turnstile system records the date and time of entry, along with identifying information about the badge that was used to activate the turnstile. The OIG obtained over 13 million turnstile records for patent examiners from the USPTO’s Office of Security and Safety. The OIG culled this into a smaller database consisting only of records for patent examiners employed at the USPTO during the analytical periods using information provided by the USPTO’s Office of Human Resources.

While the USPTO employees are required to badge-in when entering the building at all times, they are only required to badge-out on nights (between 10:00 p.m. and 5:30 a.m.) and on weekends.

⁵² All training was excluded except for “IT Security Training,” “No Fear Act Training” and “Develop or attend e-learning.” The USPTO included these codes on the list of examiner activities that were dependent on computer activity. *See* App. B.

⁵³ *See* footnote 49, *supra*.

⁵⁴ Examiners working at the Detroit, Denver, Dallas, and Silicon Valley offices do not have turnstile records.

Although it is not required, some USPTO employees choose to badge out when exiting the building. When this type of data was available, the OIG determined the total number of hours examiners were present in a facility by calculating the difference between the earliest badge-in record and the latest badge-out record for each continuous time interval. However, in the vast majority of cases, the OIG could not determine when examiners exited the USPTO facilities because the USPTO policy does not require employees to badge out. In cases where there was only badge-in data, the methodology favored the examiner—the OIG assumed that the examiner was working from the time of their first badge-in until 10:00 p.m., or until such time that supported all claimed hours for that day. In a typical case, an examiner could badge-in at 9 a.m. and not have a badge-out record. Here, the OIG assumed the examiner worked for all claimed hours up to 13 hours (9:00 a.m. until 10:00 p.m.).

The turnstile data methodology favored the examiner by assuming the examiner was working:

- from time of badge-in until 10:00 p.m. or badge-out; and
- from 12:00 a.m. until a badge-out time prior to 5:30 a.m.

Absent badge-out data between 10:00 p.m. and 5:30 a.m., when examiners are required to badge out, the OIG assumed that the employee did not work after 10:00 p.m. However, if a badge-out record appeared between 10:00 p.m. and 5:30 a.m. the next morning, the OIG assumed the employee worked until midnight on the first day and, for the subsequent day, up until badge-out. In other words, if an examiner badged in at 4:00 p.m. and left at 2:00 a.m., the OIG assumed the employee worked eight hours (4:00 p.m. until 12:00 a.m.) on day one and another 2 hours (12:00 a.m. until 2 a.m.) on day two. This methodology favored the examiner, as it assumed that the employee worked from their badge-in time until their badge-out time the following day.⁵⁵ A less conservative badge-out methodology may have increased the total unsupported hours by an additional 327,000 unsupported hours.⁵⁶

Virtual Private Network Records

Examiners can access the USPTO network securely outside of the USPTO's facilities using a VPN connection. To connect using the VPN, the user has to initiate the connection using the appropriate software and authenticate using a secondary password (*e.g.*, RSA token). The USPTO's VPN database captures the time and type of VPN events, such as when an examiner connects to or disconnects from the VPN. This data is recorded upon connecting to VPN using a government-issued laptop or a personal computer.

The OIG obtained VPN data from the agency's Office of the Chief Information Officer (OCIO), which was provided in individual monthly files and consisted of approximately 359 million records. As with turnstile data, data for all USPTO employees was obtained and culled by the

⁵⁵ Thus, when an employee's first record of the day was a badge-out time, the OIG assumed both a start time of midnight, and that the examiner worked from midnight until their badge-out time, if applicable.

⁵⁶ The 327,000 unsupported hours are in addition to the 288,479 unsupported hours already identified in the 15-month period. When the OIG used each on-campus examiner's final workstation or PALM event to determine when the examiners ended their workday, it found that the examiners worked an average of 4.4 hours less than when the OIG relied solely on turnstile data. This statistic only pertains to examiners who were working at the Alexandria campus and does not include teleworkers.

OIG into a smaller subset of patent examiners, based on information provided by the Office of Human Resources. The OIG also adjusted VPN events to the user's appropriate time zone, as all events were originally timestamped in the Eastern Time Zone.

The OIG incorporated all VPN events for each examiner. These events include logons, logoffs, and all records in between. In particular, when USPTO employees are connected to the network through the VPN, their computers engage in a "key exchange" with the USPTO servers every 16 minutes. The VPN generates key exchange events as long as the user remains connected—the examiner does not need to use any programs, open documents, or even move the mouse. Although the key exchange indicates only interconnectivity between the user's computer and the network, the OIG identified key exchanges (approximately 70% of all VPN records) and all other VPN events as evidence of work activity.

In cases where the OIG identified two VPN events within a 17-minute interval, it assumed that the examiner performed work for the entire 17-minute period. The OIG used 17 minutes because the VPN generates key exchanges every 16 minutes. Being cautious, the OIG included the one-minute buffer in case an event transmitted shortly after the 16-minute threshold. Thus, the OIG assumed the examiner was working anytime he or she was connected to VPN, regardless of whether the examiner was actually working. This methodology favored the examiner. If two consecutive events were more than 17 minutes apart, the OIG treated the events as two separate intervals because such a situation indicates the examiner disconnected from the VPN. In that scenario, the OIG did not assume that the examiner was working between the two events.

The VPN methodology is favorable to the examiner because it assumed the examiner was working the entire time he or she was connected to VPN, regardless of whether he or she was actually working.

In some cases, a key exchange straddled midnight. In this situation, the OIG considered the time within the key exchange interval up to midnight as evidence of work that first day. The time from midnight until the end of the interval was also considered evidence of work, but for the following day.

Essentially, under this methodology, the only thing an examiner using VPN needed to do in order to create support for his or her claimed hours was to log in to VPN and stay connected.

Computer Workstation Records

Whenever a government-issued computer connects to the USPTO network, either at the USPTO headquarters or remotely through the VPN, the network records and preserves the date, time, and type, for numerous computer-related events. The OIG focused on four events that a user can perform on his or her government-issued computer: (1) logging on to a computer with a username and password; (2) logging off the computer; (3) locking the computer; and (4) unlocking the computer.

The OIG obtained over 18.7 billion workstation records from the agency's OCIO, which the OCIO provided to the OIG in individual monthly files. If workstation data was available on a particular day, the OIG used that data to determine an interval of time worked (*i.e.*, a start time

and end time pair). The OIG assumed that the employees were working from the time of computer login or computer screen unlock to the time of computer logoff or the locking of the computer screen. If the workstation data lacked sequential workstation pairs, the OIG matched the longest sequential pair and considered that interval as evidence of work.

When there were multiple logons and logoffs in a day, the OIG assumed that the employees worked from their first logon until their final logoff, including all gaps between the intervals, if the total amount of the gap was less than or equal to the total amount of claimed hours for the day. Logic dictates that if the gap between intervals was greater than the total claimed hours, the examiner would have accounted for that time when recording his or her hours in the time and attendance system, and thus his or her claimed hours would have been larger.

For example, if an examiner had six total claimed hours for the day and had two workstation pairs of two hours and three hours, respectively, with a four-hour gap of time between those intervals, the OIG looked at whether the gap between the workstation intervals was more or less than the six total claimed hours. If the gap was more than the total claimed hours, the OIG treated the intervals as separate periods. However, if the gap or gaps were less than the total claimed hours, as it is in this hypothetical, then the OIG assumed the examiner worked from the beginning of the first interval to the end of the last interval, or until such time that the data supported all claimed hours, whichever was less.

The workstation methodology is favorable to the examiner because it assumed examiners worked during each workstation interval and during gaps between workstation intervals where the gaps were less than the total claimed hours for the day.

Even if an examiner forgot his or her badge, all he or she needed to do for his or her claimed hours to be supported under this methodology was to log in to his or her workstation and shut it down or lock the screen (it auto-locks after 15 minutes of non-use) when done for the day.

PALM Data

The PALM data consists of timestamps for examiner activity related to reviews of patent applications. The OIG considered the following four sources of PALM data:

- Timestamps from the Office Action Correspondence System, the application used by examiners to generate office actions;
- Timestamps from the Image File Wrapper, indicating when examiners opened electronic versions of patent applications;
- Timestamps from the Information Disclosure Statement list, defined by USPTO as “a list of all patents, publications, U.S. applications, or other information submitted for consideration by the Office in a non-provisional patent application filed under 35 U.S.C. 111(a) to comply with applicant’s duty to submit to the Office information which is material to patentability of the invention claimed in the non-provisional application”; and
- Timestamps for patent transfers.

The OIG compared the PALM data, consisting of 24 million individual timestamps, with the turnstile, VPN, and workstation intervals to determine whether the methodology captured each examiner's activity in a given day. The comparison found that only 0.3% of examiner days had unsupported time and at least one PALM data timestamp outside of the supported time intervals for that day.⁵⁷ This result suggests that the methodology accurately identifies overall trends. The rare instances where PALM data fell outside of VPN, turnstile, and workstation intervals appeared to occur for various idiosyncratic reasons.⁵⁸ As the timestamps reflect discrete events rather than a period of time over which work was performed, the OIG did not attempt to recreate an interval of time worked based on the timestamps available in the PALM data. However, even if the OIG would have assumed that examiner work the entire day in this situation—the most conservative approach possible—it would have only reduced the total unsupported hours by approximately 14,000 hours over the 9-month period.⁵⁹ The use of a less conservative approach would have even less of an impact on the total unsupported hours.

The OIG identified approximately 2,000 examiner days (0.1% of all examiner days, excluding part-time telework) where there were PALM data timestamps but no turnstile, VPN, or workstation records. In these cases, the OIG assumed that the examiner worked the entire day based on the existence of the PALM data to ensure that the examiners were not impacted negatively due to the USPTO's lack of turnstile, VPN, or workstation data.⁶⁰ These numbers are reflected throughout the report.

SOHO Router

During the analytical periods, the USPTO also provided a SOHO (Small Office/Home Office) router to select examiners. The SOHO router allows a user to connect office phones and government-issued computers to USPTO's network from the examiner's hoteling location without the use of a VPN connection. Examiners with a SOHO router operate as if they were in the office even though they are working remotely. In order to connect, the user logs into their computer using their credentials, selects the appropriate connection type in the Cisco AnyConnect and then joins the enterprise network. Workstation records are the only data available to support examiner-related computer activity for hotelers.⁶¹ As a result, the data available for SOHO users is similar to examiners working from the USPTO campus.

⁵⁷ The OIG identified approximately 3,900 examiner days where the evidence did not support all of the examiners' claimed hours and at least one PALM data timestamp occurred outside of the supported work intervals based on the available workstation, turnstile, and VPN data.

⁵⁸ For example, the applied turnstile methodology assumes that examiners leave the office at 10:00 p.m. unless there is a badge-out record between 10:00 p.m. and 5:30 a.m. (as is required). The OIG identified an examiner who badged in to USPTO on Day 1 and had PALM data timestamps early the following morning without badging out, apparently due to spending the night in the office. Further, there were several instances where PALM data timestamps fell between VPN intervals, but the OIG could not determine whether the issue related to missing VPN events, time lags, or other factors.

⁵⁹ The same approach reduces the total unsupported hours by 22,000 hours over the 15-month period.

⁶⁰ The lack of turnstile, VPN, and workstation data in these situations is likely due to a USPTO system error.

⁶¹ Hotelers are USPTO employees whose primary place of work is from their home. Hotelers rarely have to report to the USPTO campus or satellite offices, if ever.

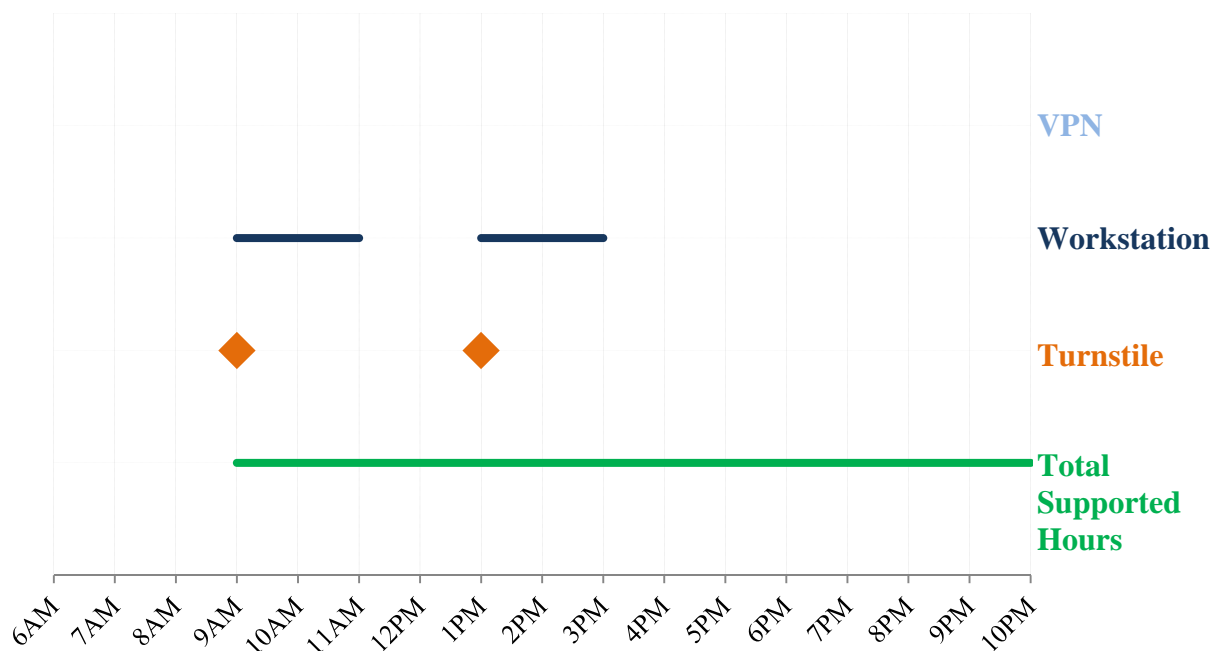
Calculating Examining-Related Computer Activity Based on Multiple Sources

As discussed above, the OIG combined data from turnstile records, VPN records, and computer workstation records for each examiner for each day to calculate the total number of claimed hours that are supported by the data. Figures 2 and 3 below illustrate the basic principles of how the total active work hours were calculated based on badge and workstation data, and VPN and workstation data.

Badge and Workstation Data

In Figure 2, a hypothetical employee badges in at 9:00 a.m., logs onto a workstation minutes later, only to lock his or her workstation screen two hours later. After a two-hour gap with no data, the employee then badges in a second time, at 1:00 p.m., and again accesses his or her workstation for two hours. Even though the workstation activity ceases at 3:00 p.m., the OIG assumed that the employee worked up to an additional seven hours, until 10:00 p.m., because there was no badge-out data. Note that even in the absence of workstation data, the employee's time was supported until 10:00 p.m. due to the OIG's examiner-favorable assumption regarding turnstile data. Since the examiner first badged in at 9:00 a.m., the OIG assumed that he or she worked from 9:00 a.m. until 10:00 p.m. Therefore, the evidence supports a total of up to 13 hours that day. Further, although it is highly likely that the employee left his or her USPTO building before returning at 1:00 p.m., the second instance of badging in has no negative effect on the employee's supported time.

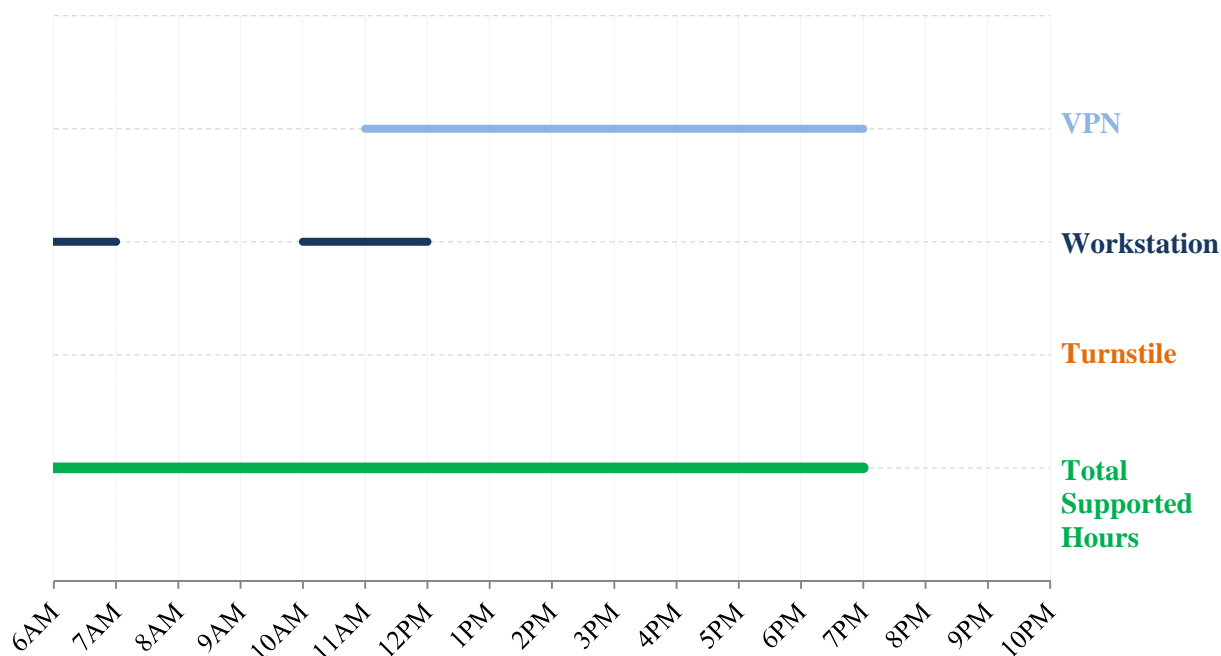
Figure 2: Methodology of Combining Time Intervals



VPN and Workstation Data

In Figure 3, a hypothetical employee logs onto a computer workstation at 6:00 a.m. and logs off at 7:00 a.m. The employee then logs on a second time at 10:00 a.m., signs onto VPN at 11:00 a.m., and locks his workstation screen at 12:00 p.m. However, the examiner remains connected to VPN until 7 p.m. that evening. According to the methodology, the data supported the employee's time from the beginning of the first workstation interval to the end of the second workstation interval, as long as his or her claimed hours were 3 hours or more. In addition, the VPN data supports that the examiner was working from 11:00 a.m. until 7:00 p.m. Thus, the data supports a total of 13 hours of work for the day.

Figure 3: Methodology of Combining Time Intervals



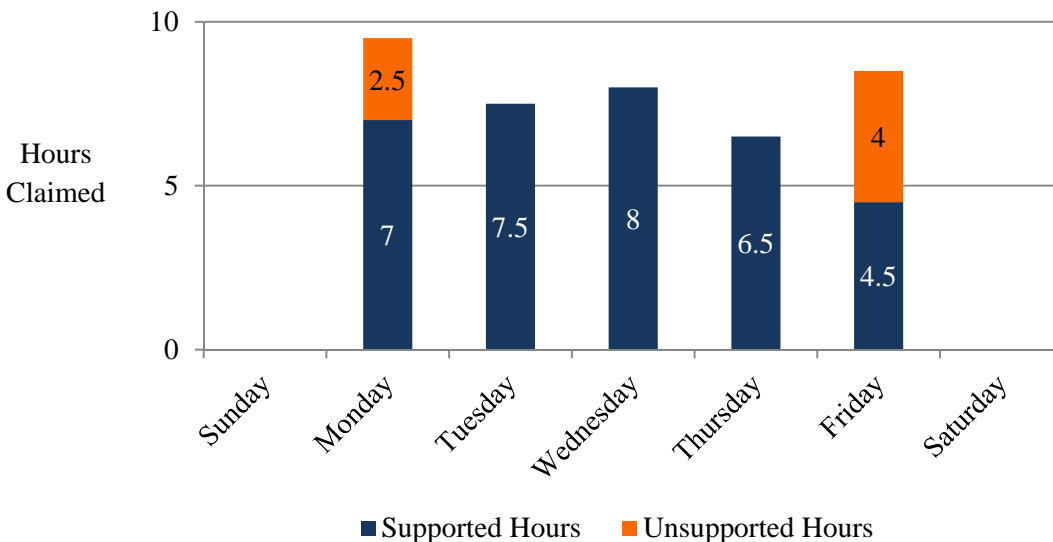
Determining Number of Unsupported Hours and the Percentage of Supported Hours

The final steps in the OIG's methodology involved comparing the total number of hours with evidence of work activity to the number of claimed hours for each examiner, on each day. The OIG then subtracted the supported work hours (calculated from the badge, VPN, and workstation records) from the claimed webTA hours (the 66 activity codes) to calculate the number of unsupported hours for each employee and day.⁶² Figure 4, below, shows an example of a

⁶²The OIG compared the number of claimed hours with evidence of work for each respective day. If an examiner claimed eight hours of work on a day, the OIG expected to find evidence of work activity for eight hours on that specific day. Due to the numerous generous assumptions made in the report, examiners often showed evidence of "working" greater than the claimed hours in a day. For example, many teleworkers remained connected to the USPTO network for 24 hours on a given day, but only claimed eight hours of work. The OIG did not carry forward the remaining 16 hours to another day.

hypothetical patent examiner’s workweek involving 40 hours of claimed work within the limited subset of codes considered. In Figure 4, the OIG’s analysis did not identify work activity for 2.5 hours on Monday and 4 hours on Friday, resulting in 6.5 unsupported hours during this week.

Figure 4: Hypothetical Patent Examiner’s Work Week Including Unsupported Hours



Due to the conservative assumptions made by the OIG, the analysis found many days where the evidence of computer-related work activity appeared to exceed the time claimed for that day. However, the analysis does not determine the number of hours the employees *actually* worked, but rather determines the maximum *possible* hours worked. The OIG fashioned the methodology in this way to give each examiner the best chance to meet their claimed hours. Thus, the analysis capped the daily hours worked at the daily hours claimed.

Any instances where it appears an examiner worked more hours than they claimed is likely due to how the OIG interpreted the data. For example, the OIG assumed that examiners worked from the time they badged in until 10:00 p.m. This does not mean that an employee who badged-in at 8:00 a.m. actually worked until 10:00 p.m., but it ensures that if an employee claimed twelve hours of work, the OIG assumed that they worked for those twelve hours. Similarly, employees on VPN frequently remain logged in for 24 hours at a time. This does not mean that those employees actually worked 24 consecutive hours. Thus, the OIG assumed that those examiners worked the full amount of time claimed for that day rather than 24 hours. This is a reasonable approach to interpreting the data, especially in light of the fact that each examiner attested under penalty of perjury that their claimed hours were accurate, and both supervisors and timekeepers approved and certified those hours. Further, the OIG reviewed every possible data source to ensure that they received credit for as much time as possible.

Following the above calculations, the OIG created a ratio for each patent examiner based on their total number of hours with evidence of work and the total number of claimed work hours associated with the limited subset of codes identified by the USPTO. The OIG divided the total

number of hours with evidence of work by the total number of claimed hours to find the percentage of supported hours.

As noted above, the OIG also analyzed data from databases that record when an examiner submits and reviews applications. If there was evidence that an examiner edited or submitted an action on a day with no corresponding turnstile, VPN, or workstation records, the OIG assumed that the examiner worked all day.

Additional Exclusions or Adjustments from the Methodology and Posture

In order to preserve the integrity of the methodology, the OIG also excluded certain groups of examiners to ensure that this data did not negatively impact the percentage of supported hours:

- Examiners with fewer than 160 hours (approximately one month) of claimed hours within the relevant time frame.
- Examiners who transitioned to or from supervisory duties at any point during the periods at issue, either employees who transitioned from non-supervisory to supervisory or vice versa, in order to eliminate any potential impact on unsupported hours due to the transition.
- Examiners assigned a new user ID to login to USPTO's systems during the analytical periods, either because their last name was changed or for another reason.
- Examiners impacted by 22 information technology incidents preventing connection to the USPTO network for the days during which they were unable to connect to the USPTO network were assumed to be working during this time.⁶³
- 151 examiners without turnstile records during the analytical periods. Since many examiners work either remotely or in offices without turnstiles, the OIG was not surprised to find that many examiners did not have turnstile records.⁶⁴ However, the OIG also learned that USPTO's turnstile database sometimes listed the incorrect employee number. The OIG performed electronic testing to confirm whether the employee numbers provided by the USPTO Office of Security and Safety were correct. However, after completing testing, there were 176 employees without turnstile records and the OIG could not determine whether those employees should have had such records. In the interest of time and efficiency, the OIG asked the USPTO to research whether 25 of the remaining 176 employees possessed a USPTO badge. The USPTO Office of Security and Safety verified that 14 of the 25 employees did not have any turnstile data associated with their employee ID during the periods previously requested. The remaining 11 examiners had incorrect employee IDs in the turnstile database. Rather than tax the office further, the OIG excluded the remaining 151 employees from the analysis. As with the previous

⁶³ See App. E, *infra*. The OIG made adjustments for those examiners who reported the issues to USPTO's IT Help Desk.

⁶⁴ The Silicon Valley, Denver, Detroit, and Dallas offices do not have turnstiles.

steps, this was purely to benefit examiners: missing turnstile records could result in employees associated with incorrect unsupported hours. Finally, the OIG provided a list of the 151 employees to the USPTO Office of Security and Safety so that it could confirm, if it so desired, whether additional examiner employee ID errors were present in the turnstile database.

- 46 examiners who did not have any workstation data during the 15-month period.⁶⁵ The OIG requested all workstation records and confirmed receipt of complete files from USPTO, and then excluded examiners with missing records. The USPTO's OCIO was not aware that the workstation data for these examiners was not retained, nor does the USPTO have a way of identifying future affected individuals.

Methodology Comparison

The OIG ran this methodology over Examiner A's data for fiscal year 2014, the period covered in the Examiner A Report. For fiscal year 2014, the analysis found that 44% of Examiner A's hours were unsupported.⁶⁶ This finding is similar to the 43% of unsupported hours found in the Examiner A Report.⁶⁷

Tentative Findings Presented to USPTO

The OIG presented its tentative findings to USPTO senior management on March 31, 2016. At the time of the presentation, the investigation methodology was still evolving and thus the final total number of unsupported hours for both the 9-month and 15-month periods were not available.

In response to the briefing, the USPTO commented that the OIG's methodology may not account for examiners in part-time telework programs because those examiners are not required to login to the USPTO network. In light of the USPTO's suggestion, the OIG modified its methodology by excluding from the analysis any days where an examiner in a part-time telework program (*e.g.*, PTP-10, PTP-20vpn, PTP-20novpn, and PTP-32) indicated in webTA that he or she was teleworking.⁶⁸

⁶⁵ There were 46 examiners who did not have workstation data after the OIG applied the previous exclusions.

⁶⁶ Approximately 737 out of 1685 hours were unsupported.

⁶⁷ There are a number of reasons why the current methodology resulted in a slightly different percentage of unsupported hours for Examiner A's fiscal year 2014 time than was found in OIG's August 2015 report. Mainly, the methodology used for this investigation is more refined and, as a result, is both more conservative and less conservative in certain respects than the previous methodology. The current methodology (1) looked at computer-related activity, rather than all activity; (2) did not take into account instant messages or emails that indicated work stoppage; (3) assumed the examiner worked from badge-in until 10:00 p.m., even in the absence of workstation data; and (4) better addressed gaps in workstation and VPN data through an automated process.

⁶⁸ In addition, the OIG's methodology did not consider whether the examiner took a non-compensable lunch break. Accounting for the 30-minute lunch break would have increased the number of unsupported hours.

Appendix B: Activity Codes Considered in Analysis

Code	Description
112012	Prepare all examiner actions
140751	Cpc transition learning curve
112030	Examining design application
112054	Other time—prepare restriction requirements
112057	Afcp 2.0 consideration time
119052	Other time—reexam ep activity after an order
112102	Other time—reexam ip activity after an order
119104	Qas qa reviewing applications
119022	Petition handled by a/c for patents
119112	Qas qa other activities
112019	Qpids before issue fee paid
112059	Reopening and review
112042	Other time—process transfer inquiries
119051	Other time—reexam ep activity through order
112027	Other time—pe2e
112600	Ifw tss production activities
A00031	It security training
112184	Quality review activities
112020	Qpida after issue fee paid
119093	Patent corps pct detailees
114081	Cpc revision projects/reclassification of us patents
119050	Inter partes petition
112034	Examining expedited applications
L00026	Litigate and support ip legal actions—app ct—patents
112025	Markush searching
114014	Stic reference/online activity
L00044	Ex parte appeal: prepare decision on appeal
119062	Litigation search
L00186	Ipr: all pre-institution activities except disc. Disputes
L00011	Produce weekly in house electronic newsletter
112112	Other time supplemental examination (se) after an order
112111	Other time supplemental examination (se) act. Through order

Code	Description
A00039	Information technology
119614	Petition decision
140709	Classify applications
L00027	Litigate and support ip legal actions-dist ct-patents
D00027	Support eipd bulk data products
112603	Jumbo ids processing
119055	Ex parte petition
114044	Other time—pgpub classification
L00165	Ipr: all post-institution activities except disc. Disputes
112101	Other time—reexam ip activity through order
140731	Re-examination and reissue processing
119097	Other time—assisting spe with home copa applications
112029	Consideration of response after final rejection
119024	Process regularly assigned pct
119054	Other time—ex parte
112103	Spre/paralegal reexam tasks-ex parte
112525	Tss qas activities
114084	Classify gps—application transfer
119110	Qas management time
140725	Rework
113002	Prepare and process appeals for decision
112038	Classify foreign patents by examiner
112104	Qas/paralegal reexam tasks
090143	Clearing out the oldest application (copa)
A00118	No Fear Act Training
A00027	Develop or attend e-learning
112031	In-tc reclassifying patents
140713	Pct classification and security review
112052	Php/non-php examiner survey
112065	SIR Processing
112016	Special Cases
112110	Other Time – Inter Parties
119053	Other Time - Reexam EP Activity Post-Merger
112109	Other Time - Rexam IP Activity Post-Merger

Appendix C: USPTO Policy on Work Schedule Notification (Feb. 22, 2015)

UNITED STATES PATENT AND TRADEMARK OFFICE POLICY ON WORK SCHEDULE NOTIFICATION, COMMUNICATION, AND COLLABORATION

I. Purpose

The purpose of this policy is to reinforce the importance of work schedule notification, communication, and collaboration between employees and between employees and supervisors at the United States Patent and Trademark Office (USPTO). As the USPTO workforce increasingly disperses from the Alexandria headquarters through telework and the opening of satellite offices, the need for work schedule notification, communication, and collaboration correspondingly grows. This policy seeks to promote a consistent, Agency-wide, approach to these challenges.

II. Scope

The provisions of this policy apply to all USPTO supervisors and full-time teleworkers.

III. Definitions

Collaboration tools are the electronic communication tools that enable employees to effectively communicate with each other and their supervisors, to collaborate on joint projects, and to participate in Agency events, training, and meetings, regardless of physical location. The USPTO's collaboration tools are currently comprised of the Lync enterprise unified communications platform.

Full-time teleworkers are those employees working either a part-time or full-time schedule and participating in the Patents Hoteling Program (PHP), Patents Hoteling Program for NTEU 243 (PHP-N), Trademark Work at Home Hoteling Programs (TWAH), the SPE/MQAS Full-Time Telework Program, their successors, or a functionally similar program under which the employee generally does not retain USPTO office space and typically works his or her entire schedule from a remote location, save for periodic reporting back to a USPTO worksite (if applicable.)

Presence indicator refers to the functionality of Lync, or a successor tool, that allows a user to electronically determine whether another user is available to communicate.

IV. PTONET and Collaboration Tools

All full-time teleworkers must remain logged into PTONET during their working hours when PTONET is available to the teleworker. PTONET will be considered to be unavailable to the teleworker during any period of outage and/or when the teleworker's duties make PTONET inaccessible (e.g., attending training or meetings or traveling for official business).

All full-time teleworkers (when working remotely) and supervisors (regardless of work location) will be signed into the electronic communication tools provided (currently Lync) when

these tools are properly functioning and available. Full-time teleworkers and their supervisors will use the collaboration tools, including the presence indicator, to effectively communicate, participate in any USPTO events, training or appropriate business meetings. The presence indicator is used to determine when an employee is present to facilitate communications. It is understood that the presence indicator does not necessarily reflect whether or not an employee is working. Participants may use any presence indicator status, except that participants should not take action to block available communication methods (i.e., by setting a "do not disturb" status in Lync).

V. Work Schedule Notification

All supervisors and full-time teleworkers will provide advance notice of the number of hours that they intend to work.

This notice must:

- be submitted either on a daily, weekly, or biweekly basis. If an employee's intended biweekly work schedule is relatively consistent, the employee may choose to submit a single biweek's notice and indicate that it will remain effective until/unless changed.
- be submitted in advance of the week or biweek which it covers, and should be submitted by email. If an employee is submitting a daily notice, then advanced notice should be submitted when the employee begins work that day or by noon, whichever is earlier.
- specify, for each day covered by the notice, the total number of hours (including overtime, compensatory time, credit hours, etc.) that the employee intends to work on each day (or, that the employee does not intend to work at all on a particular day).
- for full-time employees, account for at least 80 hours of intended work. If the employee's intended schedule amounts to more than 80 hours of work, then the surplus should correlate with authorized overtime, compensatory time, credit hours, etc. If the employee's intended schedule amounts to less than 80 hours of work, then the employee should indicate his intention to take leave to cover the difference. All employees are reminded of their obligation to be in a pay status (i.e., working or on approved leave) for the entirety of their work schedule.

All currently available work schedules and work schedule flexibilities remain in effect and are not restricted by this policy. It is understood that the number of hours an employee actually works may vary from the original noticed schedule provided by the employee.

Reported schedules should be consistent with the employee or supervisor's existing work schedule requirements. For example, for all full time employees and supervisors on IFP/IFS, the current work schedule requirements remain in effect, including:


1. Employees/supervisors must work a minimum of 4 days per week (Monday through Saturday between 5:30am to 10:00 pm), including core hours.

2. Employees/supervisors may not work more than 12 hours or less than 15 minutes on a work day.
3. Employees/supervisors must satisfy their requirement for 80 regular hours during a hi-week.
4. Employees and supervisors must notify each other if they will be absent on a weekday that is a scheduled work day for that employee.
5. Regular hours may not be worked on Sunday. However, credit, compensatory, or overtime hours may be worked, consistent with policies and agreements.

VI. Effective Date

This policy will take effect on February 22, 2015.

FOR THE



Frederic W. Steckler
Chief Administrative Officer



DATE

Appendix D: Unsupported Hours Over the 15-Month Period by Location

Location of Work Status	Supporting Records	Number of Days ^a	Unsupported Hours
No Evidence of Work	None	20,864 (1%)	132,054 (46%)
On Campus	Turnstile and Workstation	806,901 (40%)	38,282 (13%)
Teleworked (VPN, SOHO) and on Campus	Turnstile, Workstation, and VPN	28,965 (1%)	527 (<1%)
Teleworked using VPN	VPN and Workstation	1,110,450 (56%)	104,634 (36%)
Teleworked using SOHO	Workstation	9,368 (<1%)	3,920 (<1%)
Satellite Locations; Days Where People Worked at the Facility but Forgot Their Badges	Workstation	15,687 (1%)	9,062 (3%)
Unknown	Patent Reviews	2,068 (<1%)	0 (0%)
Total		1,994,303 (100%)	288,479 (100%)

^aIn this context, “days” means each day for each examiner. Over the 15-month period, examiners averaged 237 workdays (1,994,303 days / 8,399 examiners). Again, part-time telework days were excluded.

Appendix E: List of Network Outages

Incident ID Number	Start Date	Restore Date
PBI000000011881	09.17.2014 @ 12:50 hrs.	09.17.2014 @ 15:21 hrs.
PBI000000014891	02.05.2015 @ 06:04 hrs.	02.05.2015 @ 09:04 hrs.
PBI000000015176	02.12.2015 @ 15:04 hrs.	02.12.2015 @ 15:34 hrs.
PBI000000015573	02.24.2015 @ 09:04 hrs.	02.24.2015 @ 09:46 hrs.
PBI000000015575	02.24.2015 @ 11:50 hrs.	02.24.2015 @ 15:46 hrs.
PBI000000015556	04.15.2015 @ 12:47 hrs.	04.15.2015 @ 13:45 hrs.
PBI000000015971	05.18.2015 @ 09:10 hrs.	05.18.2015 @ 09:48 hrs.
PBI000000016673	06.29.2015 @ 10:37 hrs.	06:29.2015 @ 17:04 hrs.
PBI000000017072	07.20.2015 @ 07:26 hrs.	07.20.2015 @ 13:30 hrs.
PBI000000017504	08.15.2015 @ 17:22 hrs.	08.15.2015 @ 19:53 hrs.
PBI000000018190	09.25.2015 @ 12:06 hrs.	09.25.2015 @ 12:58 hrs.
PBI000000018479	10.05.2015 @ 16:26 hrs.	10.05.2015 @ 16:37 hrs.
PBI000000018498	10.08.2015 @ 22:12 hrs.	10.08.2015 @ 23:18 hrs.
PBI000000011287	08.26.2014 @ 14:23 hrs.	08.26.2014 @ 17:09 hrs.
PBI000000013475	11.13.2014 @ 05:57 hrs.	11.13.2014 @ 11:23 hrs.
PBI000000013977	12.16.2014 @ 14:50 hrs.	12.18.2014 @ 17:37 hrs.
PBI000000014171	12.18.2014 @ 05:42 hrs.	12.18.2014 @ 06:12 hrs.
PBI000000014177	12.19.2014 @ 08:55 hrs.	12.19.2014 @ 14:32 hrs.
PBI000000014284	12.23.2014 @ 19:12 hrs.	12.23.2014 @ 23:16 hrs.
PBI000000014873	01.26.2015 @ 13:52 hrs.	01.26.2015 @ 16:59 hrs.
PBI000000015079	02.06.2015 @ 13:27 hrs.	02.06.2015 @ 15:46 hrs.
PBI000000015481	02.28.2015 @ 16:30 hrs.	02.28.2015 @ 19:43 hrs.

Appendix F: USPTO Policy on Work Schedule Notification (July 6, 2016)

UNITED STATES PATENT AND TRADEMARK OFFICE POLICY ON WORK SCHEDULE NOTIFICATION

I. Purpose

The purpose of this policy is to facilitate communication and collaboration between employees and supervisors by requiring increased schedule notification, in reasonable and appropriate circumstances, and for limited periods of time.

II. Scope

The provisions of this policy apply to all USPTO employees.

III. Effect on Existing Policies

This policy supplements the January 20, 2015 United States Patent and Trademark Office Policy on Work Schedule Notification, Communication, and Collaboration. All provisions of that Policy remain in effect.

IV. Work Schedule Notification

Employees on flexible work schedules will be required to provide increased schedule information when the employee:

- i. receives a warning of unacceptable performance;
- ii. receives a disciplinary or adverse action decision for time and attendance, work schedule, work credit abuse, or telework-related misconduct; or
- iii. receives a most recent rating of record below Fully Successful.

The increased schedule notification requirement will last for the duration of the performance warning in i. above, or for seven full pay periods from the receipt of the action or rating described in ii. and iii., respectively.

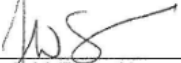
Upon being required to provide increased schedule information, an employee will provide his or her supervisor with notice, prior to the start of the biweek, of the time the employee intends to start and stop work on each day of the coming biweek, including start and stop times of any mid-day flex of over an hour. The intended schedule information is approximated and therefore, employees will not be expected to conform strictly to the provided schedule. However, if the schedule information is not sufficient to permit the employee's supervisor to assist the employee with the performance and/or conduct issue that necessitated the increased reporting, the supervisor may direct the employee to notify the supervisor contemporaneously when he or she starts and completes the workday for the remainder of the increased reporting period.

Employees subject to an increased schedule notification requirement will no longer have to supply schedule information once the increased reporting period is completed, provided that a new increased reporting period has not begun as a result of a new occurrence of i., ii., and/or iii., above.

V. **Effective Date**

This policy will take effect on July 6, 2016.

FOR THE AGENCY



Frederick W. Steckler
Chief Administrative Officer

7-6-2016

DATE