



U.S. PATENT AND TRADEMARK OFFICE

USPTO's Other Backlog: Past Problems and Risks Ahead for the Board of Patent Appeals and Interferences

FINAL REPORT NO. OIG-12-032-A
AUGUST 10, 2012

U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

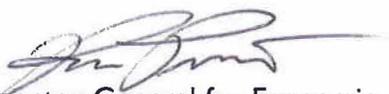
For Public Release





August 10, 2012

MEMORANDUM FOR: David Kappos
Under Secretary of Commerce for Intellectual Property
and Director of the U.S. Patent and Trademark Office

FROM: Ron Prevost 
Assistant Inspector General for Economic
and Statistical Program Assessment

SUBJECT: *USPTO's Other Backlog: Past Problems and Risks Ahead
for the Board of Patent Appeals and Interferences*
Final Report Number OIG-12-032-A

Attached is the final report on our audit of USPTO's Board of Patent Appeals and Interferences (BPAI). This audit, part of OIG's fiscal year (FY) 2012 audit plan, determined whether BPAI staffing and resources have changed in relation to changes in its caseload and to what extent BPAI's operations and resources will be affected by the implementation of the America Invents Act (AIA).

We found BPAI's staffing levels did not increase as the number of patent examiners grew; its actual *ex parte* appeal backlog prior to FY 2010 was higher than reported to external stakeholders; and BPAI had not established a performance target for *ex parte* appeals. In addition, BPAI lacked a comprehensive AIA implementation plan before May 2012; its current AIA implementation plan lacked requirements for measuring progress and performance; and BPAI had not determined its future management and administrative staffing structure.

Our draft report proposed six recommendations to address these issues. In its response to our draft report, USPTO agreed with all recommendations and outlined steps it has taken or plans to take to address them. We are pleased to learn USPTO took prompt corrective action to address the recommendation about annotating current information on its public Web site regarding the backlog data prior to 2010. USPTO has provided information to external stakeholders explaining the discrepancy surrounding the *ex parte* appeal backlog.

In accordance with Department Administrative Order 213-5, please provide us with an action plan within 60 calendar days of the date of this memorandum that responds to the recommendations. We thank USPTO personnel for the assistance and courtesies extended to my staff during the review. If you have any further questions or comments about the report, please feel free to contact me at (202) 482-3052 or Carol Rice, Division Director, at (202) 482-6020.

Attachment

cc: James D. Smith, Chief Judge, Board of Patent Appeals and Interferences, USPTO
James T. Moore, Vice Chief Judge, Board of Patent Appeals and Interferences, USPTO
Margaret Focarino, Commissioner for Patents, USPTO
Bo Bounkong, Associate Commissioner for Patent Resources and Planning, USPTO
Anthony P. Scardino, Chief Financial Officer, USPTO
Welton Lloyd, Audit Liaison, USPTO
Katrina Pritchett, Office of Planning and Budget, USPTO



Report In Brief

AUGUST 10, 2012

Background

As the sole authority for issuing U.S. patents, USPTO's responsibilities include reviewing and deciding on patent applications, as well as providing the means for parties to appeal patent examiners' decisions. Although the backlog of patent applications remains at more than 600,000, USPTO has also accumulated another substantial, growing backlog and pendency of patent appeals.

Responsibility for patent appeals rests with the Board of Patent Appeals and Interferences (BPAI), USPTO's administrative law body. Most of BPAI's cases are *ex parte* appeals, for which judges hear from one side only. As the number of decisions have increased (almost doubling from FYs 2005 to 2011), so have the number of *ex parte* appeals—and the average time to decide an appeal has almost doubled since FY 2010.

Why We Did This Review

The growing number and pendency of *ex parte* appeals is not the only challenge BPAI faces. The America Invents Act of 2011 gives BPAI operations additional responsibilities—including planning, implementing, and institutionalizing new proceedings for reviews and expanding the size of BPAI to meet these responsibilities.

Because of these challenges, our review sought to determine (1) whether BPAI's staffing and resources have changed in relation to changes in its caseload and (2) to what extent BPAI operations and resources will be affected by the implementation of AIA.

U.S. PATENT AND TRADEMARK OFFICE

USPTO's Other Backlog: Past Problems and Risks Ahead for the Board of Patent Appeals

OIG-12-032-A

WHAT WE FOUND

Between FYs 2005 and 2011, as the number of appeals BPAI received for review rose substantially (as have the appeal backlog and pendency time), BPAI's staffing levels have remained essentially flat. Furthermore, until 2008, inaccurate data delayed efforts to address the growing backlog and increase in appeal pendency. Our concerns include:

BPAI Staffing Levels Did Not Increase as the Number of Patent Examiners Grew. While the number of BPAI's administrative patent judges has increased, their growth has not been as steady as the growth of patent examiners or their decisions.

Prior to FY 2010, the Actual Ex Parte Appeal Backlog Was Higher Than Reported to External Stakeholders. Between FYs 2005 and 2009, BPAI did not accurately account for the true number of *ex parte* appeal cases awaiting its review, because thousands of unassigned cases that should have been added to BPAI's case management docket remained in a holding status.

BPAI Has Not Established a Performance Metric For Ex Parte Appeals. Unlike both Patents and Trademarks, BPAI does not have official performance targets to serve as public benchmarks for directing its efforts and measuring the success of its *ex parte* activities.

Further, AIA significantly increases BPAI's responsibilities—yet BPAI lacks a strategic plan for expanding its operations and an implementation plan to guide it through the many uncertainties associated with organizational growth. Specifically, we found:

BPAI Lacked a Comprehensive AIA Implementation Plan Before May 2012. To address the law's passage, BPAI prepared key individual documents but did not initially prepare a comprehensive implementation plan.

Current AIA Implementation Plan Lacks Requirements for Measuring Progress and Performance. BPAI's strategic AIA implementation plan lacks the milestones, tasks, delivery dates, and task leads to guide AIA implementation, measure progress and results of new proceedings, and manage and mitigate risks before they occur.

BPAI Has Not Determined Its Future Management and Administrative Staffing Structure. Even though it will increase in size to address a growing appeal backlog and new AIA trial proceedings, BPAI has not completed a comprehensive workforce analysis or prepared a workforce plan for its future management and administrative staffing needs.

WHAT WE RECOMMEND

We recommend that the Under Secretary of Commerce for Intellectual Property and Director of USPTO:

- Align BPAI's resource planning with the hiring actions and expected production levels of patent examiners;
- Require BPAI to annotate current information on public websites to indicate that backlog data prior to FY 2010 is underreported and therefore should be used with caution;
- Direct BPAI to develop and publish performance measures and targets for *ex parte* appeals and other proceedings;
- Develop comprehensive management plans (including how to measure progress, gauge performance, and identify risk) to address the implementation and operational oversight of the new BPAI proceedings under the AIA;
- Ensure that data processing systems meet the needs of all four AIA proceedings; and
- Explore the feasibility of BPAI's current management and administrative structure and staffing, given the increase in the number of proceedings and staff at BPAI.

Contents

Introduction	1
Findings and Recommendations	5
I. BPAI’s Staffing Levels, Data on Backlogs, and Lack of Performance Targets Compromise the Timely Review of Ex Parte Appeals	5
A. BPAI Staffing Levels Did Not Increase as the Number of Patent Examiners Grew	5
B. Prior to FY 2010, the Actual Ex Parte Appeal Backlog Was Higher Than Reported to External Stakeholders.....	7
C. BPAI Has Not Established a Performance Metric For Ex Parte Appeals	9
II. BPAI, with Increased AIA Responsibilities, Lacks a Comprehensive Plan to Guide Implementation and Ongoing Management	11
A. BPAI Lacked a Comprehensive AIA Implementation Plan Before May 2012	11
B. Current AIA Implementation Plan Lacks Requirements for Measuring Progress and Performance.....	12
C. BPAI Has Not Determined Its Future Management and Administrative Staffing Structure	13
Summary of Agency Comments and OIG Response.....	15
Appendix A: Objectives, Scope, and Methodology	16
Appendix B: Ex Parte Appeals Process.....	21
Appendix C: Agency Response.....	22

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

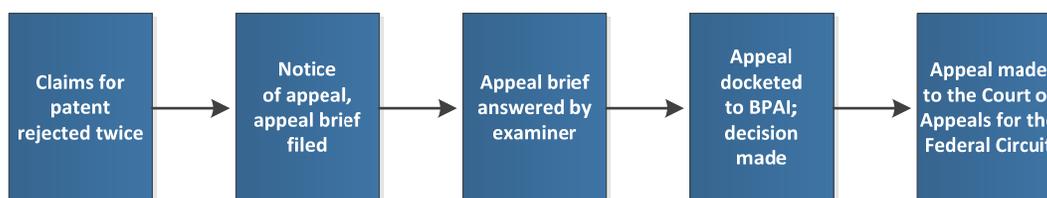
Introduction

As the sole authority for issuing U.S. patents, the U.S. Patent and Trademark Office (USPTO) responsibilities include reviewing and deciding on patent applications, as well as providing the means for parties to appeal patent examiners' decisions. Much attention over the past decade has focused on the backlog of patent applications, which remains above 600,000. During that time, however, USPTO has also accumulated another substantial, growing backlog and pendency of patent appeals.

BPAI plays a critical role in ensuring that inventors have the opportunity to protest the decision of the patent examiner who rejected their claims. Patent applicants may submit an ex parte appeal to BPAI after any of their claims have been rejected twice by patent examiners.

Responsibility for patent appeals rests with the Board of Patent Appeals and Interferences (BPAI), USPTO's administrative law body. Figure I below, shows the BPAI administrative appeal process which an applicant must generally follow (see appendix B for more details on the appeal process).

Figure I. Overview of BPAI Patent Appeals Process

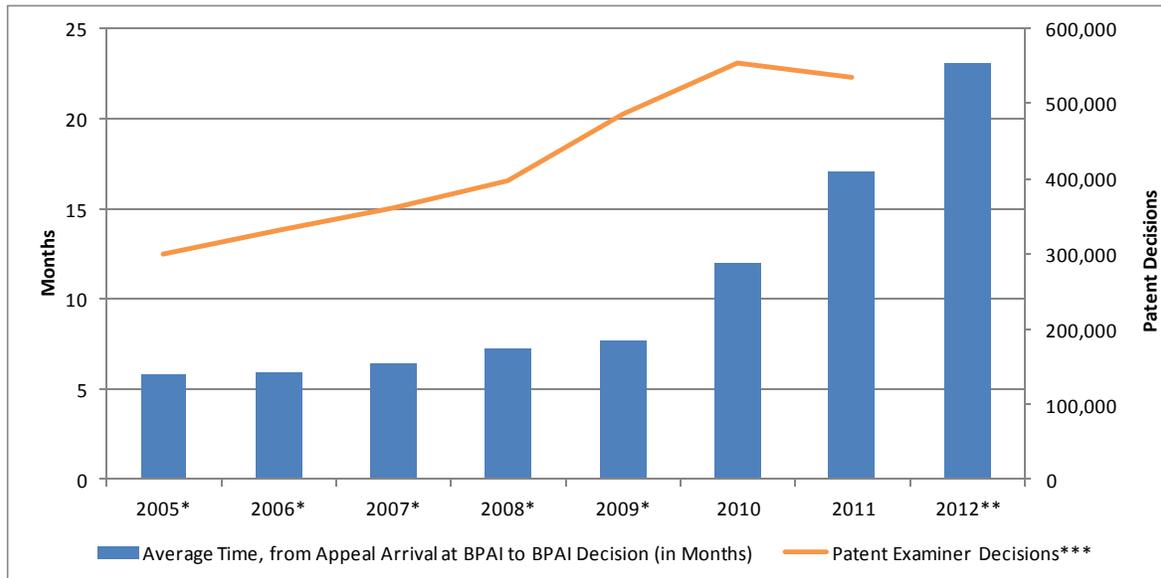


Source: OIG, based on USPTO documentation

Although BPAI decides on various types of cases, the majority of its cases are *ex parte* appeals.¹ Around 1–3 percent of the applications that examiners decide each year are appealed by the applicant. While the percent has remained in this range over time, the actual number of patent decisions has increased dramatically, from almost 300,000 decisions in fiscal year (FY) 2005 to over 530,000 in FY 2011. As expected, as the number of patent examiners grows, the number of new *ex parte* appeals also grows significantly, reaching 13,500 in FY 2011. The time it takes to decide an *ex parte* appeal has also grown, almost doubling in the time between FY 2010 and the midpoint of FY 2012 (see figure 2 below). Just in the 6 months between the end of FY 2011 and the midpoint of FY 2012, the average amount of time between an appeal arriving at BPAI and receiving a decision increased from 17 months to 23 months.

¹ *Ex parte* is defined in Black's Law Dictionary as "done or made at the instance and for the benefit of one party only, without notice to, or argument by, any person adversely interested." *Ex parte* proceeding is defined as "a proceeding in which not all parties are present or given the opportunity to be heard." (9th ed., 2009). In addition to *ex parte* appeals, BPAI receives requests for *inter partes* and *ex parte* reexaminations from patent owners or third parties to evaluate the patentability of a claim or claims of an existing patent. BPAI also has jurisdiction for interferences, which are appeals from applicants who claim the same proposed invention as one already claimed by another applicant or patent owner.

Figure 2. Average Appeal Pendency (in Months), Compared with the Patent Production



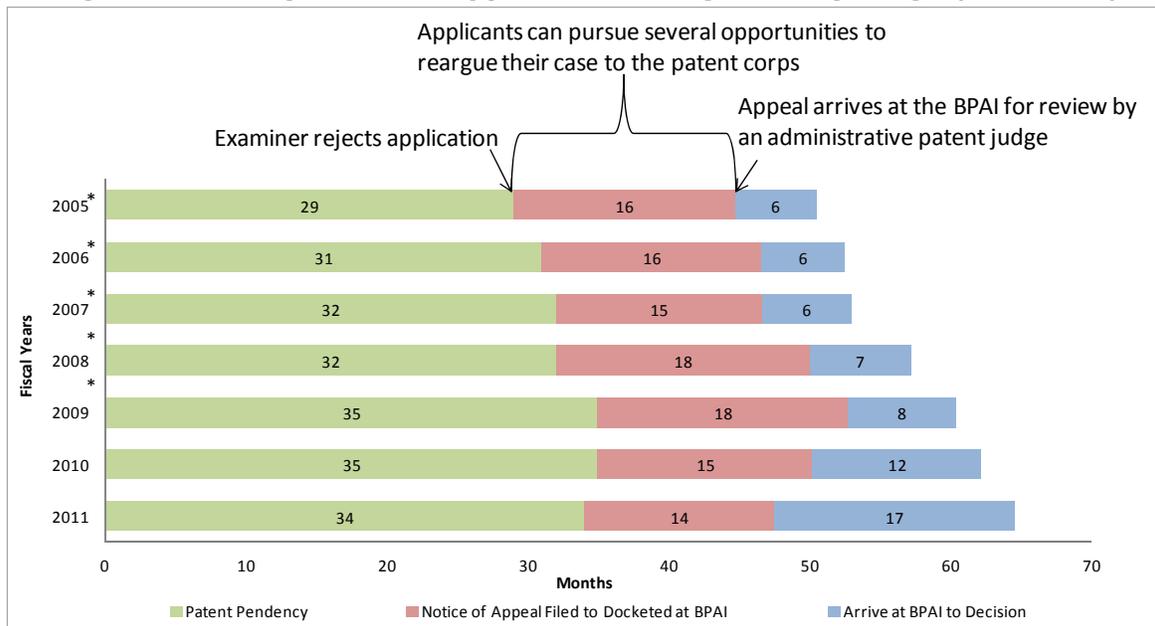
Source: OIG, based on USPTO data

* Pendency estimates (in months) are likely understated during these years due to procedural issues (see finding I.B of this report); ** the 2012 pendency estimate is for the first half of the fiscal year; *** data are not available on the number of patent decisions issued for the first half of FY 2012.

However, a patent applicant has already invested time in the patent process prior to the time spent waiting for a decision on appeal. On average, a patent applicant must wait about 3 years for a final decision on a patent application. Those years, combined with the appeals period as well as an interim period when additional procedural steps may accompany an appeal, can add more than 5 years² to the time when the inventor first filed the patent application (see figure 3 below). These long delays in receiving a patent can negatively affect economic growth, including job creation and the production of new goods or services.

² After a patent examiner rejects a claim for a patent twice, an applicant's options include requesting an examiner re-review the application through a request for continued examination (RCE), filing a notice of appeal, or filing an appeal after submitting an RCE. This estimate of 5 years does not include the additional time an application may spend in the RCE process. Pendency for applications that went through the RCE and then the appeals process averaged about 81 months, or close to 7 years, for those appeals decided in FYs 2010–2011.

Figure 3. Average Overall Appeal Processing Time by Stage (in Months)



Source: OIG, based on USPTO data

Yet the growing number and pendency of ex parte appeals is not the only challenge BPAI faces. The America Invents Act (AIA, P.L. 112-29), signed in September 2011, places additional responsibilities on BPAI operations. These new responsibilities include planning, implementing, and institutionalizing new proceedings for post-grant reviews, inter partes reviews, and derivations, and include expanding the size of BPAI to meet these responsibilities.³

Because of the growing pendency and the additional requirements to implement AIA, the objectives of this audit were to determine (1) whether BPAI’s staffing and resources have changed in relation to changes in its caseload and (2) to what extent BPAI operations and resources will be affected by the implementation of AIA. In examining BPAI’s resources, we reviewed relevant documents and interviewed appropriate agency officials. Using USPTO data, we analyzed changes in BPAI’s ex parte appeals caseload, including backlogs and pendency, and its staffing and resources. We also reviewed and tested policies and internal controls relevant to BPAI’s caseload. In examining the impact of AIA on BPAI operations, we

Under AIA, BPAI will also be responsible for:

Post grant reviews, where someone other than the patent holder petitions USPTO to cancel claim(s) within 9 months of a patent being issued.

Inter partes reviews, where someone other than the patent holder petitions USPTO to cancel claim(s) 9 months after a patent is issued.

Derivations, where patent holders and other parties challenge a claimed invention on the basis that one applicant derived his application from another applicant without authorization.

³ In addition, the AIA also changes BPAI’s name to the Patent Trial and Appeal Board effective September 16, 2012.

reviewed relevant legislation, proposed rules, and related documents and interviewed appropriate officials. For more details on the scope and methodology of our audit work, see appendix A. Appendix B contains an overview of the ex parte appeals process.

Findings and Recommendations

I. BPAI's Staffing Levels, Data on Backlogs, and Lack of Performance Targets Compromise the Timely Review of Ex Parte Appeals

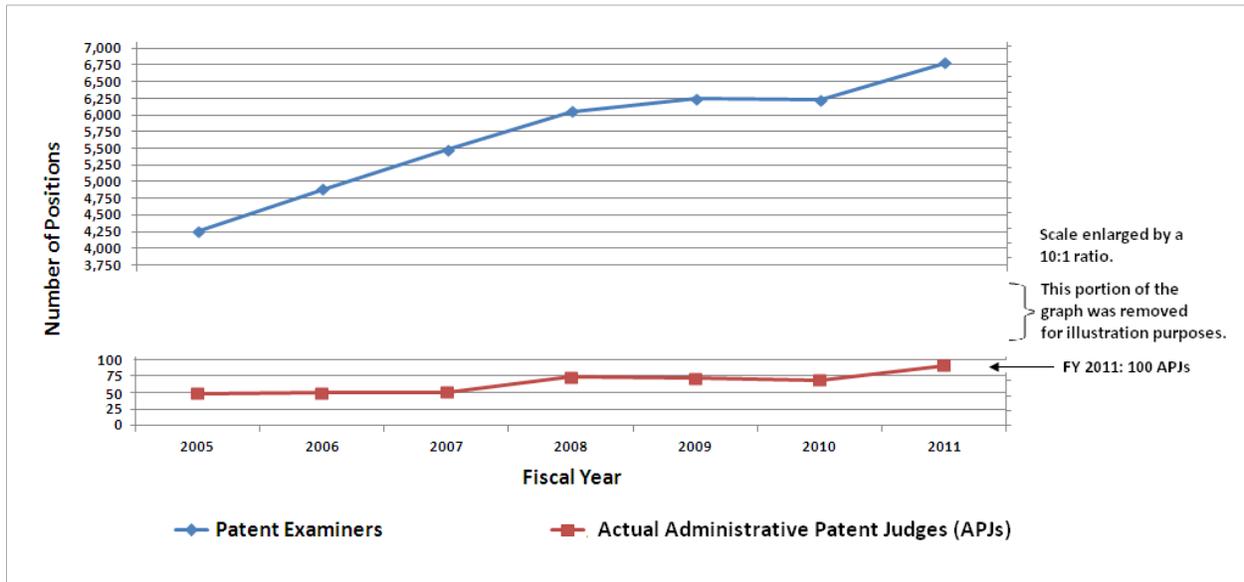
Between FYs 2005 and 2011 the number of appeals BPAI received for review each year rose substantially. However, during this same time, BPAI's staffing levels have remained essentially flat. The mismatch between BPAI's workload and workforce led to (a) a rapid rise in the appeal backlog and (b) a near doubling of the time it takes to receive a decision on an appeal in the past 2 years. Furthermore, until FY 2008, inaccurate data delayed efforts to address the growing backlog and increase in appeal pendency. BPAI's expected hiring surge in FYs 2012 and 2013 should begin to alleviate the backlog, but it will need to make significant changes to address the legacy of inadequate staffing and prevent another rapid rise in the ex parte appeal backlog.

A. BPAI Staffing Levels Did Not Increase as the Number of Patent Examiners Grew

Historical data indicates correlations among the number of patent examiners, the number of patent examiner decisions, and the number of appeals filed by patent applicants: as the number of patent examiners increases, so do the number of decisions and, subsequently, the number of appeals.⁴ From FY 2005 to FY 2011, the number of patent examiners increased from 4,258 to 6,785 and the number of patent examiner decisions increased from 298,838 to 533,943. During this same time period, the number of BPAI's administrative patent judges (APJs) also increased, from 54 to 100, although their growth was not as steady as the growth of patent examiners or their resultant decisions. APJ levels remained at about the same level from FY 2005 to FY 2008, and again in FYs 2009 and 2010 (see figure 4 below).

⁴ In general, after an applicant files a notice of appeal and appeal brief and pays the relevant fees, a patent examiner must write an "examiner's answer" in response to the appeal. In FY 2010 and 2011, 96 percent of the appeals that received examiner's answers were eventually docketed with BPAI.

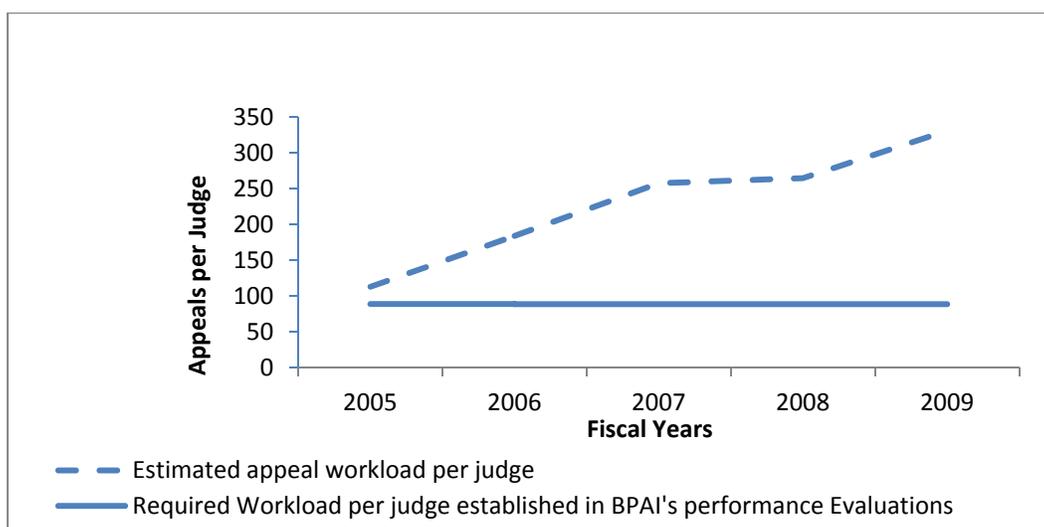
Figure 4. Patent Examiners and Administrative Patent Judges Staffing Statistics (FY 2005–2011)



Source: OIG, based on USPTO data

During this same period, the backlog grew as BPAI did not process the growing number of decisions, reaching almost 24,000 appeals at the end of FY 2011. Based on our analysis (see figure 5 below), the estimated workload of the number of appeals per judge has far exceeded the required workload level of APJs as set out in their performance plans.⁵

⁵ BPAI’s performance plans layout the minimum number of appeals that must be issued per judge based on the technical specialty.

Figure 5. Estimated Workload^a per APJ Compared with Required Workload

Source: OIG, based on USPTO data

^a Workload represents decided appeals plus backlog of appeals.

B. Prior to FY 2010, the Actual Ex Parte Appeal Backlog Was Higher Than Reported to External Stakeholders

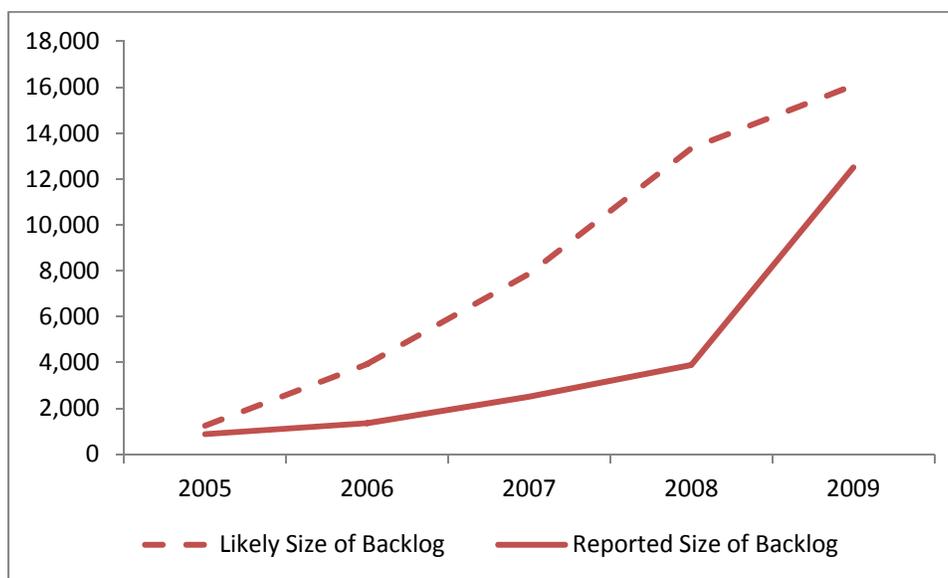
Between FYs 2005 and 2009, BPAI did not accurately account for the true number of ex parte appeal cases awaiting its review, because thousands of cases that should have been added to BPAI's case management docket were not assigned to anyone at either Patents or BPAI. These appeals had mistakenly been kept in a holding status, when they had actually been ready for BPAI's review and should have been transferred accordingly. As a result, several thousand additional cases previously unaccounted for were added to BPAI's docket of ex parte appeals once USPTO staff identified this problem in 2008. Before FY 2008, the process for transferring appeals to BPAI was unreliable. If the appellant had not filed a reply brief to an examiner's answer, which is an optional step in the appeals process, there was no automatic notification that Patents should transfer an appeal to BPAI. When USPTO staff identified this problem, the agency took corrective actions and implemented new controls to ensure appeals' automatically transfer to BPAI, regardless of whether an appellant filed a reply brief. In addition to this problem, BPAI experienced significant delays in completing the intake procedures for the newly-discovered appeals, as well as new appeals, generated in FYs 2008 and 2009. Due to these delays, many appeals were not reflected in BPAI's FYs 2008 and 2009 backlog statistics. Thus, the statistics for describing the number of new appeals and the size of the backlog are inaccurate until FY 2010.

Using historical statistics,⁶ we estimated that the gap between the reported and likely size of the backlog worsened each year until USPTO discovered the error in 2008 (see

⁶ These data are based on the number of patent applications, rejected by patent examiners, which become appeals. See appendix A for more information on this methodology.

figure 6 below). At the high point of this problem in 2008, we estimate that BPAI may have understated the size of the backlog by as much as 9,443 appeals (see appendix A for our methodology for estimating the likely size of the backlog). Since that time, our testing indicates that USPTO has corrected the problem to ensure that appeals are accounted for in BPAI's case management system.

Figure 6. Reported Ex Parte Appeal Backlog Versus OIG-Estimated Backlog



Source: OIG, based on USPTO data

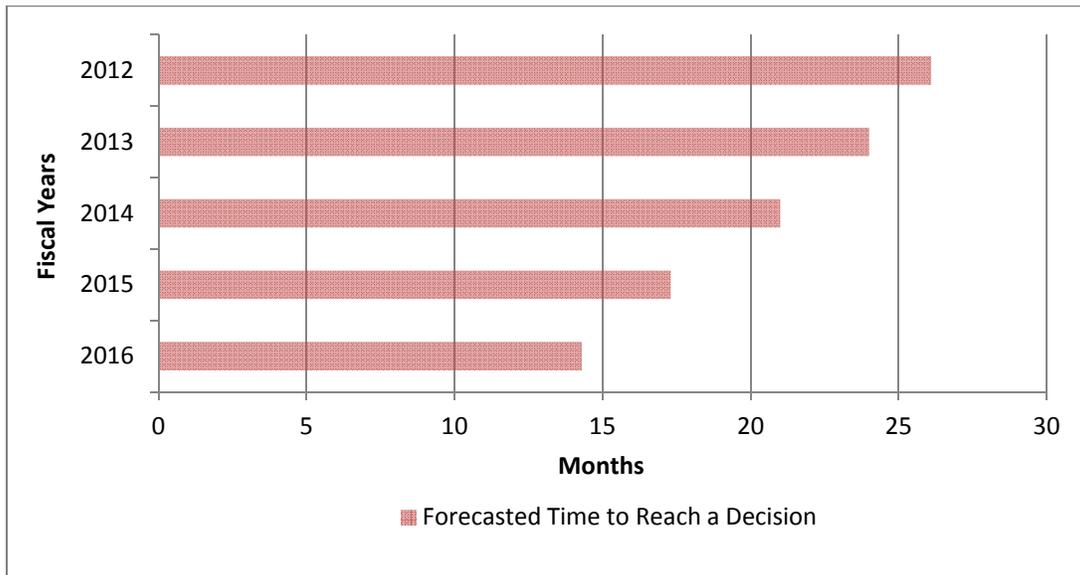
The legacy of this problem continues to negatively affect both internal and external users of BPAI's data, as BPAI has not publicly acknowledged this problem. As a result, both internal and external users may base decisions on inaccurate data. For example, internally BPAI continues to use the inaccurate figures for the size of new appeals in FYs 2005–2009 to test how well their current backlog forecasting model predicted previous years. The use of the inaccurate data compromises the results of the forecasting model. This, in turn, can compromise management's ability to make informed decisions as to how to prioritize work and how to allocate finite resources.

Externally, BPAI continues to report these incorrect data on public websites without acknowledging the shortcomings of the older data. Without BPAI's transparency about the problems with these data, external stakeholders, such as Congress, may incorrectly conclude that the spike in the backlog in 2009 and 2010 were a statistical anomaly rather than part of a larger trend associated with examiner hiring. This inaccuracy could also affect potential appellants' decisions as to whether to file an appeal, given the amount of time the appeal could take. Had appellants understood that the increase in pendency was part of a larger trend, they may have chosen to pursue other options, such as submitting to USPTO an RCE, rather than appealing their case to BPAI.

C. *BPAI Has Not Established a Performance Metric For Ex Parte Appeals*

BPAI faces major challenges in addressing its growing number of appeals and increasing pendency—yet, unlike both Patents and Trademarks, it does not have official public program performance targets to serve as public benchmarks for directing its efforts and measuring the success of its ex parte activities.⁷ Official performance measures and indicators, such as those employed at Patents and Trademarks and published in USPTO's annual and strategic plans, play an important role in managing the overall programs and operations. Such data help program managers determine whether they are meeting strategic and annual performance plans and hold managers accountable for progress toward meeting these goals. In addition, such measures also hold managers accountable for the effective and efficient use of resources. Without such public performance measures, BPAI risks diverting resources from ex parte appeals to other areas of work if there is no consensus as to what is an acceptable backlog size or length of appeal pendency. Further, without managing to targets, BPAI risks the ex parte appeal backlog returning to the historic highs of recent years if it directs attention and resources elsewhere. Publicly available pendency performance measures could also inform external stakeholders about how BPAI is progressing toward its targeted goals and also the expected amount of time to reach a decision. For example, as of the midpoint of FY 2012, the pendency of appeals on BPAI's docket had increased to 23 months. This is 6 months longer than the end-of- FY 2011 statistics last reported by BPAI. Further (as seen in figure 7 below), we forecast that, through FY 2015, the average pendency for an ex parte appeal decision will remain longer than 16 months (for assumptions informing these projections, see appendix A). With a reasonable expectation of how long it will likely take to receive a decision on an appeal, a potential appellant could weigh the appeal option against other choices, such as filing an RCE or reducing the number of claims for its patent application.

⁷ USPTO's *2010–2015 Strategic Plan* includes specific targets for both Trademarks and Patents. In the plan, Trademarks established a first-action pendency target of 2.5–3.5-months and a final action pendency target of 13 months, with analysis to illustrate how it would achieve and measure those targets. Among other goals stated in the plan, the Patents indicated that it would strive to achieve a 10-month pendency for first actions and a 20-month overall pendency.

Figure 7. Projected Pendency at BPAI (in Months)

Source: OIG, based on USPTO data

Recommendations

We recommend that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office:

1. Align BPAI's resource planning with the hiring actions and expected production levels of patent examiners;
2. Require BPAI to annotate current information on public websites to indicate that backlog data prior to FY 2010 is underreported and therefore should be used with caution; and
3. Direct BPAI to develop and publish performance measures and targets for ex parte appeals and other proceedings.

II. BPAI, with Increased AIA Responsibilities, Lacks a Comprehensive Plan to Guide Implementation and Ongoing Management

AIA significantly increases BPAI's responsibilities, yet BPAI lacks a strategic plan for expanding its operations and an implementation plan to guide it through the many uncertainties associated with organizational growth. BPAI operations will be significantly affected as it implements four new proceedings—three starting on September 16, 2012, and the fourth on March 16, 2013. In undertaking this large endeavor, and when combined with its existing operations, BPAI may more than double the number of APJs during FYs 2011–2013. However, BPAI has developed neither a comprehensive strategic plan for its expanding operations nor a plan to help guide it through the preparation and implementation of the new proceedings. Instead, BPAI has taken a piecemeal approach and planned only for some aspects of individual activities. In doing this, BPAI is missing an opportunity to smooth the transition to these new programs and mitigate risks for the many acknowledged uncertainties ahead.

With the implementation of AIA, BPAI will begin managing three new procedures in September 2012, and BPAI has requested a total of 146 new staff over the next 5 years to specifically work on AIA proceedings.

Given the new AIA responsibilities and the corresponding growth of BPAI, it needs a comprehensive strategic planning effort to guide BPAI through the process of implementing the new provisions and then overseeing the operational phases. The Government Accountability Office (GAO) has recommended⁸ that, as part of the strategic planning efforts for new or existing programs, federal agencies should include implementation plans to assist them in making the transition. According to GAO, the plans should document a project's or program's (1) responsibility for the overall and individual tasks, (2) schedules, (3) tasks and milestones, (4) delivery dates and status, (5) performance measures, (6) cost estimates, (7) resource estimates, (8) identified risks, (9) prioritized initiatives, and (10) revised goals, if revisions become necessary.

A. BPAI Lacked a Comprehensive AIA Implementation Plan Before May 2012

To address the passage of the law, BPAI prepared key individual documents (see table I below) but did not initially prepare a comprehensive implementation plan with milestones, delivery dates, and performance measures to ensure timely implementation or help identify and manage potential risks.

⁸ See appendix A for specific GAO reports.

Table I. Various BPAI Planning Documents for AIA Implementation

BPAI Planning Document	Purpose
Business Case Template	Documents general goals, resources needed to implement new AIA proceedings; includes estimates, forecasts for number of each type of new proceeding, number of APJs required for FYs 2012–2017, and financial resources needed to fund these positions
Proposed Rules^a	Describes processes and paperwork for post grant reviews, inter partes reviews, covered business method patent reviews, and derivation proceedings; estimates the expected number of proceedings, number of APJs needed to do this work, and funding necessary for additional personnel expenses
USPTO's FY 2013 Proposed President's Budget	Contains resource requests to hire an additional 146 staff members between FYs 2013 and 2017 for new proceedings

Source: OIG, based on USPTO documents

^a BPAI issued proposed rules for post grant reviews, inter partes reviews, covered business method patent reviews, and derivation proceedings in the *Federal Register* in February 2012.

However, even with these documents, we found that initially BPAI lacked an overall implementation plan to guide its AIA transition and individual implementation plans for its new AIA proceedings scheduled to begin in September 2012. The business case template, the proposed rules, and the President's budget proposal lack comprehensive and individual plans to implement the tasks including the hiring of additional staff members necessary for AIA transition.

Further, none of these three documents articulate the needs for additional space to house the additional APJs, nor do they communicate needs related to information technology, such as whether the current case management system can handle the additional proceedings. For example, while the strategy was not documented anywhere, BPAI officials explained that, as soon as AIA was enacted, they met with USPTO's chief information officer to discuss updating the current case management data system to accommodate the additional proceedings under AIA. Efforts began to identify requirements and BPAI initiated a contract for an information management system to be in place by the legislative deadline of September 16, 2012. On April 20, 2012—5 months before the legislative deadline—USPTO signed a contract to design and implement a new system for its AIA proceedings. This short time frame leaves little time for addressing issues that may arise in making this system operational.

B. Current AIA Implementation Plan Lacks Requirements for Measuring Progress and Performance

Late in our review, BPAI prepared a strategic implementation plan for AIA that outlined the broad-term transition to the new proceedings. The document, provided to OIG staff on May 2, 2012, includes general descriptions of BPAI needs for executive, regional, and administrative management; human capital; information technology; training; rule making; and space planning. However, this plan still lacks the milestones, tasks, delivery

dates, and task leads to guide AIA implementation, measure progress and results of the four new proceedings, and manage and mitigate risks before they occur. Without these details, BPAI lacks the fundamental project management tools used to manage uncertainty and deliver results. Further, although the plan notes there will be challenges in implementing a new IT system to process the new proceedings, hiring adequate staff, finalizing the new administrative rules, and locating adequate space for the new personnel, it does not provide insight on mitigating the risks and ensuring success. Given BPAI's previous problems accurately accounting for all appeals in its current IT infrastructure, any lapses in mitigating AIA implementation-related risks could prove to have significant impact.

While BPAI has begun hiring judges, obtained additional office space at USPTO headquarters and its satellite office in Detroit, and contracted for a new case management system, the new proceedings will coincide with BPAI addressing its current backlog of ex parte cases. Implementing operational changes and addressing existing backlogs are never easy endeavors; while BPAI notes that there will be challenges, its planning efforts have been piecemeal when a more comprehensive approach would more likely result in success.

C. BPAI Has Not Determined Its Future Management and Administrative Staffing Structure

BPAI will undergo historical changes as it increases in size to address its growing ex parte appeal backlog and its four new AIA trial proceedings. Nevertheless, BPAI has not completed a comprehensive workforce analysis or prepared a workforce plan for its future management and administrative staffing needs. As a result, BPAI risks not having an appropriate organizational structure and personnel in place to adequately manage all of its work.

In its initial planning documents, such as its business case template and the FY 2013 proposed President's budget, BPAI outlined the hiring needs for APJs to handle ex parte appeals and the new AIA proceedings. In addition to hiring APJs, BPAI has also begun hiring additional support personnel for administrative roles and is considering creating a new director of IT position to oversee its growing information technology requirements of the board. Further, BPAI officials noted they have begun discussing organizational changes with USPTO's Office of Human Resources in order to effectively operate in a post-AIA environment.

However, without an evaluation of its future staffing needs, and a workforce plan to manage the transition, BPAI's management and administrative personnel may not be in a position to adequately oversee personnel, process proceedings, and ultimately meet its mission.

Recommendations

We recommend that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office:

1. Develop comprehensive management plans (including how to measure progress, gauge performance, and identify risk) to address the implementation and operational oversight of the new BPAI proceedings under the AIA;
2. Ensure that data processing systems meet the needs of all four AIA proceedings; and
3. Explore the feasibility of BPAI's current management and administrative structure and staffing, given the increase in the number of proceedings and staff at BPAI.

Summary of Agency Comments and OIG Response

In response to our draft report, the Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office agreed with all of our recommendations. The response below summarizes the steps USPTO has taken or is taking that address the recommendations in the report.

Recommendation 1: USPTO noted that it must consider additional factors, such the handling of interferences and reexamination appeals, when determining hiring levels. We acknowledge other factors affect resource planning but reiterate our recommendation for USPTO to take corrective action.

Recommendation 2: USPTO has already described the problems with the appeal data on its Web site to external stakeholders. This should provide applicants with the information they need to assess whether to pursue options other than an *ex parte* appeal.

Recommendation 3: USPTO reported having established internal performance targets for its senior management. Our finding referred to publicly-reported performance measures. We have modified this section of our report slightly to clarify this point and reiterate our recommendation.

Recommendation 4: USPTO stated it has developed initial management plans that establish initial timelines and resource allocations for the AIA proceedings.

Recommendation 5: USPTO is working with its Chief Information Officer to ensure that its new data processing for AIA proceedings will be available on or before September 16, 2012.

Recommendation 6: USPTO has implemented initial management structural changes and, in conjunction with the Chief Administrative Officer, has begun an organizational study of BPAI which will result in a proposed new management structure by the first quarter of FY 2013.

We encourage USPTO to continue taking corrective actions in response to our recommendations and look forward to receiving its action plan following the issuance of this final report. We have included USPTO's formal response as appendix C.

Appendix A: Objectives, Scope, and Methodology

The objectives of this review were to determine (1) whether BPAI staffing and resources have changed in relation to changes in its caseload; and (2) to what extent BPAI operations and resources will be affected by the implementation of the America Invents Act (AIA). For the first objective, we focused our work on BPAI staffing levels for FYs 2005–2012 and changes to its caseload during that same time period. For the second objective, we focused our work on BPAI plans to implement AIA requirements and what resources BPAI had requested and budgeted to implement AIA requirements during FY 2012 and future years.

Data, Methodology, and Control Testing for Objective I

Data. In order to analyze BPAI’s staffing and caseload levels, we obtained data from a variety of sources, as outlined below.

Table A-I. Personnel, Caseload, and Internal Control Data Sources

Data Source	Type of Data and Description
National Finance Center (NFC)	<i>Payroll data.</i> Provide number of BPAI employees onboard at the end of the fiscal year by position title.
Patent Application Locating and Monitoring (PALM) system	<i>Employee production data.</i> Help determine the number of patent examiners on board and reviewing patents at the end of the fiscal year.
Adjudicated Case Tracking System (ACTS)	<ul style="list-style-type: none"> <i>Decided appeals.</i> Enumerate all appeal decisions issued FYs 2005–2011, as well as the first 6 months of FY 2012. <i>Docketed appeals.</i> Enumerate all appeals on BPAI’s docket for FYs 2005–2011 and select months of FY 2012.
PALM	<ul style="list-style-type: none"> <i>Filing date.</i> Provides all appeals decided in FYs 2010 and 2011. <i>Status code dates for appeals.</i> Supply date that any appeal achieved specific statuses (e.g., examiner answer mailed, reply brief filed) for all appeals during FYs 2005–2011. <i>Pull reports.</i> Identify whether a case is ready for BPAI review (OIG obtained 7 weeks of reports).

Source: USPTO

Data Reliability Testing. We assessed the reliability of data obtained from the NFC, PALM, and ACTS data systems in accordance with Generally Accepted Government Auditing Standards (GAGAS). We reviewed whether there were any information control problems or data quality issues known to the system owners. In addition, we identified no known issues with NFC, and found the NFC data to be sufficiently reliable for describing the number of BPAI staff on board during this period.

However, the system owners for ACTS and PALM communicated problems with the internal controls that could increase the risk of unreliable data from these systems. Because of these limitations, we performed more extensive electronic testing data from both of these systems. We also performed reasonableness tests to determine whether there were any illogical relationships, historical anomalies, or missing data. Although we identified some anomalies, we determined that the issues were a result of the specific reports generated by the data system rather than the actual data.

We found that the ACTS and PALM data were sufficiently reliable for describing historical trends for the number of staff on board at the Patent Corps, as well as describing the number of decisions that BPAI issued. However, we also determined that the ACTS data were not sufficiently reliable for describing the number of new appeals reaching BPAI dockets between 2005 and 2009. Therefore, we established estimates for these figures.

Data Limitations. We faced some limitations with the data we received from the ACTS system because the reports generated inaccurate information for the notice of appeal for a small subset of cases. We excluded these appeals from our analysis and, thus, from our historical backlog and pendency estimates. Additionally, we identified a few instances in which a single appeal appeared to have received multiple decisions because of how ACTS generates the report.

Our ability to conduct certain types of forecasting was also limited by the data that ACTS does not collect. For instance, ACTS does not record how many decisions each judge issues in a year, therefore limiting our ability to determine how many appeals a new judge would typically issue in a year. We needed this information to forecast the future productivity of new judges hired in FYs 2012–2013. Instead, we assumed that all new judges would meet the minimum number of decisions required to achieve a fully satisfactory rating identified in BPAI's annual performance plans. For FY 2011, first year judges were required to issue 60 decisions if they were in the chemical and mechanical divisions and 49 decisions for all other technical specialties.

Methodology to Analyze Actual and Estimated BPAI APJ Levels. From our analysis of the payroll data we were able to determine the number of administrative patent judges (APJs) on board at the end of the each fiscal year. It was determined that BPAI's APJ staffing levels remained relatively constant with a net gain of 46 judges from 2005 to 2011. However, during the same time period, patent examiners staffing levels continued to grow at a rapid rate with 4,258 patent examiners onboard at the end of FY 2005 and 6,785 onboard at the end of FY 2011.

Methodology to Estimate the Number of Ex Parte Appeals Docketed, FYs 2005–2009. We built upon BPAI's current forecasting methodology to estimate the likely size of the backlog between FYs 2005 and 2009.

To estimate the likely size of the FY 2005–2009 backlog, we obtained data on the number of disposals not allowed and examiner’s answers written during this period.⁹ Using a file containing all of the examiner’s answers and a file containing all of the applications reaching BPAI’s docket between FYs 2005 and 2011, we tested (1) how many of the appeals that received an examiner answer during FYs 2010 and 2011¹⁰ were eventually on BPAI’s docket and (2) the amount of time that passed between receiving an examiner’s answer and a case reaching BPAI’s docket.

We concluded that 96 percent of the appeals that had received an examiner’s answer were eventually on docket. We also found that 75 percent of the appeals arrived at BPAI within 4 months of receiving an examiner’s answer. We then used these two statistics to estimate the likely size of the backlog for FYs 2005–2009.

Methodology to Forecast the Ex Parte Appeals Backlog. To forecast the likely size of the backlog for FYs 2012–2016, we first built upon our methodology to estimate the actual backload of cases and the likely number of examiner’s answers. Using estimates of the number of disposals and allowance rate for FYs 2012–2016¹¹ from USPTO’s patent production model, we estimated the initial size of the pool of applications that could be appealed.

We also found a correlation between the percentage of non-allowed decisions that are appealed and the allowance rate of the prior year ($r=.6$). Essentially, as the allowance rate increases, the number of rejected applications that are appealed decreases. Using a simple regression model, we found that for every 1 percent increase in the allowance rates, the percent of non-allowed decisions that are appealed decreases by 0.1 percent. We then used this relationship to estimate the number of examiner’s answers that would be generated in FYs 2012–2016.

Next, we combined our finding that 96 percent of examiners’ answers would eventually become appeals with a similar finding that, in FYs 2010 and 2011, BPAI’s docket received 8 percent more appeals than the initial pool of examiners’ answers. We then estimated the number of examiners answer based on the projected number of disposals and allowance rates, multiplied this by 96 percent, and multiplied the result by 10 percent to generate the likely intake of new appeals each year for FYs 2012–2016.

After calculating how many new appeals could occur in future years, we then estimated how many decisions BPAI could issue during FYs 2012–2016, based on previous performance and the number of new APJs that BPAI has been approved to hire to review ex parte appeals. We used the production levels of FY 2011 as the productivity level of the current corps of judges and estimated when the 105 new judges would be

⁹ Generally, an examiner’s answer is written if the appellant correctly files a notice of appeal and appeal brief and pays the relevant fees.

¹⁰ Because of known inaccuracies in the data prior to FY 2009, we used FYs 2010 and 2011 to obtain these estimates.

¹¹ As of February 2012.

on board.¹² We also assumed that all new judges would issue the minimum number of decisions required to achieve a fully satisfactory rating. These targets are laid out in BPAI's annual performance plans.

Table A-2. Assumptions Regarding Number APJs Hired and Timing of Hires

FY	OIG Assumption
2012	<ul style="list-style-type: none"> • 20 judges start at midpoint of the fiscal year • 55 judges start at beginning of the last quarter of the year
2013	30 judges start at midpoint of the fiscal year
2014 and beyond	All (105 in total) full-time administrative patent judges hired in FYs 2012 and 2013 would perform at a fully satisfactory level and any attrition would be backfilled immediately. ^a

Source: OIG, based on USPTO data

^a BPAI requested to hire APJs for FY 2014, but this request has not yet been approved.

Methodology to Forecast the Ex Parte Appeals Pendency. We then determined the likely pendency of appeals using inputs from the analysis above and information on the current backlog. By comparing the number of docketed appeals that had not been decided, we calculated the age of oldest cases in the ACTS system. We assumed that BPAI would review the oldest appeals first. We then calculated the pendency of appeals by employing BPAI's historical decision rate, the estimated intake of new appeals, and estimate productive capacity of APJs for FYs 2012–2016. From this analysis, we could thus estimate the likely number of months it will take BPAI to reach a decision on an appeal after it is docketed at BPAI in future years.

Methodology to Estimate the Difference Between the Estimated Workload and Required Workload. To estimate the difference between the estimated workload and required workload, we based our analysis upon the methodologies used to estimate the size of the backlog and the performance expectations laid out in the APJs performance plans. Required workload describes the minimum number of appeals a judge must issue in a year, based on that judge's discipline, to achieve a fully satisfactory rating. To calculate the estimated workload, we divided the total workload for the year by the estimated number of APJs reviewing ex parte appeals. We estimated how many APJs spent the majority of their time reviewing ex parte appeals by reviewing BPAI organizational charts. To calculate the total workload, we added the number of decided appeals in a year (the completed work) with the estimated size of the ex parte appeal backlog (the incomplete work) for the year.

¹² BPAI indicated that it was on track to have 75 full-time APJs on board by the end of FY 2012 to review ex parte appeals. BPAI also received approval to hire an additional 34 judges to review ex parte cases in FY 2012. We assume that BPAI will meet their FY 2012 target and 95 percent of the approved hires for FY13 and some of these positions will also include part-time judges. For fiscal year 2012, we assumed that 20 judges would start at the midpoint of the fiscal year and another 55 judges would be on board for the last quarter of the year based on BPAI's projected hiring. We also assumed that the judges hired to review the new AIA proceedings, and not included in the figures mentioned in our report, would review AIA proceedings rather than ex parte appeals.

Internal Control Testing. Because of the significant problems in the past of transferring appeals from the patent corps to BPAI, along with continued manual input of some data, we focused our internal control testing on whether appeals were being transferred in a timely basis since the implementation of new controls. This included testing whether cases identified as ready for BPAI review were correctly entered into ACTS and in a timely manner, as well as whether the controls put in place to correct the previous problems were working. Overall, we did not identify concerns with USPTO's internal controls that ensure appeals are transferred to BPAI in timely manner.

Data, Methodology, and Control Testing for Objective 2

For objective 2, we obtained and reviewed relevant agency documents including the May 2011 business case template for AIA Implementation; the February 2012 proposed new rules for AIA inter partes reviews, post grant reviews, combined business method patent reviews, and derivation proceedings; and the February 2012 USPTO FY 2013 President's budget. We also interviewed appropriate BPAI officials. To determine what documentation federal agencies should prepare when undertaking a program such as AIA, we reviewed relevant GAO reports, which indicated that federal agencies should prepare implementation plans to undertake new programs and guide operational initiatives.¹³

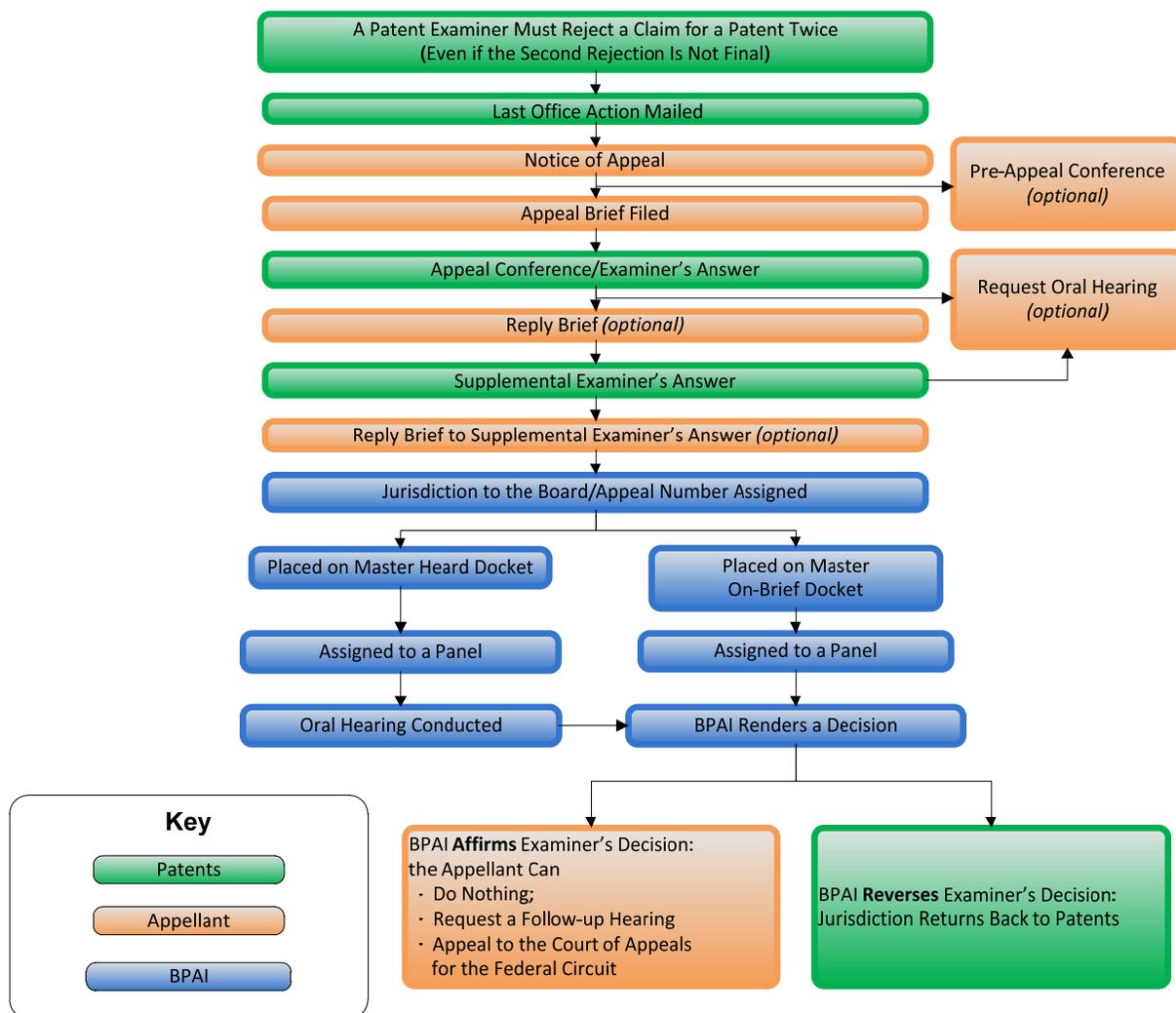
The audit was conducted under the authority of the Inspector Act of 1978, as amended and Department Organization Order 10-13, dated August 31, 2006. We conducted the audit in accordance with generally accepted government auditing standards between November 2011 and May 2012 at USPTO headquarters in Alexandria, Virginia. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹³ The GAO reports included *Increased Federal Planning and Risk Management Could Further Facilitate the DTV Transition* (GAO-08-43, November 19, 2007); *Army Needs to Finalize an Implementation Plan and Funding Strategy for Sustaining an Operational Reserve Force* (GAO-09-898, September 17, 2009); and *Content and Coordination of Space Science and Technology Strategy Need to Be More Robust* (GAO-11-722, July 19, 2011).

Appendix B: Ex Parte Appeals Process

BPAI’s ex parte caseload flows directly from decisions made by patent examiners. In order for a patent application to become a docketed appeal, a patent examiner must reject patent claims twice. Subsequently, if the applicant files a notice of appeal and an appeal brief, and pays the relevant fees, then the patent examiner must issue an examiner’s answer. After the examiner’s answer is issued, the appeal goes through several more steps before it is docketed with BPAI.¹⁴

Figure B-1. Required and Optional Steps in the Appeal Process



Source: OIG, based on USPTO documents

¹⁴ This chart reflects the appeals process in place at the start of our audit. BPAI amended the rules of procedure effective January 23, 2012, but the process generally remains the same.

Appendix C: Agency Response



UNITED STATES PATENT AND TRADEMARK OFFICE

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

JUL 26 2012

MEMORANDUM FOR Ron Prevost
Assistant Inspector General for Economic and
Statistical Program Assessment

FROM: David J. Kappos 
Under Secretary and Director

SUBJECT: Response to Draft Report "*USPTO's Other Backlog: Past
Problems and Risks Ahead for the Board of Patent Appeals and
Interferences*" (July 2012)

Executive Summary

We appreciate the effort your staff has made in evaluating the effectiveness of the Board of Patent Appeals and Interferences ("Board") and our resources, backlogs and performance targets. We have considered carefully the six recommendations that the Inspector General ("IG") identified in the draft report, and have provided comments.

The Agency is providing these comments to provide additional context, clarification, and updates to the draft report findings. Further, we agree that the recommendations raised by the IG have merit, and we have taken or are taking steps to address the valid concerns raised by them. It is hoped that the responses we have provided demonstrate the Board's significant efforts in meeting those challenges. We would appreciate your amending the report to note the progress that the USPTO has made to date in each of these areas.

Agency Comments to Draft Report

The first comment made in the report is that the number of *ex parte* appeals received at the Board between fiscal years ("FY") 2005 and 2011 rose substantially, yet the staffing levels remained "essentially flat." During this previous period, staffing levels at the Board did not increase commensurate with the increase in workload at the Board. However, under the current Administration, the Board has already commenced a significant increase in hiring and will continue to be provided with additional staffing and support to address its growth in workload. Already in 2012, the Board is on pace to hire one hundred additional Administrative Patent Judges ("Judges") to manage the backlog and to reduce the current pendency level of *ex parte* appeals. Additionally, the USPTO is committed to providing further resources to support the Board's growth in the FY 2013 budget and beyond.

P.O. Box 1450, Alexandria, Virginia 22313-1450 - www.USPTO.gov

The second comment made in the report is that inaccurate data regarding pendency of certain types of *ex parte* appeal cases between FY 2005 and FY 2009 delayed USPTO efforts to reduce the growing backlog and that such incomplete information might affect external stakeholder decision making. It is true that there was some inaccurate data prior to FY 2008, but as the report indicated, USPTO took corrective action once the problem was identified. Additionally, as recommended by the report, USPTO has already annotated the data for these years to provide the public with transparency regarding backlog information -- past and present.

The third comment made in the report is that the Board lacks performance targets for *ex parte* appeals, which is said to limit the Board's stakeholders from holding managers accountable for the effective and efficient use of resources. *Ex parte* appeals pendency, as noted below, is of great concern to the Board. The Board has in each of the years covered by this report had targets in the performance assessment plans of the Board managers. In the future, the Board will publish performance targets for stakeholders.

The fourth comment made in the report asserts that a strategic plan for implementation of the America Invents Act ("AIA") was not developed until May 2012, and that it lacks detailed specificity in measuring progress. However, as the report noted, the Board provided budgetary, operational, and regulatory plans related to Board implementation of the AIA in advance of the passage of the AIA and shortly thereafter, in addition to the subsequent strategic plan developed in 2012. Nevertheless, we do agree with the IG that further work is warranted. The Board is working closely with the Chief Administrative Officer (Office of Human Resources) in formulating a comprehensive and more detailed strategic plan for growth and measurement of progress now that the underlying AIA rules and procedures have become clarified.

Similarly, the fifth comment in the report states that the Board has not completed a comprehensive workforce analysis to evaluate future staffing needs and organizational structure. We agree with the IG that the Board has undergone an extreme period of growth and also that during previous years the Board was understaffed in management roles. In large part, under the current Administration, with the accession of a new Chief Judge and enhancement of the management structure to include lead judges, that lack of available management resources has been reduced. Also, the Board, in conjunction with the Agency Chief Administrative Officer, has begun a Board organizational study which will result in a proposed new management structure. The project is targeted for completion within the First Quarter of FY 2013.

Response to Recommendations

IG Recommendation that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (1): Align Board's resource planning with the hiring actions and expected production levels of patent examiners.

USPTO Response:

The USPTO agrees with this recommendation. The recommendation is correct inasmuch as the Board judge hiring should not lag behind the hiring efforts and productivity of the patent examination corps. The USPTO notes that the Board also has other duties, such as handling interferences and reexamination appeals, in addition to the new AIA post grant proceedings.

Therefore, the Board's overall workflow, in addition to the expected workflow from the patent examination corps, should be taken into account.

IG Recommendation that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (2): Require Board to annotate current information on public Web sites to indicate that backlog data prior to 2010 is underreported and therefore should be used with caution.

USPTO Response:

The USPTO agrees with this recommendation. The Board has already annotated the appropriate pages on the Board Web site. Please see:
<http://www.uspto.gov/ip/boards/bpai/stats/process/index.jsp> and
<http://www.uspto.gov/ip/boards/bpai/stats/receipts/index.jsp>.

IG Recommendation that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (3): Direct the Board to develop and publish performance measures and targets for *ex parte* appeals and other proceedings.

USPTO Response:

The USPTO agrees with this recommendation. The Board will publish suitable targets and adjust them as appropriate.

IG Recommendation that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (4): Develop comprehensive management plans (including how to measure progress, gauge performance, and identify risk) to address the implementation and operational oversight of the new BPAI proceedings under the AIA.

USPTO Response:

The USPTO agrees with this recommendation. The Board has already developed initial management plans that establish initial timelines and resource allocations for the AIA proceedings. As the Board gains experience with these new proceedings, the Board will further refine those plans.

IG Recommendation that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (5): Ensure that data processing systems meet the needs of all four AIA proceedings.

USPTO Response:

The USPTO agrees with the recommendation. The Board began the process of obtaining and implementing a data processing system in September of 2011. Working in close cooperation with the Chief Information Officer, requirements for a system were developed, and a contract for procurement of a system was awarded in April 2012. The prototype is expected to be available for user comment in August, with launch on or before September 16, 2012. Additionally, the Board has plans to regularly monitor and refine the systems supporting the AIA proceedings.

IG Recommendation that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (6): Explore the feasibility of BPAT's current management and administrative structure and staffing, given the increase in the number of proceedings and staff at BPAT.

USPTO Response:

The USPTO agrees with this recommendation. Within the last year, the Board has already implemented initial management structural changes, including the appointment of lead judges. Also, the Board, in conjunction with the Agency Chief Administrative Officer, has begun a Board organizational study which will result in a proposed new management structure. The project is targeted for completion within the First Quarter of FY 2013.

Conclusion

Again, we thank the Assistant Inspector General for Economic and Statistical Program Assessment for the report. We appreciate the opportunity to provide context and clarification to the comments made in the report. We intend to meet the recommendations in a diligent manner, and we will accept gratefully suggestions as we move forward to ensure that effective processes are in place to address the BPAT backlog, workloads, and AIA implementation, that will enable us to meet the strategic goals and needs of the United States Patent and Trademark Office.

I0USPTO00132