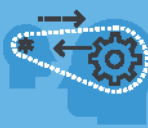




PATENT QUALITY

INFORMATION TECHNOLOGY



PPAC

Patent Public Advisory Committee

FINANCE



PATENT TRIAL & APPEAL BOARD



PATENT PENDENCY AND RCE

Annual Report | 2016

INTERNATIONAL



2016



HUMAN CAPITAL AND OUTREACH



LEGISLATION





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November 1, 2016

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The President
The White House
Washington, D.C. 10500-0001

Dear Mr. President:

I am pleased to present you with the 2016 Annual Report of the Patent Public Advisory Committee (PPAC) of the United States Patent and Trademark Office (USPTO). Fiscal Year 2016 has been a very successful year of impressive collaboration between the USPTO and the PPAC to further the mission of the agency, stemming from the leadership of Michelle Lee, Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

Recognizing that the issuance of high quality patents with a reasonable pendency is of critical importance to the economic strength of the United States, Under Secretary and Director Michelle Lee established patent quality as the major focus of her tenure. Throughout this fiscal year, the USPTO has held public fora and sought comments from stakeholders on ways to improve the patent products and processes. The USPTO has continued to focus efforts to ensure and enhance patent quality through the development of numerous enhanced patent quality initiatives, directed to excellence in work product, excellence in measuring patent quality, and excellence in customer service. These initiatives included, for example, new programs for applicant participation, a quality review tool to gather uniform review data on correctness and clarity of the work product into a single database, delivery of reference material to examiners to ensure consistent decisions by different areas of the USPTO, and programs to improve the clarity of the record.

In FY 2016, Information Technology (IT) initiatives continued to deliver progress in replacing antiquated technology and providing new systems for use

by patent examiners, patent applicants and other stakeholders providing improved capabilities and better interfaces for interactions with the USPTO. This necessary modernization of the computer systems at the USPTO is essential to the patent examination process to improve the patent examiner tools and enhance their abilities to deliver quality examination. Implementation of Global Dossier, affording the public access to the contents of patent applications from a variety of patent offices was a significant achievement.

During FY 2016, the fees collected were consistent with projections with an increase of 1.86% from FY 2015. Underlying this growth in revenue was a 5.11% increase in patent filings compared to FY 2015 and an increase in maintenance fees collected. However, fee collections for FY 2016 were still less than in FY 2014. On the spending side, both FY 2015 and FY 2016 show spending requirements as greater than fee collections, which supports the need for adjusted patent fees being planned for FY 2017. In FY 2015 and in FY 2016, the shortfall was addressed by drawing from the Patent Operating Reserve, emphasizing the importance of that reserve fund. Continued access by the USPTO to all collected fees is crucial for the efforts to improve patent quality and replace mission critical systems.

In the international arena, the USPTO made excellent progress in a number of vital areas, including work sharing, patent harmonization, and implementation of the Global Dossier project, delivering improved efficiency and greater access to patent documents for examiners and the public.

A recent study titled “The Bright Side of Patents” and conducted by Harvard Business School and New York University (see, [USPTO Economic Working Paper No. 2015-5, December 2015](#)), demonstrated that patents help startups create jobs, grow sales, innovate, and reward their investors. The United States has been the leader in startup companies and innovation but for American innovation to continue to thrive, we must have a strong, high-quality patent system that encourages innovation, attracts investors, grows our economy and creates good jobs. The ability to patent, and thereby protect an invention, is a necessary incentive for inventors and innovative companies to assume the financial risk and investment to bring new products and services to market. A strong, fully funded, technologically supported USPTO is vital to its ability to provide timely high quality examinations of patent applications that result in strong patents being issued that support our economy and stimulate innovation around the world.

Thank you for taking the time to review this report. We welcome any questions you or your staff have about it.

Respectfully,

A handwritten signature in black ink that reads "Esther Keplinger". The signature is fluid and cursive, with the first name "Esther" written in a smaller, more compact script than the last name "Keplinger".

Esther Keplinger
Chairman
Patent Public Advisory Committee
United States Patent and Trademark Office

Enclosure: Patent Public Advisory Committee Fiscal Year 2016 Annual Report

cc: The Honorable Charles Grassley, Chairman, Senate Judiciary Committee
The Honorable Bob Goodlatte, Chairman, House Judiciary Committee
The Honorable Patrick J. Leahy, Ranking Member, Senate Judiciary Committee
The Honorable John Conyers, Jr., Ranking Member, House Judiciary Committee
The Honorable Darrell Issa, Chairman, Subcommittee on Courts, Intellectual Property, and the Internet
The Honorable Jerry Nadler, Ranking Member, Subcommittee on Courts, Intellectual Property, and the Internet
The Honorable Penny Pritzker, U.S. Secretary of Commerce
The Honorable Michelle K. Lee, Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office
Andrew Hirshfeld, Commissioner for Patents

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I. INTRODUCTION

The Patent Public Advisory Committee (PPAC or Committee) thanks the United States Patent and Trademark Office (USPTO), and in particular, Under Secretary of Commerce and Director of the USPTO Michelle Lee, for the assistance and positive atmosphere enabling our committee to interact effectively and efficiently with the employees of the USPTO. Throughout the year, all personnel of the USPTO provided unfettered access to the information requested by the PPAC in its role as advisors. They regularly provided detailed information allowing us to better understand the complex issues facing the USPTO and permitted constructive discussions of options, constraints, and upcoming initiatives for our consideration and comment.

The PPAC thanks all of the employees of the USPTO for their assistance over this year and for the efforts made by all to improve the system and provide a world class patent office. The leadership at the USPTO has consistently demonstrated a commitment to excellence throughout all of our interactions and we commend their efforts to continually provide better service, quality, information, and interactions with the public. This positive atmosphere translated to more productive interactions with the PPAC and the public in numerous venues. The USPTO continued to demonstrate transparency by holding public meetings and issuing requests for comment on various proposed changes and actions, which can only provide better results. We are grateful to the management of the USPTO and the examiners' union, the Patent Office Professional Association (POPA), for the assistance we have received in fulfilling our roles as members of the PPAC. We look forward to our continuing interactions with the USPTO.

II. PATENT QUALITY

High quality patents continue to be the most important priority for patent applicants and the public and the USPTO has placed appropriate emphasis on providing it by proposing and implementing a series of steps and initiatives throughout FY 2016. The value of high patent quality is essential in a global economy to reduce uncertainty in the marketplace and unnecessary conflict or litigation and to help drive the U.S. economy. Following the establishment of patent quality as the major focus of her tenure during FY 2015, Director Michelle Lee continued this focus and expanded the efforts and initiatives of the USPTO to provide enhanced patent quality during FY 2016.

The USPTO implemented a significant number of new initiatives to enhance patent quality ranging from training pilots for examiners and training programs for applicants' participation; providing alternative options during prosecution; a Master Review Form

(MRF) for use in all reviews of the work product; and adjusting the metrics utilized to track and report the evaluations done by the USPTO of their work product. The USPTO solicits comments and suggestions on all of these initiatives. Some initiatives may need modifications based on those comments, feedback or lessons learned even after their implementation. The initiatives represent the USPTO's commitment to improve performance and provide additional options for the applicants. Especially noteworthy initiatives include: the Post Prosecution Pilot (P3) program in which applicants may present arguments after a final rejection to a panel of three examiners and receive detailed information regarding the outcome of their evaluation; the Post Grant Outcomes Pilot in which information from the Inter Partes Review (IPR) of patents is provided to the examiner of a pending related application; the MRF to be used in all evaluations of the work product; Clarity of the Record Pilot; Case Studies of topics suggested by the public; and regularly distributed memos, guidelines and examples related to examination of claims under 35 U.S.C. § 101 and caselaw. The USPTO continues to accept comments for improving patent quality through the World Class Patent Quality (WCPQ) mailbox (worldclasspatentquality@uspto.gov).

Continued necessary information technology (IT) improvements are underway at the USPTO to modernize the computer systems essential to the patent examination process that should provide tools that will enhance the abilities of examiners to deliver quality examination.

Recommendations:

The PPAC recommends that the USPTO focus on supervisory review and a robust feedback system to channel quality comments and suggestions to the examiners, combined with the identification of any individual or group deficiencies that can then be addressed with additional training and follow up. The Supervisory Patent Examiners (SPEs) are well positioned to conduct reviews and deliver feedback, but they must be allowed an adequate amount of time to perform these functions and have emphasized that this is their primary and most important function.

The PPAC recommends a focus on complete searches as set forth in the Manual of Patent Examining Procedure (MPEP) covering an invention, as described and claimed, including the inventive concepts toward which the claims appear to be directed; clear and comprehensive office actions which identify how the claim is being interpreted and the passages of the reference(s) being relied upon; and thorough treatment of arguments and evidence submitted in response to the rejections.

The PPAC recommends that the USPTO focus on mining the data obtained from the pre-appeal brief conferences and the appeal conferences to identify patterns or errors and

develop steps for quality improvements of the final rejections being advanced. While these programs provide an invaluable check and balance to weed out improper rejections, the procedures themselves are costly in time and money to both the applicant and the USPTO. Therefore, efforts to reduce the number of improper final rejections are a worthy undertaking.

The PPAC recommends that the USPTO evaluate and try to reduce the number of final rejections which cite new prior art, particularly, following small changes to the claims which should have been recognized as the invention was searched according to the guidance provided for search in the MPEP. It appears that new prior art applied in some final rejections should have been located and applied to the claims, as originally presented. Additionally, efforts or initiatives to enter more small changes to the claims, especially those which put the case in condition for allowance following a final rejection, would be welcomed. Changes to the current compact prosecution system which would allow other options, such as an additional amendment after a final rejection, should be considered. Reconsideration of the application with additional amendments and arguments within a few months is more effective and efficient for both the applicant and the USPTO.

The PPAC recommends that the USPTO evaluate the compact prosecution model and determine if it provides an efficient, effective process for patent examination. Approximately 30% of filed applications are Requests for Continued Examination (RCEs) suggesting that a single round of prosecution allotted from the compact prosecution model is insufficient to resolve the issues in many applications. Reducing the number of RCEs could make the USPTO more efficient in the long-term so an analysis of whether a different process could be utilized is suggested.

The PPAC recommends that the USPTO focus on improving the consistency of the rejections and quality of actions from the Patent Examining Corps. Many practitioners believe that the outcome of a patent application depends very heavily upon which examiner is assigned to the application. While some differences among examiners are to be expected, a more predictable examination and outcome of patent applications should exist. This is thought to exist especially in the application of 35 U.S.C. § 101 but seems prevalent across all examination review. Whether or not an applicant receives a patent and how long and at what cost the process takes should not be dependent on which examiner does the examination. The USPTO should focus on consistency, supervisory oversight to monitor the quality, and implementation of programs for intervention and correction of errors without the need for costly appeals to the Patent Trial And Appeal Board (PTAB).

III. INFORMATION TECHNOLOGY

In FY 2015, the USPTO continued to fund IT initiatives at a higher level than they had in previous years, at spending levels that were in fact double those of FY 2013; this same trend continued into FY 2016. The PPAC endorsed, and continues to endorse, these higher levels of IT spending because replacement of antiquated technology has already been delayed too long, jeopardizing mission-critical functions such as efficient examination, service delivery to applicants and other stakeholders, and improving patent quality via functions such as examiner search and improved workflow. At present there is no question that these initiatives must move forward; therefore, the PPAC's focus is in helping the USPTO to prioritize as well as to determine the specific funding levels necessary, given fluctuations in application filing and USPTO revenues.

During the second quarter of FY 2015, the USPTO made available to the entire Patent Examining Corps a new system, the Docket and Application Viewer (DAV), the first of a planned series of rollouts of the new Patents-End-to-End (PE2E) functionality. This new software tool, which replaces the electronic Data Application Navigator (eDAN) tool long in use by examiners, provides integrated case management, improved ability to prioritize tasks, and numerous features to automate tasks examiners previously carried out by hand, such as drawing claim trees and searching for text within application files. In addition, like all of the other tools in the PE2E portfolio, DAV builds upon an advanced, open source, standards-based architecture so that functions that were previously performed separately within each separate software tool, such as searching and claim tracking, can be consistently streamlined across tools and applications. During FY 2016, there continued to be wide acceptance of DAV among examiners, to the point that almost every examiner has been trained on DAV and its use was widely adopted. Usage of eDAN will cease by the end of 1st quarter FY 2017.

The PPAC commends the Office of the Chief Information Officer (OCIO), the Office of Patents Information Management (OPIM) and the entire USPTO organization for the smoothness of implementing DAV usage. The DAV deployment sets the stage for the deployment of the other key components of PE2E, such as a new advanced examiner search tool and authoring tool for official correspondence (e.g., office actions), as well as the eventual retirement of the USPTO's legacy systems whose outdated custom design dates back to the 1980s. Although the PPAC is delighted with the progress so far, it recognizes that there are costs and risks associated with "changing the wheels while the car is moving forward" - maintaining two sets of systems as newer, modern systems replace the old ones. This is a set of projects which, if delayed or only partially completed, would leave the USPTO in a state where it is paying a higher, ongoing cost

without any real return. The USPTO will need to manage the budget carefully to guard against these risks.

At the same time as PE2E projects steamed ahead in FY 2015, the USPTO had several key projects to support international cooperation and work sharing. The USPTO's commitment to the Cooperative Patent Classification system (CPC), the conversion from a U.S. system for classifying patents by subject area to an international standard, required extensive technology support, and the OCIO stepped up to help, leveraging a system used in trademarks to help examiners automate the assignment of applications using CPC codes. The OCIO developed a web-based system to allow public access in the U.S. to foreign patents, which was released in first quarter FY 2016. These international initiatives continued to receive attention and priority, which in turn can help to improve patent quality; it is now possible for the members of the Patent Examining Corps to perform searches that include prior art from not only the USPTO, but also the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), and State Intellectual Property Office of the People's Republic of China (SIPO).

The PE2E projects are required in order to replace antiquated systems, which are currently being used by the USPTO for handling back-end application data as well as other outdated tools. The OCIO plans to begin deployment of the new examiner search system and official correspondence (OC) tool early in FY 2017.

The U.S. Department of Commerce (DOC) has begun a Shared Services program to address the issue of redundant services within the DOC, while at the same time improving delivery of these support functions. As the DOC begins to establish these shared services, the PPAC urges the USPTO to ensure that the examiners and the stakeholders will maintain the same or better level of service and security.

The PPAC heartily recognizes and endorses the pre-planning and steps taken by the OCIO in regards to its contingency plan when both primary and backup power systems (all four) catastrophically failed in December 2015. The damage presented a temporarily catastrophic event that no amount of pre-planning could completely compensate for. The USPTO was able to carry out some (but not all) of its functions because of pre-planning. The power outage (which did damage key portions of the USPTO's IT systems) demonstrated the need to upgrade and modernize the IT hardware. Bringing in spare parts for these old systems from around the world was hardly a desirable situation. The PPAC and the OCIO find this to be an unacceptable vulnerability.

Recommendations:

While the decline in fee collections for FY 2015 negatively impacted IT at the USPTO, FY 2016 saw a slight rebound. The USPTO has managed its IT improvements well, given both the uptick in fee collections for FY 2016 and available reserve funding. The PPAC notes that slowing IT modernization will cause significant and possibly irreversible harm without any long-term cost savings; thus these projects must continue to be funded. The PPAC also notes the importance of systems that foster international work sharing and cooperation as well as customer-facing IT systems, with the proviso that careful budget management and prioritization must apply to all projects. The PPAC finally observes that the increase in computing capabilities will serve to enhance patent quality, which both the USPTO and the PPAC see as essential to the proper functioning of a modern, world-class patent office.

IV. FINANCE

In FY 2016, expenditures and collections tracked closely to what had been forecasted. Collections grew, compared to FY 2015, but still lagged FY 2014. The growth in collections has been in large part due to an increase in RCE filings. The growth in spending has flattened in FY 2015 and FY 2016. However, spending requirements have exceeded collections in both years, leading to a drawdown in the Patent Operating Reserve.

The USPTO is taking proactive steps to assure long term fiscal health while protecting the expenditures necessary to improve patent quality, control pendency, and upgrade the IT infrastructure. In early FY 2016, the USPTO comprehensively reviewed and prioritized its spending. Furthermore, the USPTO completed a fee review process in FY 2015 and sent a patent fee adjustment proposal to the PPAC for review and comments on October 27, 2015. Subsequently, the PPAC solicited public input, held a public hearing, and published a report with its views of the fee adjustment proposal (attached as Appendix 2). Although having concerns with individual fee adjustments, the PPAC and the stakeholders were highly supportive of a reasonable fee structure that would provide more revenue to the USPTO. The USPTO issued a Notice of Proposed Rulemaking (NPRM) for the proposed fee changes on October 3, 2016. The fee structure proposed in the NPRM shows that the USPTO took careful consideration of the input from the public and the PPAC, addressing some key stakeholder concerns. The USPTO expects to issue a final rule setting new fees after receiving public comments on the NPRM. The adjusted fees are planned to go into effect in August 2017.

Recommendations:

The USPTO is displaying sound management of the funds it collects, carefully prioritizing its needs to assure the long-term health of the patent system. The fee review and fee setting processes are working as designed. However, the USPTO's fee setting authority is currently scheduled to sunset in September, 2018. The PPAC and other stakeholders believe that the USPTO's fee setting authority should be made permanent. Furthermore, Congress and the next Administration should respond favorably to the USPTO's requests for authority to spend its collected fees in FY 2017 and FY 2018. After receiving public comments on the NPRM, the USPTO should move forward with fee adjustments that provide the necessary increase in revenue, while addressing the concerns noted in the PPAC's fee setting report. Also, the USPTO should continue to carefully prioritize spending and not assume a return to historical filing growth rates.

V. PATENT TRIAL AND APPEAL BOARD

The Patent Trial and Appeal Board (PTAB or Board) continued to be busy in FY 2016. As of September 30, 2016, the Board has received a grand total of 5,680 petitions under the Leahy-Smith America Invents Act (AIA): 5,143 IPR petitions; 476 covered business method (CBM) petitions; 37 post grant review (PGR) petitions; and 24 derivation petitions. The majority of petitions continue to be filed in the electrical/computer software area, although the number of filings has risen this year in the biotechnology area. In particular, the petition filings by area of technology were: 59% electrical/computer software; 25% mechanical; 9% biotechnology/pharmaceutical; 6% chemical; and <1 % design. With respect to IPRs, CBMs, and PGRs, patent owners have submitted 4,051 preliminary responses and waived their rights to submit a preliminary response in 754 cases. In addition, 440 AIA cases settled in FY 2016. The PPAC is pleased with the patent owner's usage of preliminary responses, waivers, and settlements because these options are not available in ex parte and inter partes reexamination proceedings. Lastly, the PTAB issued 1,214 final written decisions in IPR proceedings, 143 in CBM proceedings, and 3 in PGR proceedings.

The backlog of ex parte appeals pending at the Board stands at 15,448 appeals as of September 30, 2016. The backlog averaged about 18,784 appeals for the year. The backlog trend has exhibited a significant downward trajectory for the year, with the peak reaching 21,543 appeals in October 2015 and decreased to a backlog of 15,448 appeals at the end of FY 2016.

In FY 2016, the USPTO implemented substantive trial rule changes that had the following effects:

- Allowed new testimonial evidence to be submitted with a patent owner's preliminary response;
- Added a Rule 11-type certification for papers filed in a PTAB proceeding;
- Allowed a district court-type construction approach for claims of patents that will expire before entry of a final written decision; and
- Replaced the current page limit with a word count limit for major briefing.

In addition to changes to the trial rules, the PTAB issued 7 precedential opinions this year addressing issues arising in AIA trials. Several of these opinions address matters of PTAB practice and set binding precedent for handling of procedural matters in PTAB trials. Other opinions address matters of statutory interpretation in cases of first impression.

Recommendations:

The PPAC applauds the PTAB for the work it has done since the passage of the Leahy-Smith America Invents Act (AIA). As evidenced by the record, there have been more than 5,500 IPR, CBM, and PGR petitions since the PTAB proceedings went into effect in 2012. In FY 2016, 1,696 petitions were filed. These petitions are often directed to patents in corresponding litigation so the importance of these PTAB proceedings remains critical to stakeholders. The PTAB proceedings took on an additional layer of scrutiny in FY 2016 as the U.S. Court of Appeals for the Federal Circuit and the U.S. Supreme Court rendered critical decisions in the PTAB space. Moreover, Congress has been closely following the PTAB developments and held hearings on patent reform where proposed changes to the USPTO's PTAB rules were hotly debated. The PPAC recommends that the PTAB remain vigilant in rendering its decisions and continue its positive outreach efforts to educate the stakeholder community on important developments in the PTAB area.

The substantive PTAB rules changes that went into effect in FY 2016 were a positive step forward. For example, an important aspect of the substantive rule changes gave the patent owner the right to file a newly prepared expert declaration in the patent owner's preliminary response. Prior to this change, the petitioner had the right to submit such declaratory evidence, but the patent owner did not have such opportunity as of right. This change makes the PTAB process more balanced. The PPAC recommends that the PTAB continue to review proposed rule changes to continue to hone the efficiency and fairness of the PTAB process.

The PPAC applauds the USPTO's deployment of its new PTAB End-to-End (E2E) IT system on July 11, 2016, to replace the basic PRPS filing system deployed on September 16, 2012.

With respect to AIA statistics, the PPAC recommends that the USPTO routinely update stakeholders with the latest and most accurate AIA statistics. These statistics are a valuable tool in making decisions regarding whether to take certain actions during a PTAB proceeding, such as filing a patent owner preliminary response or filing a claim amendment.

The PPAC recommends that the USPTO continue to evaluate the conduct of the administrative processes of the PTAB proceedings, educate the stakeholder community on current developments, and make improvements in the process consistent with the AIA. Some stakeholders continue to believe that the PTAB proceedings unduly favor petitioners, while others believe that the proceedings are fair. In fact, in FY 2016, there has been significant debate in Congress with respect to the fairness of the IPR proceedings. The PTAB roundtables, Boardside chats, and rule changes have helped to address stakeholders' concerns, but the USPTO needs to remain vigilant in this regard.

VI. PATENT PENDENCY

The USPTO continued to make improvements to decrease pendency to first action and total pendency during FY 2016. As a result, total pendency for utility, plant and reissue (UPR) applications, as of June 30, 2016, was reduced by about one month as compared to FY 2015, and pendency to first action was reduced by about 1.2 months, also as of June 30, 2016, as compared to FY 2015.

With respect to design applications, pendency and unexamined design application inventory were slightly volatile compared to UPR applications. Total pendency in FY 2016, as of June 30, 2016, was 0.4 months longer than reported in FY 2015, as of July 2015, while first action pendency in FY 2016, June 30, 2016, was 1.4 months shorter than reported for FY 2015, July 2016. The PPAC is not concerned by this slight volatility in the pendency of design applications and unexamined application inventory. However, as with pendency in general, the PPAC encourages the USPTO to continue its efforts to reduce both design application pendencies and unexamined application inventories at a sustained rate.

On reporting pendency data, the PPAC reiterates its urging that the USPTO publish pendency data that actually reflects the entirety of time required from the date of filing to the time a patent grants or final abandonment as the case may be. Current Traditional Total Pendency does not take into account the at-times very long period required for

action on RCEs; however, the USPTO tracks Traditional Total Pendency including RCEs and pendency of applications, which include at least one RCE, on the USPTO Visualization Center

<https://www.uspto.gov/corda/dashboards/patents/main.dashxml?CTNAVID=1004>. The PPAC urges the USPTO to utilize available technologies to provide patent stakeholders with timely and meaningful data, and the Patent Examining Corps with tools, technologies, and resources that will improve patent quality and reduce pendency at the same time.

Unexamined utility patent application inventory in FY 2016, as of July 25, 2015, was 5,450 applications less than FY 2015 levels, with a current unexamined inventory of 547,771 applications. The USPTO's 2019 target is 385,500 unexamined applications, which means that another 162,271 applications will need to be removed from the inventory in the next 26 or so months. Whether this target is ultimately met, the key goal is for the USPTO to continue to appreciably reduce the unexamined inventory going forward.

The PPAC believes the reduction of pendency can be attributed in part to the reduction in the UPR examiner attrition rate, which for FY 2016, as of June 30, 2016, is 3.5%, not including transfers and retirees, as compared to 4.3% for FY 2015, also not including transfers and retirees. And, as in FY 2015, the maturation of new examiners, in combination with the USPTO and POPA's new mentoring initiative whereby senior examiners are paired with junior examiners with the goal of sharing tried-and-true best practices and institutional knowledge, are also effective undertakings responsible for this favorable trend.

The PPAC commends the USPTO for the initiatives designed to reduce pendencies and unexamined application inventories, while improving patent quality. The Track One Program is an example of a successful program that brings value to the patent stakeholders.

The Patent Prosecution Highway (PPH) continues to be a valuable contributor to lowering pendency, and this bodes well for stakeholders whose applications are being examined more quickly in multiple offices and often lowering their total cost.

With respect to the USPTO's recent implementation of the Post Grant Outcomes Pilot where examiners with progeny applications are given access to the entire IPR record of a related patent, the PPAC supports the disclosure of all information relevant to the progeny application, with the objective of improving patent quality. The PPAC has identified several issues which should be addressed in the pilot. The pilot should include a mechanism for recording in the record what materials are accessed from the IPR by the

examiner and because materials such as the petitioner's expert declarations and other litigation-prepared papers such as petitioner's briefs are naturally biased, the PPAC believes training should be provided to the examiners regarding the materials being accessed. Further evaluation of the details and process of sharing all information submitted in IPR proceedings to examiners with progeny applications is mandated given the potential issues that can arise.

Recommendations:

The PPAC believes that pendency is part and parcel of the USPTO's mission to ensure U.S. patent quality. Paramount to a strong U.S. patent system and equally strong U.S. economy is the expeditious examination and allowance of meritorious patents, provided that such patents are clear, concise, and compliant with all patent statutes. The PPAC notes, however, that reducing pendency in a vacuum brings little if any value to the patentholder if the patent granted lacks durability when challenged in post-grant proceedings before the PTAB or the courts.

The PPAC recommends that the USPTO publish pendency data that actually reflects the entirety of time required from the date of filing to the time a patent grants or final abandonment as the case may be.

The PPAC also recommends that the USPTO continue to appreciably reduce the unexamined application inventory and meet its FY 2019 target of 385,500 applications.

On the USPTO's initiatives relating to patent quality and pendency, the PPAC sees tremendous value in the Track One initiative where the petition grant to allowance cycle is 6.6 months. The USPTO's threshold of granting up to 10,000 applications per year for Track One status is nearly reached, signifying the success and value of this program to the patent stakeholders. As such, the PPAC recommends that the USPTO make it permanent, at least until the desired pendency and aging unexamined inventory levels are reached.

The PPAC recommends that the Post Grant Outcomes Pilot be further evaluated with extensive input from stakeholders because a number of issues have been identified that mandate consideration by the USPTO. In this pilot, examiners with progeny applications are given access to the entire IPR record of a related patent and the PPAC supports the disclosure of all information relevant to the progeny application. Because, however, materials such as the petitioner's expert declarations and other litigation-prepared papers such as petitioner's briefs are naturally biased, the PPAC believes training should be provided to the examiners that these materials represent just one view. Also, a process for documenting what the examiner accesses from the IPR and on what date needs to be

developed to ensure a complete and accurate record exists concerning the materials reviewed and considered by the examiner.

The PPAC looks forward to working with the USPTO to develop initiatives that couple patent quality and patent pendency. These steps must be closely tied to initiatives directed to improving patent quality, reducing pendency, and addressing the RCE backlog.

Importantly, the PPAC recommends that the USPTO work closely with POPA to ensure a strong and efficient Patent Examining Corps and provide, to the extent it can be budgeted, state-of-the-art, secure, and robust tools, continuing education in technology, training and access to external resources for searching to address the most common hurdles examiners face when examining applications for patents. Not only is this a worthy investment to ensure the health of the U.S. economy for decades to come, it is also a necessary improvement to the sole agency that is the gatekeeper and champion of the country's innovation that has been wanting for years. The time for budgetary temporizing has passed.

VII. REQUESTS FOR CONTINUED EXAMINATION

The backlog of RCEs has increased to 27,394 as of the end of FY 2016. This represents an increase of 1.8% over the backlog of 26,901 at the end of FY 2015, but still represents an impressive reduction of nearly 76% since the high mark in the RCE backlog was reached in FY 2013, in spite of an increase in RCE filings of over 13% over FY 2015.

Following the move of RCEs from the examiner's amended docket to the special continuing docket, the backlog of RCEs ballooned from about 17,000 in October 2009 to almost 112,000 in February of 2013. However, focused attention on RCEs resulted in a steady reduction of the backlog to 26,901 by the end of FY 2015. At the beginning of FY 2016, the RCE backlog rebounded by about 32% and remained relatively steady through August of FY 2016, but decreased in September to end FY 2016 at 27,394. Additionally, the USPTO focused efforts on moving the oldest RCEs out of the backlog and into examination. This resulted in a reduction of the percentage of the RCE backlog that was awaiting examination four months from the RCE request to 24.7% at the end of FY 2016, compared to 32.7% of the RCE backlog at the end of FY 2015, and 52% of the RCE backlog at the end of FY 2014. This is a commendable achievement. Although the backlog of RCEs has increased, the percentage of RCEs awaiting action four months from filing the request has continued to decrease. However, the average total pendency of the application in which one or more RCEs have been filed remains twice the average total pendency of an application without an RCE filing.

Recommendations:

The PPAC recommends exploring an avenue for resolution of issues in prosecution other than an appeal to the PTAB, such as permitting participation in a full two-way dialog interview in the P3 program, the pre-appeal brief conference or the appeal conference, which would permit an interview having a two-way dialog between the applicant and with multiple primary examiners in addition to the examiner of record. The PPAC appreciates the implementation of the P3 program but that permits only a presentation, not a full interview and the materials are limited to a five-page submission. Allowing a back and forth in an interview in the P3 program would be more effective in resolving the issues and allowing an in-person interview would also resolve more issues, reducing the need for an RCE or appeal to the PTAB.

The PPAC also recommends that the USPTO place RCEs on the amended docket or at least establish a goal of four months to completion of an action, as well as having a goal for total prosecution pendency for applications in which an RCE has been filed. The PPAC recommends that the USPTO focus on improving the quality of final rejections. The pre-appeal brief and appeal brief conference results show a significant number of unsustainable final rejections. This suggests that other final rejections are improper leading to at least some of the RCEs filed. The PPAC recommends providing the opportunity for the entry of two responses as a matter of right in each application and/or providing an option for paying for the consideration of one more amendment after a final rejection to reduce the need for appeals or filing of RCEs. In addition, the PPAC recommends that the USPTO continue working on after final programs, such as the After Final Consideration Pilot (AFCP) 2.0, and other such programs to provide entry of amendments after final rejection. The PPAC further supports having programs which encourage examiners to consider and enter amendments after final to place the application in better condition for appeal or to make the case allowable. Finally, the PPAC recommends a review of compact prosecution to determine whether or not it contributes to the high number of RCEs filed.

VIII. INTERNATIONAL COOPERATION, WORK SHARING AND OUTREACH

The USPTO continues to show a strong commitment, in concert with the user and stakeholder community, to make current and future improvements in the complex and costly international patent filing system. The Office of Policy and International Affairs (OPIA), headed by the Chief Policy Officer and Director for International Affairs, leads agency efforts to formulate and execute U.S. domestic and international intellectual property (IP) policy. This includes promoting the development of high-quality systems for the protection and enforcement of IP nationally and internationally as well as negotiating international agreements, including cooperation agreements with other patent

offices. The Office of International Patent Cooperation (OIPC), established in 2014 and headed by the Deputy Commissioner for International Patent Cooperation, enables the USPTO to focus dedicated resources to implement its international patent cooperation agreements and initiatives, including to provide optimized business process solutions to the international patent examination system for examiners and external stakeholders.

During the past year, the OPIA and the OIPC have created a cohesive and strategic approach regarding international initiatives and activities throughout the USPTO, while also continually seeking extensive feedback and input from the user and stakeholder community to help improve quality, efficiency, timeliness and predictability with regard to U.S. and global patent prosecution. The USPTO has also worked to promote the development of intellectual property systems internationally and has advocated for improvements in, and more effective means of promoting and enforcing intellectual property rights throughout the world through cooperation, work sharing, and outreach.

The PPAC supports the efforts made by the USPTO this year in its international cooperation, work sharing and outreach initiatives among multiple patent offices and encourages the continued development and expansion of these efforts. Examples of such efforts include substantive patent law harmonization initiatives via the IP5 Offices¹ and the Group B+ Patent Offices², the Global Dossier Initiative and its implementation by the USPTO, the Access to Relevant Prior Art Initiative, the Collaborative Search Pilot Programs (CSP) with JPO and KIPO, the continued usage and extension of the PPH to additional countries as well as the reduction in the PPH petition backlog, the Hague Agreement concerning the International Registration of Industrial Designs, and the creation of the Industrial Design Forum (ID5). These efforts not only make improvements to the international patent filing system but also improve patent examination quality and efficiency globally.

Recommendations:

Over the past two years, the PPAC has watched the USPTO continue to focus its international initiatives, projects and goals for the betterment of the USPTO's operations. The PPAC commends the USPTO for the creation and implementation of the OIPC and applauds the extensive efforts and work of both the OIPC and the OPIA. The PPAC further commends the USPTO in its international cooperation and work sharing initiatives with multiple patent offices around the world and recommends more in depth dialogue on "global quality" with these offices.

¹ EPO, JPO, KIPO, SIPO and USPTO are collectively known as the "IP5 Patent Offices."

² The Group B+ Patent Offices consist of the following members: the European Union's 28 member states, U.S., Canada, Australia, Japan, South Korea, EPO and the European Commission (EC).

To support the USPTO commitment to its international initiatives, the PPAC further recognizes the ongoing financial needs of the USPTO for a secure and modern IT infrastructure and strongly supports and recommends stable IT funding along with continued upgrades to its IT infrastructure on a regular basis.

The PPAC again recommends that the USPTO repeatedly review its efforts to ensure that its international initiatives promote quality and timeliness and encourages the USPTO to find new and innovative ways to improve, expand and enhance such efforts, while being mindful of the needs and concerns of the stakeholder and user community with regard to a changing global patent arena, in FY 2017.

IX. HUMAN CAPITAL

The value in an organization comes from its people, and the USPTO has been fortunate to have been able to build and retain a workforce of dedicated examiners. Quality of examination of patent applications is the heart of the mission of the USPTO, and the work done to hire, train and retain examiners is critically important to the success of the USPTO.

There have been many activities related to human capital in FY 2016. The USPTO has hired new examiners consistent with current and projected budgets. The regional offices have continued to hire and are likely to be fully staffed by FY 2017. In addition, the USPTO has undertaken a significant amount of work to train its workforce, while continuing to embrace initiatives that attract new talent and improve retention. Importantly, the USPTO continues to do internal surveys to solicit input from employees on what things are working well, and to identify areas for improvement, which is a sign of a healthy organization.

With respect to retention, the USPTO saw a decrease in the attrition rate from 5.6% in FY 2015 to approximately 3.5% in FY 2016; excluding transfers and retirees from the data, the attrition rates fall to 4.3% in FY 2015, and approximately 3.3% in FY 2016. This drop in attrition rate is noteworthy, and is a result of efforts at the USPTO to provide a positive working environment through responsiveness to employee feedback, improved systems and training.

To continue its focus on productivity and quality, the USPTO has instituted and furthered a number of important initiatives to make the most of its current Patent Examining Corps. These include: developing a nationwide workforce, upgrading IT systems, and providing comprehensive training. In particular, the USPTO has been successful in developing a workforce that includes employees who participate in telework programs or work from the USPTO regional offices in Detroit, Denver, Silicon Valley, or Dallas. These telework

programs have greatly reduced costs while allowing the USPTO to attract top talent to its Patent Examining Corps.

Several third party reviews of the USPTO operations, including its teleworking programs, have recently taken place, including:

1. National Academy of Public Administration (NAPA) report dated July 31, 2015, titled “The United States Patent and Trademark Office: An Internal Controls and Telework Program Review”;
2. Government Accountability Office (GAO) report GAO-16-490 dated June 2016 titled “Patent Office Should Define Quality, Reassess Incentives, and Improve Clarity”;
3. GAO report GAO-16-479 titled “Patent Office Should Strengthen Search Capabilities and Better Monitor Examiners' Work”; and
4. The U.S. Department of Commerce, Office of Inspector General (OIG) report OIG-14-0990 dated August 2016 titled “Analysis of Patent Examiners’ Time and Attendance”.

The USPTO has taken affirmative steps to implement improvements in response to the NAPA report, including specific training held in FY 2016. The USPTO concurred with each of the recommended actions in the GAO reports and is implementing appropriate actions.

The OIG undertook a comprehensive review of data related to more than 8,400 of the USPTO’s approximately 10,000 patent examiners. The OIG made six recommendations, which will be reviewed by the USPTO. While that review is being undertaken, the PPAC would note that the data in the OIG report was from 2014 and 2015, which was at a time before the USPTO implemented a number of improvements related to time and attendance in response to the NAPA report.

The PPAC believes that the USPTO takes very seriously the requirement that examiners work the full number of hours for which they are paid and has taken actions against some examiners for whom it could be documented that they were not following the policies for time and attendance. Footnote 2 of the OIG report acknowledges that the OIG did not recommend any actions against examiners be taken based on this report because of possible noncompliance with Federal Rules regarding such actions.

The potential unsupported time alleged by the OIG was about 2% which fell to 1.6% after implementation of steps resulting from the NAPA report. Being able to document 98% or greater of employees’ time seems quite good. While the tools used by the OIG in its

evaluation were designed for other purposes, the USPTO does have a robust set of measures that track the output and quality of the work that patent examiners perform, including percentage achievement of a production goal, achievement of pendency goals and quality assessment. These measures hold examiners accountable for completing a dictated amount of work within set time periods at a proscribed level of quality, establishing, it is contended, a level of accountability beyond what many workers, in the public or private sector face.

Although the examiners rely on electronic means for doing their work, many continue to print out documents for review and analysis or do occasional work on another computer. Thus, the PPAC agrees that the lack of a digital footprint is not evidence that an examiner was not working. Additionally, patent examiners frequently work hours that they do not claim on their time sheets, that is, voluntary overtime (VOT), to achieve the necessary level of work and quality, but this time was disregarded by the OIG.

The USPTO is evaluating the time allocated to examiners to complete the examination of patent applications. It is noted, however, that the GAO report found that perhaps examiners need more time to do their work, the exact opposite of the suggestion by the OIG. Computers used by the examiners to identify prior art locate more art than in the past and the job of evaluating that prior art and the claims remains an intellectual process requiring time and at least for now, a person.

Recommendations:

The PPAC recommends that the USPTO continue to support, promote, and expand the Patent Hoteling Program (PHP) and other telework programs, which permit examiners to work from remote locations. These programs allow the USPTO to attract and retain technical talent to achieve its mission that might not otherwise be available to work as examiners. In this regard, the Telework Enhancement Act Pilot Program (TEAPP) ends or expires on December 8, 2017, and the PPAC strongly urges that legislative action be taken to extend this program. TEAPP has been very successful in attracting and retaining talent, and the loss of this additional tool would have significant negative consequences for the USPTO and its user community. Additionally, implementing an exit strategy would be disruptive to ongoing USPTO operations.

The PPAC recognizes the significant efforts undertaken to provide training to teleworking examiners and supervisors to improve employee engagement, morale, and enhance quality, and the effort to train supervisors responsible for the examiners in order to address issues identified in third party reports. The PPAC strongly supports these efforts and urges the USPTO to continue its efforts in this regard to inculcate these improvements in the culture of the organization. Further, the PPAC encourages the

USPTO to reach out to the PPAC and others for continued input and suggestions on ways to sustain and maintain the expected improvements from this training.

The PPAC recommends that the USPTO consider the OIG report and continue to evaluate the policies and procedures to ensure that employees understand and are following the time and attendance rules.

The PPAC understands that the USPTO is continuing to evaluate a shared services model as part of a broader program within the DOC. This proposal would include a new model for providing human resources support to the USPTO. The PPAC strongly encourages the USPTO to review this proposal carefully to ensure that its potential impacts are fully and well understood before implementation. It is very important to maintain the positive work environment that resulted in the USPTO being ranked #1 among agency subcomponents as the Best Place to Work in the Federal Government in FY 2013 and #2 in FY 2014.

X. USPTO OUTREACH INITIATIVES

The mission of the Office of Innovation Development (OID) is to increase the transparency and accessibility of the patent system to unrepresented and/or under-resourced inventors. These inventors can be found in startups, incubators, universities, meet up groups, inventor groups, and working alone in workshops and garages. To help these stakeholders, the OID conducts educational outreach programming and to that end the OID has added several new initiatives to its repertoire of outreach programs and events. For the past several years, the OID has conducted university outreach using the talents of a pool of outreach SPEs from the Patent Examining Corps; the universities are chosen based on the USPTO's hiring goals/job fairs and the number of engineering students, with attention to numbers of minority students. Since the 1990s, the OID's flagship event has been its inventor conference and this year's event was held in partnership with the Rocky Mountain Regional Office in Salt Lake City.

New on the horizon for the OID this year was its effort to reach out to independent inventor groups such as the Minnesota Inventors Network and the Florida-based Edison Innovators Association; these groups of inventors sponsor gatherings where they share information and best practices.

In addition to bringing its programs to new audiences, the OID is also developing new programs. As an adjunct to the popular Women's Entrepreneurship Symposium, the OID has worked with the Director's Office to build roundtables based on the gender gap in patenting and entrepreneurship. The OID has received requests for this program content

from across the country and presented that content in both New York, New York and Wilmington, Delaware.

By virtue of their locations across the nation, the Regional Offices (ROs) are well-situated to be able to serve the USPTO stakeholders in their own backyards. The partnering of the ROs with the OID has provided a vehicle for hosting programs within the regions. Thus, a particular area of focus in FY 2016 has been the coordination of the OID's activities by the Alexandria Headquarters and the ROs. Each of the ROs has a Director in place, and the OID and the Regional Directors have regular contact to discuss outreach opportunities and coordinate closely on outreach to communities served by the ROs. This coordination provides an outstanding ability of the ROs to play a significant role in reaching audiences to discuss the USPTO, the patent system, and the importance of IP and its role in fostering innovation that might not have otherwise occurred.

Recommendations:

The PPAC continues to strongly support the outreach efforts of the OID. The PPAC recognizes the importance of the ROs in enhancing the outreach efforts of the USPTO. With the newness of the ROs, it is natural that there will be some intersections in these outreach efforts. It is recommended that the Regional Directors and the OID continue their close cooperation on outreach efforts, with particular attention given to those in the local communities that may not have been adequately served when all outreach activities were centered in the Alexandria Headquarters. The PPAC also recommends developing plans for at least one or more PPAC quarterly meetings to be held at the ROs, to further the goals of both the ROs as well as the PPAC in gathering relevant stakeholder involvement in the USPTO's public engagement.

XI. LEGISLATION

Enactment of additional patent reform in the remaining months of the 114th Congress (2015-2016) is unlikely. Largely similar bills, H.R. 9 (the Innovation Act) and S. 1137 (the PATENT Act), were approved by the House and Senate Judiciary Committees, respectively, in June 2015. Both bills were designed to address allegedly abusive patent litigation practices and attempt to increase transparency in the patent system. Progress of the bills was stalled when consensus could not be reached among stakeholder groups on several controversial provisions including, in particular, substantive changes to the scope and administration of the USPTO's post-grant review proceedings and litigation fee shifting provisions. However, discussions continue regarding a possible path forward that might include crafting a new, scaled-back package of reforms that combines a venue provision along with certain parts of the House or Senate bill, such as the customer-suit stay, demand letter and transparency provisions. Venue reform in patent infringement

cases is of particular interest to many stakeholders because of statistics indicating that active forum shopping has resulted in the great majority of cases being filed in a limited number of federal district courts.

While stakeholders have different views regarding the appropriate composition of a new patent reform bill, the PPAC was pleased to see that most all were united in supporting enactment of S. 1890, the Defend Trade Secrets Act of 2016. The bill was signed into law (P.L. 114-153) on May 11, 2016, following near-unanimous votes of 87-0 in the Senate and 410-2 in the House. The new law establishes a Federal civil private cause of action for trade secret theft that provides U.S. businesses with a more uniform, reliable, and predictable means of protecting their valuable trade secrets anywhere in the country. Effective protection of valuable trade secrets helps promote the innovation that is a key engine of our nation's economy.

Leadership of the USPTO have testified before various committees in Congress. And the USPTO continues to monitor and advise Congress and the White House on pending legislation regarding intellectual property and the operations of the USPTO. Making the temporary fee setting authority granted to the USPTO under the AIA permanent remains a key priority for the USPTO.

Recommendations:

The PPAC recommends that the USPTO continue to engage decision makers and other stakeholders to help ensure that any proposed legislative or administrative changes are appropriately crafted and narrowly targeted without adversely affecting the overall patent system, especially in terms of balance and fairness to all stakeholders, the efficient operation of the examination process, the quality of patents issued, or the overall costs and burdens to patent owners and other participants in the patent system. The PPAC also recommends that the USPTO stay abreast of potential suggested legislative changes regarding subject matter eligibility (35 U.S.C. § 101). Further, the USPTO should work within the Administration and with Congress to ensure that it continues to retain its current fee setting authority as well as access to all future fee collections regardless of any government-wide sequestration or other limitation.

In addition, as noted, the TEAPP ends or expires on December 8, 2017, and the PPAC strongly urges that legislative action be taken to extend this program, to continue to support, promote, and expand the PHP and other telework programs, which permit examiners to work from remote locations. The TEAPP has been very successful in attracting and retaining talent, and the loss of this additional tool would have significant negative consequences for the USPTO and its user community and be disruptive to ongoing USPTO operations.

I. PATENT QUALITY

A. INTRODUCTION

The issuance of high quality patents with a reasonable pendency remains the most important priority for the USPTO, patent applicants and the public. High patent quality, including issued patents with appropriate scope, clear, definite claims and clarity of the record, is of paramount importance in a global economy to reduce uncertainty in the marketplace and unnecessary conflict, and to help drive the U.S. economy. Director Michelle Lee established patent quality as the major focus of her tenure during FY 2015, and continued that focus by expanding quality initiatives and programs throughout FY 2016. This emphasis is endorsed by the PPAC because issuing high quality patents is extremely valuable to the patent community and public.

The PPAC believes that patents are invaluable to inventors and the public because patents foster innovation, fuel the establishment of small companies, and deliver amazing technological advances and inventions which become an integral part of everyday life. The patent system has been under tremendous stress and scrutiny regarding what subject matter is eligible for patents, the quality of patents and their ultimate value to society. The PPAC vigorously believes in a strong patent system that rewards creativeness and investment to deliver the valuable advances to the consumer. An essential piece of this equation remains high patent quality, that is: early identification of the most relevant prior art, evaluation of the claims against that prior art, clear and concise communications from the USPTO, application of the proper legal standards, and allowance of claims of the appropriate scope. It must be remembered, however, that the USPTO system has been designed to give high quality for a reasonable price but cannot of course deliver perfection. The various post grant programs provide options for relevant interested stakeholders to reasonably cost-effectively review those patents which may need correction. The PPAC does, however, believe that the USPTO can continue to enhance the quality of the work process and product within the current system and fee framework.

The PPAC applauds this emphasis on quality and the continued steps undertaken in FY 2016 to enhance patent quality.

B. ON-GOING QUALITY INITIATIVES

The USPTO continued to evaluate the current patent quality and how it is monitored, measured and reported out to the public for ways to more consistently and uniformly evaluate the quality of the work product and provide meaningful data regarding the

communications to applicants during prosecution of pending applications and the final patents issued.

1. Quality Chats

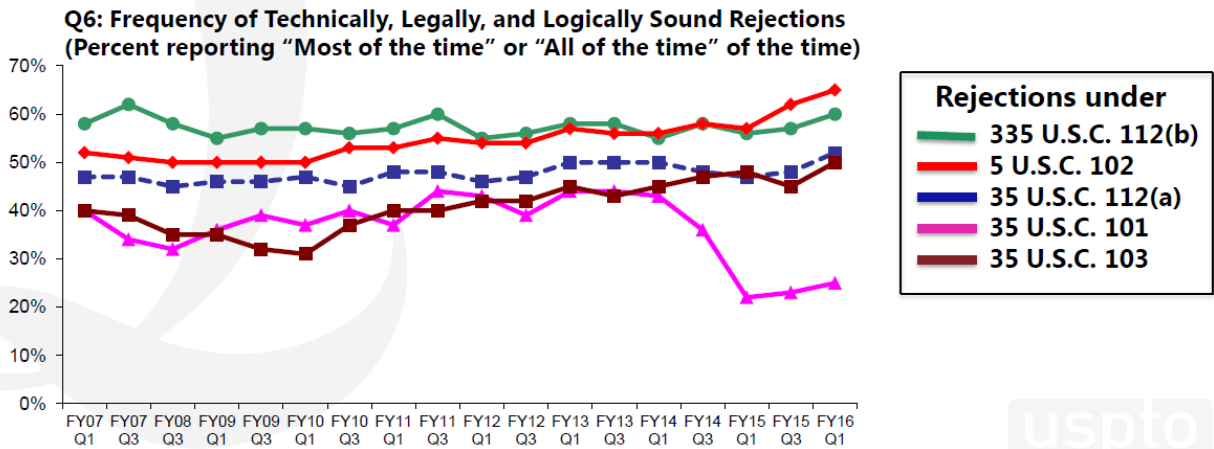
During FY 2015, the USPTO established regular Quality Chats, focusing on different aspects of patent quality and has continued these presentations into FY 2016. These chats are a valuable window on current policy and information about quality and the USPTO. The dates and times of these ongoing quality chats can be located on the USPTO website at: <http://www.uspto.gov/patent/initiatives/patent-quality-chat>.

2. External Quality Survey

The USPTO has conducted an External Quality Survey (EQS) semi-annually since 2006, with the most recent being completed during FY 2016. The EQS surveyed 3,000 frequent-filing customers and from FY 2011 to FY 2015 was included in the Patent Quality Composite. It is considered a vital quality indicator and will continue to be run but reported out as an individual quality assessment.

Below is a chart showing the perception of the product or the quality of the rejections being made by those filers who responded to the survey.

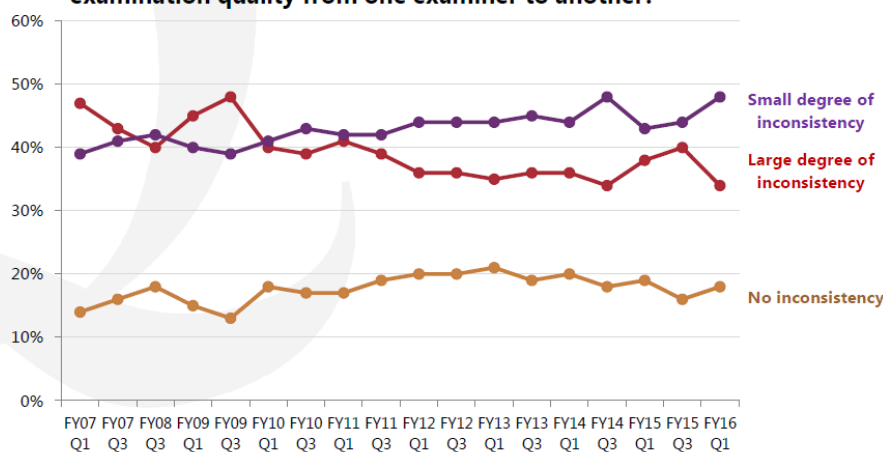
Perception of Product: Quality of Rejections Made



It can be seen that the statistics from FY 2007 through the present show relatively unchanged perceptions of the rejections by statute with the exception of a drop in the opinions about rejections made under 35 U.S.C. § 101. The survey, however, does show room for improvement in the perception of all rejections being advanced. One new area of focus by the USPTO is on the consistency of the quality and rejections among the examiners. The below chart shows the survey results regarding the perception of

Perception of Product: Consistency

Q9: In the past 3 months, have you experienced problems with the consistency of examination quality from one examiner to another?



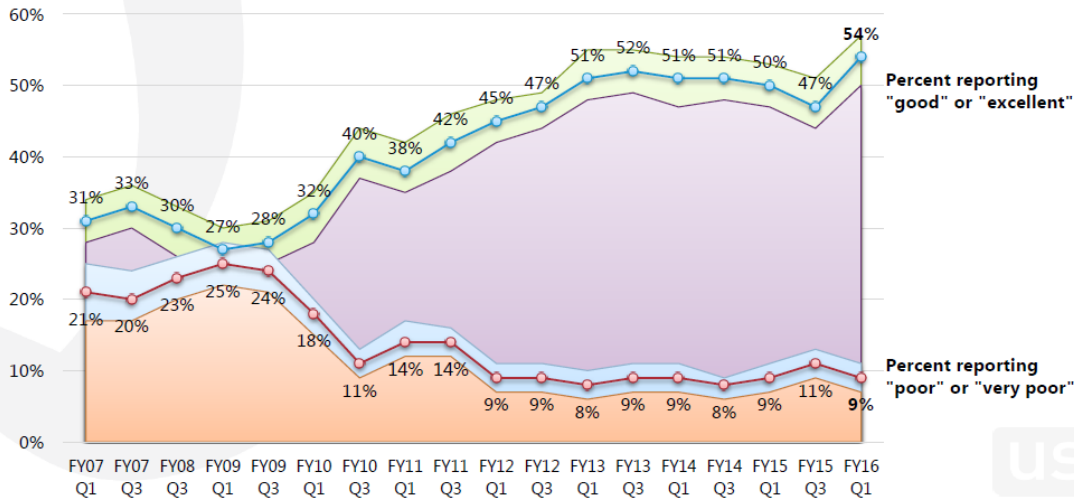
consistency of quality among the examiners.

As can be seen from the above chart, there is a perception of inconsistency of examination quality from one examiner to another by those responding to the survey. Although absolute consistency is unrealistic, the PPAC encourages the USPTO to focus on improving consistency among patent examiners. The differences in the quality of the work, the application of prior art, and correct or incorrect application of the law following arguments by applicant can mean higher costs and significant amounts of time in a delayed patent term for some applicants.

Below is a chart showing the perception of overall quality as relayed by those responding to the survey over the years of FY 2007 to FY 2016.

Perception of Overall Quality

Q7: Percent Positive and Negative Ratings of Overall Examination Quality in Past 3 Months



Two trends are apparent from this chart. The percentage of respondents reporting the quality as good or excellent has steadily increased from a low of 27% in FY 2009 to 54% in FY 2016. At the same time the percentage of respondents reporting the quality as poor or very poor has steadily decreased from a high of 25% in FY 2009 to 9% in FY 2016. These are very good trends and reflect well on the efforts made by the USPTO to focus on quality. The results demonstrate that more work needs to be done but the USPTO's focus on quality improvement, including public meetings, gathering of information from applicants, transparent explanations of programs and various initiatives recently implemented should help these trends to continue moving in their current directions.

a. Patent Quality Community Symposium

On April 27, 2016, the USPTO held a Patent Quality Community Symposium at the Alexandria Headquarters and webcast the event, with the participation of over 2,200 individuals. Featured presentations by the USPTO personnel included updates on the Enhanced Patent Quality Initiative (EPQI), an explanation of the USPTO's effort to use Big Data, the Quality Metrics to be used for FY 2016, and a Master Review Form (MRF) Workshop.

This was an important event for keeping the public and the patent community aware of the programs and changes being made at the USPTO to focus efforts on improving quality of the work product and processes.

The PPAC supports these initiatives and the continued outreach and information being provided by the USPTO to ensure transparency of the actions and the opportunities created for interactions with officials at the USPTO for a two-way flow of information.

C. NEW QUALITY INITIATIVES

During FY 2016, the USPTO proposed and implemented numerous new programs targeting improvement of the quality of the processes and the patent work products of the USPTO. To gather feedback on proposals, unveil new programs and engage in dialog with the public, the USPTO regularly holds public round tables, and meetings. For example, as noted above, the USPTO held a Patent Quality Community Symposium on April 27, 2016.

1. Case Studies Pilot

As a part of the Patent EPQI, the USPTO queried the public to seek specific areas that could be evaluated for compliance with regulations or policy or areas for quality enhancement. In certain areas they would perform an in-depth examination of applications with respect to a single issue to provide a better understanding of the quality of the work products. The case studies will assist in formulating best practices to enhance patent quality by improving the patent work products and examination processes, and to identify areas where further examiner training may be needed. Gleaned from the received suggestions, the USPTO selected:

- 1) Evaluation of the deviation of 35 U.S.C. § 101 rejections from official guidance, correctness of rejections and completeness of the analysis. This study will evaluate whether examiners are properly making subject matter eligibility rejections under 35 U.S.C. § 101 and clearly communicating their reasoning.
- 2) Review of consistency of the application of 35 U.S.C. § 101 across art units/technology centers. This study will take a look at applications with related technologies located in different art units or technology centers and determine whether similar claims are being treated dissimilarly under 35 U.S.C. § 101.
- 3) The practice of compact prosecution when 35 U.S.C. § 101 rejections are made. This study will determine whether all appropriate rejections are being made in a first office action when a subject matter eligibility issue is also identified.
- 4) Correctness and clarity of motivation statements in 35 U.S.C. § 103 rejections. This

study will evaluate whether reasons for combining references set forth in rejections under 35 U.S.C. § 103 are being set forth clearly and with correct motivation to combine statements.

5) Enforcement of 35 U.S.C. § 112(a) written description in continuing applications. This study will evaluate claims in continuing applications to determine if they contain subject matter unsupported by an original parent application and whether examiners are appropriately enforcing the requirements of 35 U.S.C. § 112(a) written description.

6) Consistent treatment of claims after the May 2014 35 U.S.C. § 112(f) training. This study will determine whether claims invoking 35 U.S.C. § 112(f) are being properly interpreted and treated.

These case studies will assist the USPTO in determining whether or not consistent and proper application of the laws, guidance and policy are being applied by the Patent Examining Corps and to what extent additional training is required.

2. Clarity of the Record Pilot

The Clarity of the Record Pilot is one of the evolving programs of the EPQI. An objective is to identify best examiner practices for enhancing the clarity of various aspects of the prosecution record. In particular, the Pilot focuses on best practices regarding enhanced documentation of claim interpretation, more detailed interview summaries, and more precise reasons for allowance.

Clarity of the record is an important issue to allow the public to fully understand what occurs in a prosecution and to make clear the reasons any application is allowed to grant as a patent. The key is to provide a clear record throughout prosecution without requiring significant more time or effort from the Patent Examining Corps.

3. Master Review Form

The Clarity and Correctness Data Capture (CCDC) Program was instituted to create an improved data capture system that enables all reviewers, from both the Office of Patent Quality Assurance (OPQA) and supervisors in the Technology Centers (TCs), to consistently document and access quality review data in one place. Historically, the USPTO reviews of finished work products, e.g., mailed office actions, were performed not only by reviewers in the OPQA, but also by reviewers in the TCs using different reviewing criteria, so the resulting data could not be aggregated or compared across reviewing areas. Consequently, only the OPQA reviews were systematically recorded for identification of trends across the Patent Examining Corps. In addition, all of these reviews mainly assessed the correctness or statutory compliance of the office action, with only a basic assessment of the clarity of the examiner's position. As such, the USPTO's

quality metrics lacked an individual metric that assessed in detail the clarity of the USPTO's finished work product.

To improve the quality evaluation process and to enhance the data gathered, the USPTO has replaced all previous review forms with a single, comprehensive review form, the MRF, which captures the correctness of the examiner's determinations with respect to the substantive patentability requirements, as well as new inquiries on the clarity of each determination made in the office action under review. Thereby, the MRF provides standardized reviewing criteria for all reviewers in both OPQA and the TCs.

The PPAC believes that the new MRF, in concept, is an improvement by standardizing the quality reviews of the work, adding a review of the clarity of the communications and permitting aggregation of all evaluations completed into a single database. One concern is the length of the form and the associated possibility that complete reviews will be too time-consuming to complete in all areas of the USPTO undertaking such reviews. However, the PPAC believes the MRF to be an important step forward in providing a mechanism for more consistent reviews of the work.

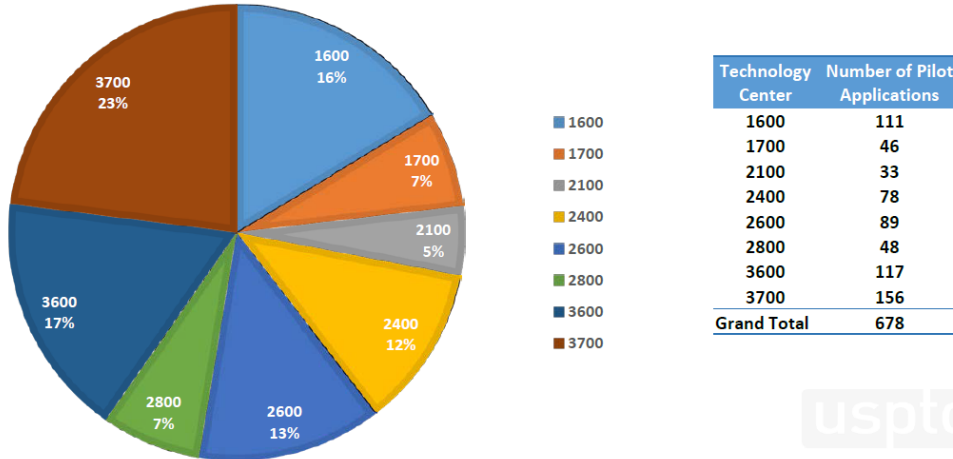
4. Post Grant Outcomes

This pilot was established to provide examiners of pending cases which are related (continuation, continuation-in-part, or divisional) to a patent undergoing IPR at the Patent Trial and Appeal Board (PTAB) with the prior art and papers submitted by the petitioner in the IPR. The pilot is gathering statistics and surveying the examiners on the usefulness of the materials from the IPR to identify best practices and identify potential targeted training for examiners. Objectives of the pilot include improved patentability determinations, creation of a bridge between the patent examiners and the PTAB, and a better understanding by the Patent Examining Corps of post grant processes.

Below is a chart showing the numbers of applications by TC, which have a parent patent in which an IPR has been filed.

Objective 1 – Pilot Statistics

DISTRIBUTION OF PILOT APPLICATIONS
BY TECHNOLOGY CENTER: PP15-PP21



The USPTO has developed a mechanism for providing the materials submitted with the petition in the IPR to the examiner examining a progeny application. Statistics being gathered regarding the examination of the related progeny application include the use of: any of the references cited in the IPR, the petitioner’s analysis, the PTAB analysis, expert declarations, or related litigation documents and analysis.

The PPAC believes this pilot is an important part of quality enhancement at the USPTO but there are several important issues that need more evaluation. The PPAC encourages the USPTO to make the sharing of IPR materials with examiners as simple and easy as possible to facilitate use of those materials. Because the USPTO is providing these documents to the examiner, the record must reflect that the examiner considered them. Because the IPR is a fluid record and new documents get added, the date that the IPR record was assessed and the date that the examiner reviewed them should both be provided in the record. This will establish what documents in that record were considered. The USPTO should consider how to record this in the file. Perhaps a PTOL-892 can be generated for the examiner to initial along with the date the materials were considered.

Regarding the pilot, it is also suggested that more oversight is needed for these related applications regarding allowances and final rejections to ensure that consistent actions are being taken by the two areas of the USPTO the Patent Examining Corps and the PTAB.

The USPTO has noted that there are hundreds of pending related progeny applications of patents in IPR and there may be many more pending related non-progeny applications. It is very important that the USPTO handle these applications fairly, correctly, and consistently across the different areas of the USPTO. Because an allowance is a final action from the USPTO providing rights to applicant, those actions are more problematic if incorrect than a final rejection and thus deserve adequate scrutiny perhaps by a panel, rather than just the examiner.

Additionally, it also is suggested that the examiners should be trained to understand that the IPRs represent a contested proceeding and that arguments made by a petitioner are just one biased side of the issue, to be carefully considered and evaluated along with the arguments made by applicant. For examiners to adequately consider these documents, the USPTO is encouraged to fairly provide additional time to the examiners where appropriate.

5. Post Prosecution Pilot

The Post Prosecution Pilot (P3) program incorporated some features of two programs aimed at improving the final and after-final areas of prosecution. Some features of the After Final Consideration Pilot (AFCP) 2.0 program and the Pre-Appeal Brief Conference Pilot program, have been incorporated into a single program that adds new, requested features, such as providing applicants an opportunity to present arguments to a panel at a conference.

The P3 program began on July 11, 2016, and will run for six months or when 1,600 requests have been accepted into the P3 program, whichever comes first. Each individual technology center will accept no more than 200 compliant requests, meaning that the P3 program may close with respect to an individual technology center that has accepted 200 compliant requests, even as it continues to run in other technology centers that have yet to accept 200 compliant requests.

The P3 program is open to non-provisional and international utility applications filed under 35 U.S.C. § 111(a) or 35 U.S.C. § 371 that are under final rejection. The request to participate in the pilot must be filed via EFS-Web within two months of the mailing date of the final rejection and prior to filing a notice of appeal. The applicant will make an oral presentation to the panel of examiners, with such participation being limited to 20 minutes. The applicant will be informed of the panel's decision in writing as to whether the rejection will be maintained or the application will be allowed or reopened.

The PPAC appreciates the implementation of the P3 program but it permits only a presentation to the three-member panel, not a full interview and the materials are limited

to a five-page submission of arguments. Allowing a back and forth in an interview in the P3 program would be more effective in resolving the issues because the statistics of the USPTO demonstrate the effectiveness in resolving issues in applications increases with interviews. The stilted process provided in the P3 program undermines the potential effectiveness that could result from a more dynamic exchange of views that typically occurs in interviews, leading to a better understanding of the meaningful points and rebuttable points made by both sides.

The PPAC recommends that the P3 program continues to be reevaluated and modified based on experiences of the USPTO and participants to improve the process. While a full interview is preferable, the PPAC suggests an alternative. Following the presentation to the panel, the applicant could leave the room while the panel discusses the issues and subsequently afford the applicant an opportunity to hear some explanation and ask questions about the likely decision.

The PPAC applauds this new pilot and in fact, has been suggesting for several years that a program such as this be developed. Although the pilot does not have every feature suggested by the PPAC, it represents a step forward by allowing applicants to present arguments in person to a panel of examiners. It is hoped that this pilot will help to resolve some cases avoiding the need for either an RCE or an appeal and hoped that the USPTO will gather further stakeholder input and continue to refine the process. It is important that patent applicants provide their input to the USPTO on this and other pilot programs through surveys and comments to ensure that the USPTO understands the value and concerns about their programs from the public perspective.

6. Stakeholder Training on Examination Practice and Procedures

The Stakeholder Training on Examination Practice and Procedures program (STEPP) is a 3-day training program for delivering intellectual property information and education to external customers. The training, delivered by the USPTO trainers, was derived from training materials developed and delivered to examiners and the USPTO employees and focuses on the life of an application from docketing to allowance. Topics include: The Role of a Patent Examiner, Claim Interpretation, Reading and Understanding a Patent Application, 35 U.S.C. §§ 101, 112(a), and 112(b), Planning a Search, Mapping Art to Claims, Overview of 35 U.S.C. §§ 102 and 103, Writing an office action and Responding to Applicant, the Patent Trial and Appeal Board (PTAB), Double Patenting and Restrictions, and Central Reexam Unit (CRU).

The USPTO plans to deliver STEPP workshops in each of the four regional offices over the next four quarters, and will provide additional STEPP workshops at the Alexandria Headquarters a frequency yet to be determined.

Based on the topics being delivered and the reviews which have been provided by the participants of the first training sessions, this appears to be a worthwhile program, which the PPAC expects to become popular and useful. Understanding how examiners think and approach claims is a valuable lesson to practitioners to assist in more productive responses and approaches to office actions. Understanding how examiners approach claims with the “broadest reasonable interpretation” should be especially helpful for practitioners in evaluating the scope of presented claims and better understanding the advanced rejections in that regard.

D. QUALITY MEASUREMENT

The USPTO has been gathering and reporting quality metrics for decades but from FY 2011 through FY 2015, that data was rolled up into a weighted composite, which reflected a value incorporating the various individual measures. It was difficult to assess from the composite or even from its individual components whether the quality of issued patents had improved or not. These problems were further compounded by the fact that each factor in the composite was scaled as a percentage toward a theoretic goal, which could place an undue weight on certain factors while obscuring progress in others (e.g., when the goal was met in one area, further progress in that area no longer had any impact on the composite). Because the elements of the composite gauged different aspects of examiner behavior, and because even a given contributor to the composite, such as a survey, combined perceptions of the USPTO services and responsiveness with the apparent correctness of actions, it was extremely hard to use the composite to gain insight in specific areas. To many this composite was difficult to understand and did not convey a snapshot or meaningful identification of the overall quality of the work at the USPTO.

Following a request for comments by the public regarding the quality composite, the USPTO determined that the composite should not be continued and each measured quality of the products should be evaluated but reported separately. Additionally, the message from the public was that the quality of the work and the quality of the process should be reported separately and not merged together. Consequently, the USPTO is adopting that feedback in reporting out the quality as measured by their reviewers. During FY 2016, the MRF has been implemented in the review process and should assist in more consistent reviews of the completed work. The PPAC is pleased with this decision because it believes that individual measures without combining the numbers into a composite will allow the public to better understand the level of quality being performed and to see improvements in the quality as they occur.

Although the quality composite may have been severely flawed, it served a purpose, at least to some degree. At a coarse level, it shows the USPTO made progress in many areas over the years. At a more granular level, progress has been significant in some

areas. For example, scores on the external quality survey more than doubled over a five-year period. There were improvements in all components, although some were fleeting or statistically insignificant. People and organizations do tend to improve in areas where they are measured. The focus going forward will be on making sure the emphasis is on the most important measures and improving the effectiveness and clarity of the metrics.

Below is a chart of metrics used by the USPTO to measure patent quality, with results since FY 2010, including the quality composite score and its components. The individual quality elements will continue to be measured but no longer rolled up into a composite.

Reporting Period	USPTO Patents Quality Composite Item - Actual Metrics							
	Final Disposition Compliance Rate Stretch Goal = 97.0%	In-Process Compliance Rate Stretch Goal = 97.0%	FAOM Search Review Stretch Goal = 97.0%	Complete FAOM Review Stretch Goal = 95.0%	Quality Index Reporting Stretch Goal = 94.0%	External Quality Survey Stretch Goal = 5.0	Internal Quality Survey Stretch Goal = 6.0	Quality Composite Score Stretch Goal = 100
FY 15Q3	96.3%	95.3%	96.2%	90.3%	90.8%	5.6	5.0	58.5
FY 15Q2	96.3%	95.3%	96.3%	90.5%	91.1%	5.6	5.0	60.2
FY 15Q1	97.0%	95.6%	97.4%	90.8%	91.3%	6.4	6.1	76.9
FY 14Q4	96.9%	95.5%	97.2%	90.6%	91.2%	6.4	6.1	75.0
FY 14Q3	96.6%	95.5%	97.4%	90.5%	91.3%	5.7	6.5	72.7
FY 14Q2	96.6%	95.9%	97.4%	91.1%	91.3%	5.7	6.5	75.9
FY 14Q1	96.2%	96.1%	97.9%	91.6%	91.1%	5.8	7.4	74.4
FY 13Q4	96.2%	96.3%	97.6%	90.5%	90.8%	5.8	7.4	71.9
FY 13Q3	96.2%	96.2%	97.4%	90.7%	90.2%	6.4	5.1	64.9
FY 13Q2	96.5%	95.6%	97.1%	90.4%	89.9%	6.4	5.1	63.6
FY 13Q1	96.6%	95.9%	96.8%	90.6%	89.8%	5.2	9.4	72.0
FY 12Q4	96.6%	95.9%	97.2%	90.9%	89.8%	5.2	9.4	72.4
FY 12Q3	96.6%	96.1%	96.6%	90.8%	90.1%	5.0	5.1	66.1
FY 12Q2	96.3%	96.0%	97.0%	91.3%	89.6%	5.0	5.1	65.5
FY 12Q1	95.4%	95.2%	95.7%	90.8%	89.5%	3.0	4.3	35.2
FY 11Q4	95.4%	95.2%			89.5%	3.0		
FY 11Q3	95.4%	94.7%	Baseline	Baseline	89.1%	2.7	Baseline	Baseline
FY 11Q2	95.3%	94.8%	94.6%	90.9%	88.9%	2.7	4.3	00.0
FY 11Q1	96.2%	94.9%			88.9%	3.6		
FY 10Q4	96.3%	94.9%	N/A	N/A	89.3%	3.6	N/A	N/A
FY 10Q3	96.0%	94.6%	N/A	N/A	89.5%	1.8	N/A	N/A
FY 10Q2	95.7%	94.4%	N/A	N/A	89.1%	1.8	N/A	N/A
FY 10Q1	94.5%	94.1%	N/A	N/A	87.9%	1.2	N/A	N/A
FY 09Q4			N/A	N/A			N/A	N/A
FY 09Q3	Baseline	Baseline	N/A	N/A	Baseline	Baseline	N/A	N/A
FY 09Q2	94.4%	93.6%	N/A	N/A	85.9%	1.2	N/A	N/A
FY 09Q1			N/A	N/A			N/A	N/A

Although the composite score will not be utilized, the individual measures of quality will continue to be evaluated. The reporting of the new quality metrics will begin in FY 2017. The current measures will be divided into groups to provide key product metrics, key process indicators, and vital perception indicators.

For the key product metrics during prosecution, the MRF will assess search, statutory compliance and clarity of the communication of a variety of office action types, including allowances, final rejection and First Action on the Merits (FAOM). Using uniform criteria, these reviews will be completed by reviewers to capture both the statutory compliance and clarity of the work product and entered into a single database.

The Key Process Indicators will utilize the Transactional Quality Index Reporting (QIR) to track the efficiency and consistency of the processes during examination. For example, utilizing the big data might allow the USPTO to identify “churning” of applications. The QIR can utilize data from the Patent Examining Corps, TC, or art unit levels to identify outliers from the norm. which may or may not signal an area of concern. The Key Process Indicators will include reopening prevention, rework reduction and consistency of decision making.

The Vital Perception Indicators will leverage the internal and external surveys done by the USPTO to gather opinions about the work being done inside and outside the USPTO. The surveys will be utilized to perform root cause analysis and validation or verification of the information gathered.

The PPAC applauds the move to report the individual quality measures without a composite score to provide a better representation of patent quality. Measuring the clarity of the actions as well as correctness also is a meaningful step forward in the assessment of the actual quality of the work product. It is noted that during FY 2016, 9.5% of the reviewed applications were tagged for additional search but in 24.7% of the reviewed applications, additional searching was done by the reviewers. This is an excellent outcome because the PPAC believes that quality starts with a complete first action search coupled with a comprehensive analysis of the claims and how and whether the prior art applies. Focusing the examiners on that initial search is critical to reducing rework, reducing RCEs, and improving the overall quality of the work product.

1. Pre-Appeal Brief, Appeal Brief Conferences and PTAB Statistics

The USPTO currently has a program called Pre-Appeal Brief Conference in which an applicant may submit a five (5) page response outlining errors in the final rejection for review by a panel of three examiners, generally including the examiner of the application in question, a SPE and one other primary examiner. The decision of the panel is

conveyed to the applicant but without any explanation of the reasons for such decision. Additionally, following the submission of a brief by applicant, a panel of three examiners, again generally including the examiner of the application, a SPE and one other primary examiner, reviews the brief and decides whether the rejection in the application is proper and ready for a decision by the PTAB. From both of these programs, the USPTO has gathered statistics on the outcomes of the affected applications.

Below are the statistics for the Patent Examining Corps from the Pre-Appeal Brief Conferences from FY 2008 to FY 2016.

	Pre-Appeal Brief Conference Decisions	Pre-Appeal Brief Conference Decisions to Proceed to the PTAB	Pre-Appeal Brief Conference Decisions to Reopen/Allow
FY 2008	7543	4526	3017 - 40%
FY 2009	9276	5278	3998 - 43%
FY 2010	11922	6805	5117 - 43%
FY 2011	11572	6887	4685 - 40%
FY 2012	10795	6863	3932 - 36%
FY 2013	9981	6598	3383 - 34%
FY 2014	10675	7178	3497 - 33%
FY 2015	10125	7007	3118 - 31%
FY 2016	12159	7018	3160 - 26%

It can be seen that over the years from FY 2008 the percentage of applications in the program that were either reopened or allowed ranged from 40% (FYs 2008 and 2011), 43% (FYs 2009 and 2010) and then dropped each year to 30% in FY 2016. That seems to demonstrate a consistent improvement in the program over the nine years of the program's existence. However, the statistic of 30% of the applications' final rejections being inadequate for review by the PTAB is an indicator that significant work still needs to be done in improving the quality of the final rejections being advanced. This is an area for increased evaluation to identify problems, trends and lessons learned for feedback to the Patent Examining Corps to improve these numbers. The incorrect final rejections force applicants to file RCEs, after-final amendments or arguments, or appeals to the PTAB, all of which cost significant amounts of money and delays resulting in lost patent term.

The PPAC suggests a focus on these applications and efforts to continue to decrease the numbers of applications being reopened or allowed. Of course, if the rejection is

improper or incorrect, it is preferable that the case is either reopened or allowed but focusing on reducing the improper final rejections is suggested.

Below are the statistics for the Pre-Appeal Brief Conferences for FY 2014 - FY 2016 by TC.

Tech Center	Pre-Appeal - Proceed	Pre-Appeal - Proceed%	Pre-Appeal - Allow	Pre-Appeal - Allow%	Pre-Appeal - Reopen	Pre-Appeal - Reopen%	Pre-Appeal Total
1600	1444	71.9%	278	13.8%	286	14.2%	2008
1700	2554	70.7%	269	7.4%	792	21.9%	3615
2100	2381	64.8%	111	3.0%	1180	32.1%	3672
2400	3282	69.9%	320	6.8%	1092	23.3%	4694
2600	3071	72.2%	311	7.3%	871	20.5%	4253
2800	1975	54.9%	326	9.1%	1296	36.0%	3597
2900	79	67.5%	19	16.2%	19	16.2%	117
3600	3382	71.9%	302	6.4%	1017	21.6%	4701
3700	3295	69.1%	295	6.2%	1179	24.7%	4769
Grand Total	21,463	68.3%	2,231	7.1%	7,732	24.6%	31,426

This data shows that in about one-third of the applications reviewed, the final rejection was found to be deficient. The percentage moving forward to appeal is fairly consistent across the TCs, but the division between allowance and reopening the prosecution differs quite significantly between TCs. Evaluating these differences and the underlying reasons would be a fruitful area to explore to capture training points for product improvement.

Below are the statistics from the Appeal Brief Conferences from FYs 2008-2016.

	Appeal Briefs Reopened	Appeal Briefs Allowed	Examiner's Answers
FY 2008	4854 (27%)	2117 (12.1%)	10507 (60%)
FY 2009	4854 (28.5%)	2429 (14.3%)	9743 (57.2%)
FY 2010	5069 (24.5%)	3716 (18%)	11870 (57.5%)
FY 2011	4401 (21.5%)	3572 (17.4%)	12537 (61.6%)
FY 2012	3153 (16.6%)	3868 (20.4%)	11943 (63%)
FY 2013	2848 (17.1%)	3132 (18.8%)	10673 (64.1%)
FY 2014	2811 (17%)	3040 (18.3%)	10725 (64.7%)
FY 2015	2210 (16.3%)	2398 (17.7%)	8975 (66%)
FY 2016	2097 (17.8%)	1843 (15.6%)	7871 (66.6%)

These statistics demonstrate quite a significant number of applications (between 40% and 32%) in which the final rejection cannot be forwarded to the PTAB but rather must either be reopened or allowed. The numbers do show a noteworthy improvement over the nine years of data; however, even in the best years, over 30% of the applications are either reopened or allowed, which indicates that reducing improper final rejections should be a focus of the quality improvement efforts. These applications were evaluated by three examiners who determined that a significant proportion of the final rejections were deficient in some manner and thus represent a valuable source of important information regarding the problems found in these evaluations. It is suggested that these reviews identify what these problems are so that this information may be categorized and mined for how to provide training to the examiners for quality improvement.

It is understood that the Pre-Appeal Brief Conferences evaluate only gross error capable of being identified in five pages of argument, while the Appeal Brief Conferences are supposed to provide a more in-depth review. The USPTO should make sure that the reviews being done are all using the proper standards for these different reviews in each TC because eliminating the necessity of going to the PTAB is an important objective. Increasing the quality of the final rejections being advanced is a critically valuable goal because each of the two programs cost applicants money and lost patent term and unfortunately, with inconsistent quality among examiners, this negative result of higher cost and lost time falls only on some applicants.

The chart below shows the results for the Patent Examining Corps from the PTAB for the FY 2008 - FY 2016.

	All Board Decisions	Board Decisions - Affirmance	Board Decisions - Reversal	Board Decisions – Affirmed –in-part
FY 2008	3887	2354 - 61%	551 - 14%	982 - 25%
FY 2009	5535	3167 - 57%	841 - 15%	1527 - 28%
FY 2010	6165	3259 - 53%	908 - 15%	1998 - 34%
FY 2011	6289	3192 - 51%	1335 - 21%	1762 - 28%
FY 2012	8642	4423 - 51%	2960 - 34%	1259 - 15%
FY 2013	10398	5769 - 55%	3163 - 30%	1466 - 14%
FY 2014	8427	4555 - 54%	2792 - 33%	1080 - 13%
FY 2015	11037	6366 - 58%	3250 - 29%	1421 - 13%
FY 2016	14578	8462 - 58%	4217 - 29%	1899 - 13%

The trend in reversals shows an increase over the period of time from FY 2008 to a high FY 2012 and a decrease to 29% in FY 2015. The affirmances dropped from 61% in FY 2008 to 51% in FYs 2011 and 2012 and are now rising again. The PPAC believes that in a high functioning system a certain number of examiner positions should be reversed. There are some cases where the facts are disputable and need the higher decision by the PTAB.

Below are the statistics from Appeal Brief Decisions by TC for the period of FY 2014 - FY 2016.

TC	PTAB Decision-Examiner Affirmed	Affirmed %	PTAB Decision-Examiner Affirmed in part	Affirmed in part %	PTAB Decision - Examiner Reversed	Reversed %	Appeal
1600	1244	66.6%	167	8.9%	457	24.5%	1868
1700	2745	65.8%	341	8.2%	1088	26.1%	4174
2100	3300	60.5%	675	12.4%	1484	27.2%	5459
2400	3651	62.3%	732	12.5%	1473	25.2%	5856
2600	2986	63.7%	562	12.0%	1137	24.3%	4685
2800	1680	53.9%	345	11.1%	1094	35.1%	3119
3600	2496	45.7%	844	15.4%	2127	38.9%	5467
3700	2169	43.0%	928	18.4%	1952	38.7%	5049
Total	20271	56.8%	4594	12.9%	10812	30.3%	35677

These statistics do identify some differences between the TCs. The PPAC recommends evaluating these applications to identify whether there are problems in the search, claim interpretation or other aspects of examination which might be identified and conveyed through training to the examiners.

The PPAC suggests that the USPTO continue to focus efforts on evaluating the information coming from the all of these sources, both Pre-Appeal Brief and Appeal Brief Conferences and the PTAB decisions to identify information that can be fed into the quality improvement process.

In addition to the measures in the composite, the USPTO should focus more on data that are currently being gathered that can provide an indication of the quality of the work product. At present, these data can be hidden within different metrics—for example, the accuracy of office actions is part of survey data as well as several quality assurance components and somewhat in the quality index reporting QIR (statistical) measures. The data from Pre-Appeal Brief Conferences and Appeal Brief Conferences give some indication of the quality of the final rejections being issued based on the outcome (allowance, new rejection or continuation to the PTAB) of the application following such a conference. These data should be mined and utilized in the quality improvement efforts

but it is suggested that evaluation on a more granular level and root cause analysis should be done.

The PPAC encourages a continuing critical analysis of the quality results with a focus on continued improvement. The quality metrics are valuable tools to assess the state of quality over various time periods but their value also lies in the identification of areas for improvement. The PPAC urges the USPTO to leverage fully the talents and knowledge of the SPEs, who are change agents for a quality environment as well as a conduit to the Patent Examining Corps. The most effective quality feedback and intervention comes from the SPEs and the PPAC encourages greater involvement of the SPEs in quality enhancement. The use of the MRF by SPEs to document the required annual reviews of examiner work product is an important step to more uniformly evaluate and record these vital looks at the quality of the work product. While the PPAC understands that the USPTO has a definition of quality, has been measuring quality for decades and through the performance evaluations has been communicating to the examiners what quality is, the MRF and uniform reviews will improve the data gathered by the USPTO. The PPAC suggests increased and clear communication to the examiners and the public on the definition of quality.

E. INFORMATION TECHNOLOGY IMPROVEMENTS

The significant Information Technology (IT) improvements being developed and deployed for the patent examiners should assist in improved search capabilities and hopefully expanded abilities to identify and apply the most pertinent prior art, thus resulting in improved patent quality. The improved IT systems will also permit patent examiners to manipulate the data in the patent applications more easily to facilitate quality analysis of the application. In addition, the harmonization of the classification system to the Cooperative Patent Classification (CPC), Global Dossier, the Patent Prosecution Highway (PPH), and the continuing initiatives and strides being made by agreements among the world patent offices are excellent programs that should assist patent examiners in providing consistent, high quality work product. The PPAC compliments the USPTO on the international efforts being made to improve global consistency and access for applicants and patent examiners because these initiatives ultimately contribute to the overall quality of the patents issued by the USPTO.

F. EXTERNAL REPORTS

1. Government Accountability Office Report on Quality

The Government Accountability Office (GAO) issued two reports in June 2016: GAO-16-490 titled “Patent Office Should Define Quality, Reassess Incentives, and Improve

Clarity,” and GAO-16-479 titled “Patent Office Should Strengthen Search Capabilities and Better Monitor Examiners’ Work.”

In formulating report GAO-16-490, the GAO conducted a survey of patent examiners and interviewed officials from the USPTO and knowledgeable stakeholders. The GAO recommended seven actions to help improve patent quality: (1) develop a consistent definition of patent quality, and clearly articulate this definition in agency documents and other guidance; (2) further develop measurable, quantifiable goals and performance indicators related to patent quality as part of the USPTO’s strategic plan; (3) analyze the time examiners need to perform a thorough patent examination; (4) analyze how current performance incentives affect the extent to which examiners perform thorough examinations of patent applications; (5) establish a process to provide data on the results of the PTAB proceedings to managers and staff in the TCs and analyze PTAB data for trends in patent quality issues to identify whether additional training, guidance, or other actions are needed to address trends; (6) evaluate the effects of compact prosecution and other Office application and examination policies on patent quality and determine if any changes are needed to ensure that the policies are not adversely affecting patent quality; and (7) consider whether to require patent applicants to include claim clarity tools such as a glossary of terms, a check box to signal functional claim language, or claim charts in each patent application.

The report included the USPTO response to each recommendation who identified numerous steps already underway and which address some of the points made by the GAO: for example the Post Grant Outcomes Pilot implemented in the spring of 2016 and the Glossary Pilot completed by the USPTO.

In GAO-16-479 report, the GAO also had seven recommendations for the USPTO: (1) work with the European Patent Office (EPO) to identify a target level of consistency of Cooperative Patent Classification decisions between the USPTO and EPO and develop a plan to monitor consistency to achieve the target; (2) develop a strategy to identify new sources of non-patent literature (NPL) and assess optimal ways of providing access to these sources; (3) develop written guidance on what constitutes a thorough prior art search in each technology field, TC, art area or art unit, as appropriate and establish goals and indicators for improving prior art searches; (4) ensure that sufficient information is collected in reviews to assess the quality of the searches performed, including how often the examiners search U.S. patents, foreign patents, and NPL; (5) use audits and supervisory reviews to monitor the thoroughness of prior art searches and improvements over time; (6) analyze the

time examiners need to perform a thorough examination including assessing the time needed to conduct a thorough prior art search; and (7) assess the technical competencies of examiners to determine if they match that necessary for competent examination of that art area identify any gaps, develop strategies to address any gaps and establish strategies to monitor progress towards closing any gaps.

The USPTO concurred with the recommendations in both reports; details of the USPTO responses are included in both reports. The PPAC believes that the quality of the searches is a critical step in achieving high patent quality and encourages the USPTO to continue its efforts in measuring and improving the quality of the search. The PPAC also finds noteworthy the GAO's emphasis on non-patent literature in improving the quality of search and ultimately the issued patents.

2. Office of the Inspector General Report

The Office of the Inspector General (OIG) released report Number OIG-14-0990-I in August of 2016, and titled "Analysis of Patent Examiners' Time and Attendance." Using a number of electronic tools, which were not designed to monitor examiner work, the OIG identified time claimed by examiners but unsupported by these electronic tools they used in the audit. Based on this evaluation, the OIG made a series of recommendations: reevaluate examiner production goals and revise them, to reflect efficiencies in work processes from automation; require all examiners to provide their work schedules; require employees to use their badge to exit the facility; require all teleworkers to remain logged into the USPTO network during work hours; review policies, procedures and practices pertaining to overtime hours to identify and eliminate areas susceptible to abuse; and consider deploying SOHO routers to all teleworkers.

The PPAC believes that the USPTO takes very seriously the requirement that examiners work the full number of hours for which they are paid and has taken actions against some examiners for whom it could be documented that they were not following the policies for time and attendance. Footnote 2 of the OIG report, acknowledges that they did not recommend any actions against examiners be taken based on this report because of possible noncompliance with Federal Rules regarding such actions. Following a NAPA report, the USPTO had implemented training and other changes, the effect of which was actually documented in the OIG data. The USPTO is reviewing the OIG report and seriously considering appropriate actions. Additional information about this report can be found in the Human Capital section of this annual report.

The potential unsupported time alleged by the OIG was about 2% which fell to 1.6% after implementation of steps resulting from the NAPA report. Being able to document 98% or greater of employees' time seems quite good. While the tools used by the OIG in their

evaluation were designed for other purposes, the USPTO does have a robust set of measures that track the output and quality of the work patent examiners perform, including percentage achievement of a production goal, achievement of pendency goals and quality assessment. These measures hold examiners accountable for completing a dictated amount of work within set time periods at a proscribed level of quality, establishing, it is contended, a level of accountability beyond what many workers, in the public or private sector face.

Production goals for examiners are set based on a complexity factor assigned to the art area in which they examine, their GS-grade (higher grade equals more work expected), and the time claimed on their timesheet. Thus, examiners in more complex art are allocated more time for the work, as are more junior examiners and for every hour worked, there is a computer generated report detailing expected and achieved production. This means that for all time claimed by examiners on their time sheet, they were required to complete the amount of work based on their production goal.

Although the examiners rely on electronic means for doing their work, many continue to print out documents for review and analysis or do occasional work on another computer. Thus, the PPAC contends that the lack of a digital footprint is not evidence that an examiner was not working. Additionally, patent examiners frequently work hours that they do not claim on their time sheets, that is, voluntary overtime (VOT), to achieve the necessary level of work and quality but this time seems to have been disregarded by the OIG.

The USPTO is reviewing the OIG report and seriously considering appropriate actions. Additional information about this report can be found in the Human Capital section of this annual report.

The USPTO is evaluating the time allocated to examiners to do a quality examination of patent applications. It is noted that the GAO report found that perhaps examiners need more time to do their work- the exact opposite of the suggestion by the OIG.

The PPAC recommends that the USPTO consider the OIG report and continue to evaluate the policies and procedures to ensure that employees understand and are following the time and attendance rules. However, the USPTO should not implement recommendations, such as reduced examination time, that are likely to harm quality.

G. GUIDANCE AND TRAINING

To provide guidance to applicants and examiners on patent eligibility under 35 U.S.C. § 101, the USPTO issued life sciences and computer software examples and continued to

provide guidance on relevant court decisions for subject matter eligibility. The examples and memos are helpful to both examiners and practitioners in identifying concrete examples of patent eligible patent claims.

Training provided by the USPTO to examiners includes training on practice and procedure, examination tools, technical training, and legal training. To augment and keep current the patent examiner's knowledge in their field of examination in a cost-effective manner, the Patent Examiner Technical Training Program (PETTP) offered 173 events in various technologies featuring speakers from companies who gave lectures at the USPTO and in some cases video access to materials from universities proving in total 34,846 hours of technical training. Training programs in Patent Law and Evidence was delivered to 600 participants in 12 events for 24,000 hours. Because of the cost, visits to companies is more limited but in the Site Examiner Education (SEE) program, some examiners visited 43 locations to learn about the technology and see first-hand the work being done, an extremely valuable part of education. A variety of refresher and master training events were given to 10,852 participants for 18,318 hours of training. The Patent Training Council delivered a number of training modules including Clarity of the Record, Interview Summary Practice, 101 Responding to Applicant's Arguments, Reasons for Allowance, 103, and 112(a) for biotech or organic chemistry examiners. In many cases, these were delivered to all examiners and managers but some training was targeted to specific art areas where it was most relevant. Also, managers were trained in technology, HR aspects of their jobs and management skills resulting in 2,274 participants accruing 3,411 hours of training.

The PPAC applauds this on-going training to keep the patent examiners current in all aspects of their jobs.

The PPAC commends the USPTO on the transparency of the training materials and guidelines provided to the examiners on various aspects of procedures and case law. These are readily available on the USPTO website and the USPTO requests and considers comments and suggestions from the public regarding these materials.

Recommendations:

A. Supervisory Oversight

A superior method of improving quality lies in supervisory oversight of the work completed by junior examiners as they learn the practice, procedures and the law, followed by guidance by the supervisor on nuances for a more complete and more legally correct product. In addition, regular review of the work of the primary examiners can identify opportunities for supervisory input for any recommended changes. Utilization of

the SPEs for quality improvement is crucial because the SPEs generally have good knowledge of the technology and it is far more scalable than a review by OPQA. However, it is critical that the SPEs be accorded a sufficient amount of time to dedicate to the necessary one-on-one training and review of the work of the art unit. It is also important that SPEs understand that training, feedback to the examiners and resolution of problems is their primary and most important function at the USPTO. The PPAC recommends that the USPTO focus on supervisory review and a robust feedback system to channel quality comments and suggestions to the examiners, combined with an identification of any individual or group deficiencies which can then be addressed with additional training and follow up.

B. Complete First Action Search and Comprehensive Office Actions

A thorough pre-first action search, a comprehensive evaluation of all claims and a first action which identifies and develops all appropriate issues presented by the claims is a hallmark of good patent examination quality and is the expectation of all patent applicants. A thorough search should cover the invention as described and claimed, including the inventive concepts toward which the claims appear to be directed (MPEP 904). It is especially important that the USPTO focus efforts on identifying NPL references and continue to expand the sources available to the Patent Examining Corps to locate these references. It is also recommended that the USPTO ensure that adequate, other-time compensated training is provided to examiners on the tools and methods for identifying appropriate NPL references. The office actions should make clear how the references are being applied by identifying the appropriate passages of the references and how the claim is being interpreted to make that rejection. This need not be a treatise but rather a concise explanation to put applicants on notice and allow the public to understand the position being taken by the USPTO. The PPAC recommends a focus on complete searches as set forth in the MPEP; clear and comprehensive office actions which make clear how the claim is being interpreted and the passages from the reference being relied upon; and thorough treatment of arguments and evidence submitted in response to the rejections.

C. Consider Options for Additional Amendment Following Final Rejection

Many applications require more than one opportunity to amend the claims to reach allowable subject matter with a scope satisfactory to both applicant and the examiner. The current compact prosecution model frequently reaches final rejection before the issues are adequately developed and consequently these applications necessitate the filing of one or more RCEs. A system which permits more options than just filing an RCE, such as paying for another action after final rejection, would be desirable in some instances to complete prosecution. The PPAC urges the USPTO continue to review the

examination process to consider ways to avoid a patent application from going to “final” status prematurely. The PPAC recommends that the USPTO evaluate and try to reduce the number of final rejections which cite new prior art, particularly following small changes to the claims which should have been recognized as the invention and searched according to the guidance provided for search in the MPEP. It appears that new prior art applied in some final rejections should have been located and applied to the claims as originally presented. Additionally, efforts or initiatives to enter more small changes to the claims, especially those which put the case in condition for allowance, following a final rejection would be welcomed. Changes to the current compact prosecution system which would allow other options, such as an additional amendment after a final rejection, should be considered. Reconsideration of the application with additional amendments and arguments within a few months is more effective and efficient for both applicant and the USPTO.

The PPAC appreciates the efforts of the USPTO over the past few years to develop programs aimed at providing greater consideration and entry of amendments after final. The effectiveness of these programs is variable, but the objective of the programs is applauded. The PPAC recommends that the USPTO continue to develop, modify and enhance programs which will permit more consideration and entry of amendments after final rejection because it is believed that this will reduce the need for RCEs or appeals to the PTAB.

D. Compact Prosecution

The PPAC recommends that the USPTO evaluate the compact prosecution model currently employed and determine if this achieves the most efficient, high quality results. The percentage of RCEs filed has grown and continues to represent 30% of the applications filed, suggesting that prosecution within the proscribed process of a single application may not be occurring in significant numbers of applications. It is suggested that the USPTO evaluate the compact prosecution model and whether it is an appropriate model with current applications. The USPTO could evaluate RCEs, survey examiners and seek input from the public regarding the model and reasons for filing RCEs.

E. Mine Information from Applications

The PPAC recommends that the USPTO evaluate the cases allowed or reopened following a pre-appeal brief or appeal brief conferences to identify, to the extent possible, why the rejections advanced in the final rejection were deemed inadequate for consideration by the PTAB. Was the search inadequate, were the claims interpreted too broadly or too narrowly, were arguments or evidence submitted by applicant overlooked or dismissed? Similarly, an analysis of the patents found invalid through the IPR process

should be undertaken. In all of these cases, USPTO personnel have identified that a problem with each case existed and a more in-depth identification of weakness in searching, analysis or decision making would assist in quality improvement efforts.

F. Consistency of Positions and Quality of Actions

The PPAC recommends that the USPTO focus on the consistency of the positions taken by examiners and the quality of the office actions communicated to applicants. Unfortunately, the perception of some practitioners is that the outcome of an examination of a patent application depends very heavily on which examiner was assigned the application. It is believed that this is the case for rejections under 35 U.S.C. § 101, but also for §§ 102, 103, and 112. The PPAC commends the USPTO for including a review of the consistency of approaches to rejections under 35 U.S.C. § 101 as one of the case studies. It is hoped that this evaluations can be translated into training and efforts to more uniformly apply the statute and controlling case law.

The application of all statutes and the quality of the search and communications by examiners are not uniform or at the level expected by the public. It is understood that there will be some differences but poor searches and quality of examination cost some applicants significant amounts of money and lost time. For example, in some technologies, some examiners overuse § 112(a) rejections while in other areas this statute is underused.

Areas of suggested focus include: complete search, including NPL; the appropriate use of § 112(a) to get proper scope of claims; the complete evaluation of arguments with understanding of legal arguments that overcome rejections and a reconsideration of the new record with an open mind; the appropriate consideration of all evidence, including declarations; and a more consistent, predictable outcome of applications regardless of the assigned examiner. Whether or not an applicant receives a patent and how long and at what cost the process takes should not be dependent on which examiner does the examination. The USPTO should focus on consistency, supervisory oversight to monitor the quality, and implementation of programs for intervention and correction of errors without the need for costly appeals to the PTAB.

G. Quality, Not Just Quantity, as the Objective

The PPAC recommends an emphasis on patent quality as a defining principle for the culture of the USPTO. One important aspect for patent quality is a repeated statement by management that quality is the primary objective, reinforced by infusing the environment and culture of the USPTO with a quality, and not just quantity, focus. This is especially important to an office with many examiners working remotely from the main campus and

thus not in face-to-face contact on a daily basis. Quality involves utilization of all of the required work hours focused on a quality work product, not just a completed one. While quality awards have been discussed and are understandably challenging to implement, the USPTO should explore ways to recognize and reward outstanding quality work, using praise and public recognition to signal accomplishments, and models of quality and work ethics for the more junior examiners to follow.

II. INFORMATION TECHNOLOGY

A. OVERVIEW

The Office of the Chief Information Officer (OCIO) provides the personnel and technology for the USPTO administration, Patent Examining Corps, and end users to effectively research, file, and prosecute patent applications, and administer the patent operations within the USPTO. The USPTO database of all pending published applications and issued patents, prior art and technical journals is utilized 24 hours per day by both U.S. patrons and the global community. The system has in storage over 300 Petabytes (300 million Gigabytes) of information that is available to users, and also the 8,000 examiners that at any one time may be online. Under the direction of the OCIO, the IT staff works to provide tools to improve patent quality, reduce pendency and backlog, and build and maintain a 21st century workplace. This report outlines the efforts underway at modernizing the USPTO's IT capabilities, and describes the Patents End To End (PE2E) portfolio of IT projects that will help the USPTO continue to be the premier IP agency in the world.

The first area to be discussed is that of modernization. In FY 2016, the USPTO continued to fund IT initiatives at a higher level than they had in previous years. The PPAC endorsed, and continues to endorse, these higher levels of IT spending because replacement of antiquated technology has already been delayed too long, jeopardizing mission-critical functions such as efficient examination, service delivery to patent applicants and other stakeholders, and improving patent quality via functions such as examiner search and improved workflow. At present there is no question that these initiatives must move forward; therefore, the PPAC's focus is in helping the USPTO to prioritize as well as to determine the specific funding levels necessary given that the volume of new patent applications is lower than projected.

Related to the antiquated technology is the fact that the IT system is extremely vulnerable in terms of its usage of obsolete hardware and the lack of availability of spare parts. As will be outlined in greater detail in this report, in December 2015 the IT system was severely crippled because of an event that destroyed numerous components of the computer system. While contractors to the USPTO had some spare parts available, as

required by the USPTO contract, the magnitude of the damage was such that spare parts had to be brought in from around the world. Moreover, these spare parts at times came from computer repair organizations and not necessarily the manufacturers of the hardware. The USPTO is the world's premier intellectual property organization. It is not acceptable to the PPAC that spare parts have to be retrieved from foreign countries and from other continents. Issues of weather, diplomatic relations, foreign customs, and labor unrest among transport workers make the IT unacceptably vulnerable to such untoward events.

During the second quarter of FY 2015, the USPTO made available to the entire Patent Examining Corps a new system called DAV, the first of a planned series of rollouts of the new PE2E functionality. This new software, which replaces the eDAN tool long in use by examiners, provides integrated case management, improved ability to prioritize tasks, and numerous features to automate tasks examiners previously carried out by hand, such as drawing claim trees and searching for text within application files. In addition, like all of the other tools in the PE2E portfolio, DAV builds upon an advanced, open source, standards-based architecture so that functions that were previously performed separately within each separate software tool, such as searching and claim tracking, can be consistently streamlined across tools and applications. Once DAV was made available, training progressed by art unit within the Patent Examining Corps with usage and training of DAV being voluntary. The number of trained users has steadily increased within the Patent Examining Corps. There has been a hard deadline for transition set for no later than December 31, 2016.

The PPAC commends the OCIO and the entire USPTO organization for what is almost universal acceptance and usage of the DAV. The DAV deployment sets the stage for the rollout of the other key components of PE2E, such as a new advanced examiner search tool and authoring tool for official correspondence (e.g., office actions), as well as the eventual retirement of legacy systems whose outdated custom design dates back to the 1980s. Although the PPAC is delighted with the progress so far, the PPAC recognizes the cost and risks associated with “changing the wheels while the car is moving forward” - maintaining two sets of systems as newer, modern systems replace the old ones. This is a set of projects which, if delayed or only partially completed, would leave the USPTO in a state where it is paying a higher ongoing cost without any real return. The USPTO will need to manage the budget carefully to guard against these risks.

The USPTO has made progress in the implementation of several key projects to support international cooperation and work sharing. The USPTO's commitment to Cooperative Patent Classification (CPC), the conversion from a U.S. system for classifying patents by subject area to an international standard, required extensive technology support, and the

OCIO stepped up to help, leveraging a system used in trademarks to help examiners automate the assignment of applications using CPC codes. The Hague Agreement was finally ratified by the United States in February, 2015, leading to the live use of IT systems to support the common filing of design patents in Hague Agreement offices. The USPTO also delivered new functionality to give foreign patent offices access to applications and patent file wrappers, and developed a web-based system to allow public access in the U.S. to foreign patents.

While new IT development efforts such as these have been the focus of attention, the PPAC notes that the OCIO's office must continue to build and maintain a secure, stable infrastructure, a dynamic and compliant website, an effective back-office environment, and numerous other less glamorous technical functions that tend to be discussed only when something goes amiss.

Separate and apart from the malfunctions suffered, the PPAC reiterates that information security and detection of unknown malware and viruses is critical to the protection of the highly proprietary information the USPTO receives about innovations and inventions developed in the U.S. Given the high visibility of data breaches in other organizations and the sensitive nature of documents submitted to the USPTO, constant vigilance and a adequate amount of ongoing IT investment is a must in all infrastructure areas.

B. MISSION OF THE OCIO AND STRATEGIC IT OBJECTIVES – FOCUS ON QUALITY

In alignment with the USPTO's overall strategic goals of improving patent quality and reducing pendency, the OCIO is responsible for deploying and maintaining modern IT systems and infrastructure that improve quality and efficiency, for example, by helping examiners to work productively and effectively and by supporting communication and coordination with the user community and international stakeholders. Within the current examination environment, such systems can advance patent quality initiatives, for example, by allowing examiners to avoid mundane and repetitive tasks such as mapping claims and retyping text and devote their time and attention to those tied to quality, such as determining claim validity and finding and applying prior art. Global and community work-sharing, for example, is also important for quality because it reduces duplication of effort, thereby potentially improving the effectiveness of examination, and can also help examiners to find art that they might not find otherwise. Technology can help also to ensure that applications are assigned to the examiners who are best able to examine them. These are just a few of the ways that technology and quality tie together. Productivity and quality are also related, as implied above, because the better the examination time is spent, the more likely that examiner will produce quality results.

There is one caveat that must be emphasized when discussing both IT and quality. There is a necessary tension between high quality applications that are allowed, and decreasing the time necessary allocated for the examination. In some quarters, it has been suggested that these new worktools can help decrease pendency. While at first blush this may seem to be an appealing concept, it is not always the case.

Quality patents are those patents which comply with all statutory requirements and are of the proper scope. The difficulty in examining an application is that there is now a plethora of prior art, both patents and NPL, available to the examiner. The ability for the examiner to search KIPO, EPO and JPO databases, with increasingly sophisticated machine translation, was unheard of 10 years ago. The reality is that IT provides the examiner with a larger database than was ever available – this database and increasing access to various commercial databases of NPL are exactly one of the reasons that patent quality will improve. However automation and higher patent quality will not necessarily result in decreased pendency. The reality is that there is more prior art identified which must be considered. IT can make this art more readily available to the examiner. But in the end, it is the examiner who will still have to properly develop a search strategy, review a larger dataset of results, evaluate the claims and determine how and if to apply the discovered prior art to the claims of the application. No amount of automation or software efficiencies can be used to replace the sound technical judgment and acuity of the members of the Patent Examining Corps.

As the PPAC has reported in previous years, PE2E is the mainstay of the USPTO's IT modernization initiatives. PE2E, as its name indicates, is a set of IT systems aimed at streamlining the processing of patent documents and actions utilizing a data architecture based on open, text-based industry standards such as the XML (Extensible Markup Language), moving away from proprietary, image-based approaches that are behind some of the USPTO's legacy data-handling systems. In addition to offering opportunities for enhancements to patent quality (such as those noted above), the PE2E portfolio comprises part of the USPTO's need to upgrade an aging IT infrastructure, a challenge faced by all large-scale organizations.

The table below shows a few of the important projects within the PE2E portfolio with their achieved or scheduled release dates:

Effort	Description	Release Date
Docket & Application Viewer (DAV) (replaces eDan)	Case management tool: docket with multiple views; planner to prioritize work; document and claims management; IDS viewer	Released March 2015; Completed training
Examiner Search (replaces EAST/WEST)	Modern, scalable enterprise search for patent examiners	December 2016
Official Correspondence (for office actions, replaces OACS)	Authoring & workflow solution; integrates with DAV by leveraging notes, references, and dispositions	December 2016
Cooperative Patent Classification (CPC)	Harmonization and modernization of classification jointly managed between USPTO & EPO. Allows collaborative maintenance of classification system.	January 2013; enhancements in July 2015
Central Enterprise Data Repository (CEDR)	New operational database to replace PALM and integrate with new PE2E functionality	Incremental releases for critical path elements from above efforts

C. IT MODERNIZATION AT THE USPTO

In its strategic plans and budget requests throughout recent years, the USPTO has noted the need to modernize its aging IT infrastructure and systems, and pointed out the potential costs to stakeholders of having out-of-date systems (due to potential inefficiencies and downtime) along with the opportunities for improvements (due to collaboration and improved workflow and examination practices). As noted above, the OCIO has launched a number of mission-critical initiatives to improve IT infrastructure, processes, and systems. In its previous reports, the PPAC has cautioned that the replacement of antiquated IT systems would take at least several years, and that there would be a spike in IT expenditures during those years because the development of new systems would continue at the same time that both old and new systems were being maintained, a complex and expensive process. That spike occurred in FY 2015 and continued during FY 2016.

The Patent Application Location and Monitoring system (PALM) is one example of a USPTO mission-critical system that was designed in the 1980s for mainframe computers, and is slated for retirement in the next few years. PALM is the backbone database and

transaction processing system that records and tracks actions related to patent applications throughout the USPTO. The examiner search systems EAST (Examiner Automated Search Tool) and WEST (Web-based Examiner Search Tool), upon which examiners rely most heavily for patent searching, were similarly built upon a proprietary framework from the 1980s developed by a company then known as BRS Search. The USPTO's patent quality outreach has underscored what we already knew, that effective prior art search is a crucial part of examination. The importance of an effective search and providing the tools to enable it were underscored in the recent GAO reports on patent quality. There is no way to improve search substantively using an antiquated platform. In 2014, the PPAC expressed concern that a growing Patent Examining Corps is being tasked to undertake an increasing number of prior art searches at a time when the supporting systems are basically unchanged from where they were when the USPTO recommended their upgrade years ago. This year, the USPTO has moved the ball forward toward replacing EAST and WEST with a new set of examiner search tools slated for testing in FY 2016 and rollout early in FY 2017.

As earlier referenced, the OCIO saw a rather unexpected series of occurrences at the end of December 2015. The IT hardware had an untoward event that occurred in December of 2015. An electrical fault on the power feeder system disrupted power to the USPTO's Alexandria Headquarters. Despite a robust power system design and redundancy of backup generators, the computer system was damaged and offline for several days. This vulnerability is of a type that cannot be easily or practically minimized or engineered around. Moreover, the damaged power feed system is in a building leased by the GAO, not the USPTO. This power event does emphasize the need to upgrade the computing system; the USPTO experienced electrical damage that taxed the inventory of spare parts held both internally and also by contractors to the USPTO. It was necessary to bring in spare parts from around the world, which obviously can pose a threat when the diplomatic waters are not calm or inclement weather is occurring. The IT department implemented its backup plan, and the plan was executed and worked as intended.

The PPAC commends the OCIO and its leadership for both foresight in planning and also implementation of the plan. In this very case, we saw exactly how OCIO management had planned for the worst of circumstances, and when those circumstances occurred, the group worked their plan. At the same time, the necessity to 'import' or borrow spare parts from around the world places the USPTO in a position it should not be in. This incident alone should alert the Administration and Congress of the continued necessity of upgrading and replacing mainframe hardware that is presently obsolete and makes the USPTO vulnerable. In addition to power or other natural disruptions, the PPAC reiterates its urging that the USPTO is provided the requisite budget to put in place the most robust cybersecurity infrastructure that can effectively thwart unknown malware

and virus attacks, theft, and disruption to the U.S. patent system. Unlike most upgrades, cybersecurity-related upgrades must be frequent and anticipatory in order to be effective, and should be factored into the budget.

1. Potential Impact of the Shared Services Model on IT at the USPTO

As discussed earlier, the Department of Commerce has undertaken a Shared Services initiative aimed at reducing redundancy across organizations while potentially improving the delivery of support functions across the Department. This initiative could help, for example, in streamlining and reducing the cost of certain commodity IT functions such as electronic mail, website maintenance, helpdesk operations, and human resources IT support.

While the PPAC appreciates the Department's efforts to leverage economies of scale in order to focus user fee revenues more strategically, the PPAC is concerned with both timing and execution challenges in implementing shared services at the USPTO. Given the importance of the ongoing initiatives discussed here, the PPAC particularly notes that the USPTO must maintain the flexibility in IT procurement that it currently has along with maintaining the high levels of service and security that the USPTO has worked so hard to establish.

As the Department begins to establish these shared services, the PPAC urges the USPTO to ensure that examiners and the stakeholders will maintain the same or better level of service and security. If participation in particular shared services offerings does benefit the USPTO without compromise to service quality and security, the USPTO will also need to ensure that the service does not impose additional unreasonable costs that could interfere with its IT modernization efforts.

D. OCIO PROGRESS IN FY 2016

Since our last report, the PPAC has noted that substantial progress has been made in the following areas.

1. Global IT Systems

a. Cooperative Patent Classification

Cooperative Patent Classification (CPC) is a partnership between the USPTO and EPO, in which both offices manage and maintain the classification system. Because CPC differs from the classification system previously used at the USPTO, additional technical resources have been needed to search across CPC patent classes, as well as to assign CPC

codes to patents. Work on CPC in FY 2016 included a new interactive assignment tool to help examiners transfer applications based on CPC codes.

b. Global Dossier

Global Dossier is a set of projects to facilitate global work sharing by transmitting patent data from the USPTO to its overseas partners, as well as provide access to patent data from other IP5 patent offices (representing, outside of the United States, China, Korea, Europe, and Japan). One Portal Dossier is a part of the Examiner Tools & Infrastructure component of the PE2E portfolio, through which examiners will be able to view non-USPTO patent dossiers using the same viewers (i.e., DAV) that help to process U.S. applications. In FY 2015, the USPTO began allowing foreign access to U.S. patents and applications, and moved toward the imminent release of a system for U.S. public access to foreign patents and applications through Global Dossier in November 2015. It is particularly noted that machine translation software for language translation from other languages into English has improved greatly over the last several years, allowing the Patent Examining Corps the ability to better reference and cite foreign prior art when performing a search.

Recommendations:

The PPAC applauds the USPTO for the successful launch of the DAV viewer, the first of a series of tools in the PE2E portfolio, and for increasing funding for IT this year. The PPAC continues to believe that IT development and modernization efforts by the OCIO have produced valuable results in support of the USPTO's mission, and are expected to continue. The PPAC believes that PE2E supports the USPTO's current emphasis on improving patent quality. The PPAC recommends emphasizing the following objectives:

A. Continue to Modernize IT Systems and Replace Legacy IT Systems

The USPTO must continue to move forward aggressively with its efforts to deploy new systems, including examiner search, official correspondence, content management, and dissemination. The USPTO has concrete plans to replace legacy systems such as eDAN, OACS, PALM, EAST and WEST. For at least the next year, this means that the USPTO will continue to bear the high cost of maintaining a number of legacy systems at the same time that it continues to support projects that will ultimately replace these systems.

Additionally, the USPTO must hire new technical staff that is skilled in current technologies while also paying for the specialized skills required to maintain systems that are out-of-date. While this modernization comes at a cost, slowing the process could increase the burden by extending the period through which funding redundant systems is required. Also, slowing the process would compromise the ability to take advantage of

new features that could enhance patent quality and help reduce pendency. Therefore, the PPAC recommends that the USPTO try to protect the funding for these critical projects.

It also goes without saying that the December 2015 power system failure underscored the vulnerability of a system that is mainframe based and decades old.

B. Maintain Increased Funding

The decline in new patent applications during FY 2015, which reduced fee revenues last year and the resulting decrease in the USPTO's operating reserves highlights the variability in future fee projections and therefore the risk that the combination of fee collections and reserve funds will be inadequate to support the necessary functions of the organization. In FY 2016, the projected number of applications is slightly over 600,000, which represents an approximate 3% increase over FY 2015. A large portion of the funding for the critical IT initiatives described here is viewed as discretionary because it can be adjusted dynamically, and the funds allocated to IT make up a large portion of the USPTO's discretionary budget. The way to protect the high priority discretionary initiatives is to maintain enough of an operating reserve to ensure they can be funded, make sure that only the projects that are absolutely necessary are being undertaken, and only the non-discretionary commitments (such as hiring) that are absolutely necessary, are undertaken. The PPAC cannot advise the USPTO that everything is critical and at the same time advise the USPTO to protect against budget risk. The PPAC believes that some things are more critical than others, particularly when faced with the reality that certain short-term cuts would result in no long-term savings. This is the case with IT modernization. Use of the operating reserve to help fund these one-time larger capital expenditures seems to make sense, so long as other key office priorities and operations are not also impacted. In order to insure that funding will be available until the transition is complete, the USPTO will need to be extremely careful about committing funds in other areas.

C. Continue Support for the Global IP Community

Technology support for globalization, such as Global Dossier and the Hague Agreement, continued to be emphasized in FY 2015. These projects must continue, as they align with the USPTO's vision of leading the world in IP protection and policy and these projects of international harmonization and work sharing advance patent quality. At the same time, the PPAC recognizes that utilization of some of the new capabilities may be lagging and strongly encourages the USPTO to do further user community outreach and education on how best to use these systems to increase usage of these valuable tools.

D. Upgrade and Expand Links with Stakeholders

The USPTO should examine all customer-facing systems as part of ongoing quality initiatives and IT work should be slated to continue to improve these systems, again subject to the constraint of budget realism.

E. IT Staffing

As is readily apparent, the OCIO has a number of projects underway. Both the abundance and necessity of these projects requires that the OCIO be fully staffed, with staff efforts being augmented by numerous contractors or employees of contracting firms. The IT contracting system represents an area that both the OCIO and the PPAC would like to see improved. Outside contract personnel have no particular loyalty or allegiance to the USPTO, and are often available for hire to the highest bidder, sometimes resulting in an abundance of programmer turnover. This results in severe inefficiencies, as new contractor personnel must be brought up to speed on the current project(s). The PPAC encourages the USPTO and its OCIO to continue to bring more IT personnel on board as permanent employees, as opposed to the status quo.

F. Security

The PPAC commends the USPTO for its continued scrutiny of the IT infrastructure, particularly with respect to cybersecurity. The USPTO is the keeper of some of the most valuable information of our nation – such as technological and biomedical innovations. Theft of this coveted information could severely weaken the U.S. economy and security. With this reality in mind, the PPAC recommends ongoing reviews for the purpose of ensuring vigilant implementation, updates, monitoring, testing, analysis, and continued safeguards in order to protect the USPTO's IT infrastructure against known and unknown attacks.

III. FINANCE

A. INTRODUCTION

In contrast to most of the Federal Government, the USPTO is a user-funded agency that currently enjoys temporary authority to set and adjust fees following the procedures established in the AIA. In FY 2016, expenditures and collections were reasonably close to what had been forecasted. In late FY 2015 and early 2016, to better control expenditures, the agency undertook a comprehensive review of planned expenditures to appropriately prioritize funding across functions and initiatives. Also, the USPTO completed the biennial fee review process, resulting with a proposal to the PPAC for targeted fee increases. As required by the AIA, the PPAC collected comments and held

an open hearing. The USPTO issued a notice of proposed rulemaking (NPRM) in October 2016 with new fees anticipated to go into effect in late FY 2017.

Sound financial management continues to be essential to assuring patent quality and reasonable pendency as well as providing the necessary IT infrastructure. During FY 2016, the USPTO continued its progress in improving pendency, initiated significant quality improvement initiatives, all while managing expenditures and collections at close to their forecasted levels.

B. THE USPTO BUDGET PROCESS

The USPTO's budget process can be understood as a kind of combination of private business practices and those followed by U.S. federal government agencies. On the one hand, the USPTO entirely relies on user fees and seeks to align spending with collections while maintaining an operating reserve to manage variability. On the other hand, the USPTO can only spend the money it collects if that money is appropriated by Congress as part of the overall budgeting cycle.

The AIA granted the USPTO temporary fee setting authority. The agency may set and adjust fees to recover aggregate cost of patent operations following a statutorily mandated consultation with the public in conjunction with the PPAC and the regulatory process. The USPTO is currently undergoing the rulemaking process to adjust patent fees. However, the fee setting authority is currently slated to sunset in September 2018. Furthermore, the USPTO is not free to spend collected funds without specific authorization from Congress. If the USPTO collects more funds than is appropriated by Congress, the excess is deposited in a Patent and Trademark Fee Reserve Fund (PTFRF) established by the AIA. Using the fees from the PTFRF requires a reprogramming notification to Congress to transfer funds to the Salary and Expenses Fund.

The USPTO's Patent Operating Reserve (as well as the Trademark Operating Reserve) is a critical aspect of assuring the consistent funding of long-term priorities in the face of the inevitable variability of funding. Unspent, but previously appropriated funds, accumulate in the Patent Operating Reserve (also referred to as carryover) remaining in the USPTO's appropriation account maintained at the U.S. Department of Treasury. If fee collections dip, the Patent Operating Reserve provides the consistency in funding that long-term initiatives such as quality improvement and IT infrastructure upgrades require. If there is a lapse in the Congressional authorization to spend collected funds, as during the Federal Government shutdown in the fall of 2013, the Patent Operating Reserve funds allow USPTO's operations to continue. Setting an appropriately prudent floor to the Patent Operating Reserve is therefore a key budgetary decision.

As of this writing, multiple fiscal years are in focus for the purposes of financial assessment and planning. For FY 2016, the USPTO is reconciling its accounts and closing its financial books. Simultaneously, the statutory process of authorizing the USPTO spending for FY 2017 is underway as part of the overall federal budgeting process, which started with the publication of the President's Budget in early February and is expected to culminate in early FY 2017 with an enacted appropriation bill. As was expected, a Continuing Resolution was passed in September, which authorizes the USPTO to spend fee collections after the beginning of the fiscal year for a specified period of time absent a full year appropriation. However, as with most years, the Continuing Resolution authorized spending at the previous year's level. While Congress is reacting to the FY 2017 President's Budget, the USPTO is formulating its input for the FY 2018 President's Budget. For FY 2018, because of the upcoming Presidential election, the USPTO has not yet provided formal input to the Office of Management and Budget (OMB). However, the USPTO has nonetheless formulated its budgetary requirements for FY 2018 and communicated them to the PPAC and Department of Commerce.

C. FINANCIAL OPERATIONS REVIEW

1. Budget And Initial Forecasts

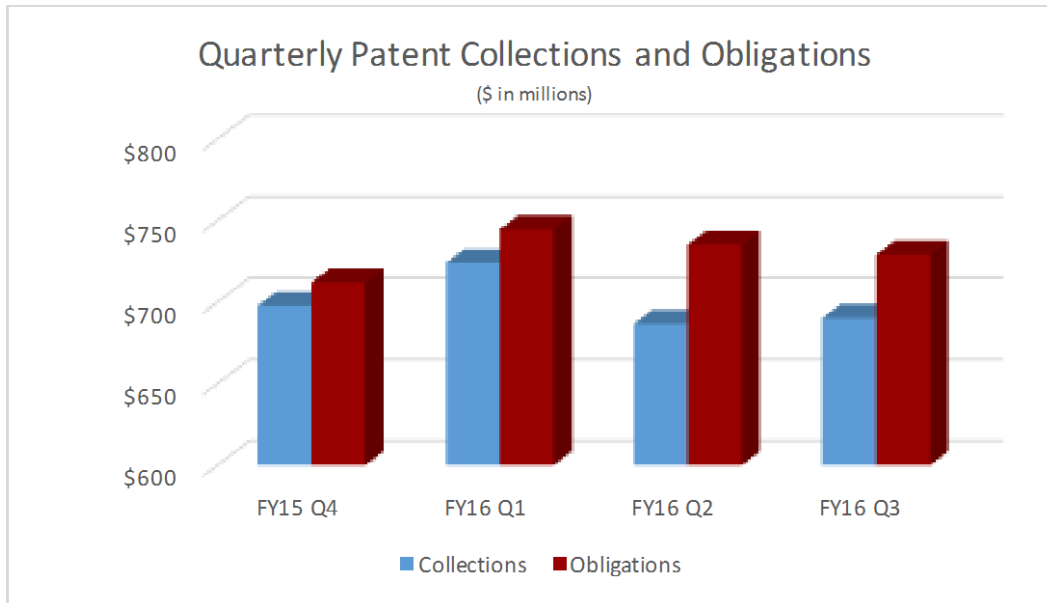
The Consolidated Appropriations Act of 2016 was signed by the President on December 18, 2015 and provided the USPTO with \$3.27 billion of funding, for both patents and trademarks, for FY 2016 as requested by the USPTO. (Prior to December 18, 2015, FY 2016 funding had been authorized by a Continuing Resolution.) The FY 2016 appropriation did not place any new restrictions on the USPTO, and the Act provided that funds collected in excess of the appropriation would be deposited in the PTFRF. The USPTO did not deposit funds in the PTFRF at the end of FY 2015, and therefore there was no need to send a reprogramming notification to Congress at the beginning of FY 2016 as had been done in the previous fiscal year. Further, the USPTO did not have a need to deposit funds into the PTFRF at the end of FY 2016.

As of December 31, 2015, the USPTO forecasted, for FY 2016, patent fee collections of \$2.79 billion and patent expenditures of \$2.89 billion which would have resulted in a year-end Patent Operating Reserve of \$318.6 million.

2. FY 2016 Results to Date and Updated Projections

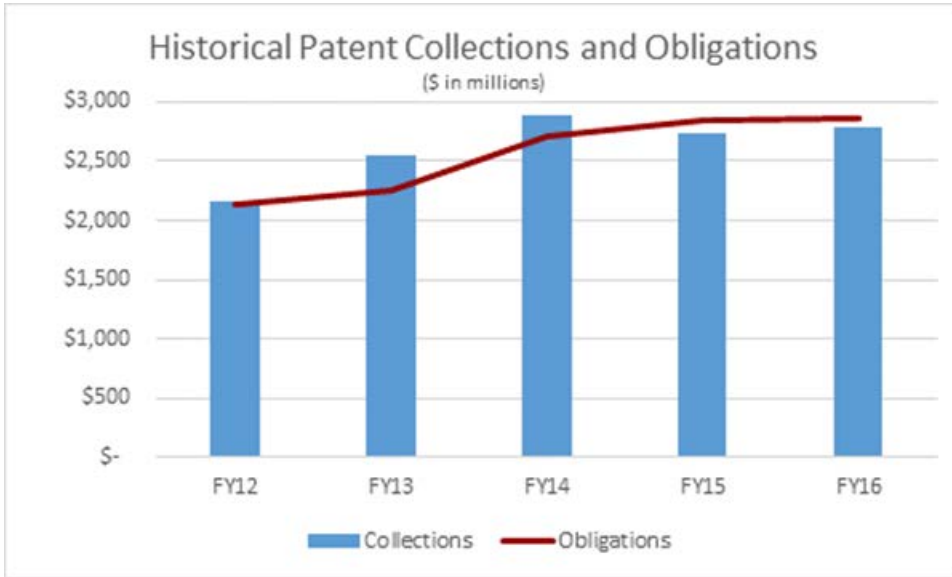
Fee collections ended the year relatively consistent with the forecast. As of September 30, 2016 patent fee collections were \$2.78 billion, 0.06% below the level planned. This represents a 1.86% increase from FY 2015, although still below the record collections of

FY 2014. Underlying the FY 2016 growth in collections is a 5.11% increase in total annual UPR (utility, plant, and reissue) patent application filings. But a large share of this growth is in RCE filings which grew by 13.57% as discussed in more detail elsewhere in this Report. The remaining, “serialized,” filings only grew by 1.65%. The spike in RCEs is focused on the art units most affected by the *Alice* and *Mayo* decisions where uncertainty in the law leads to prolonged prosecution.



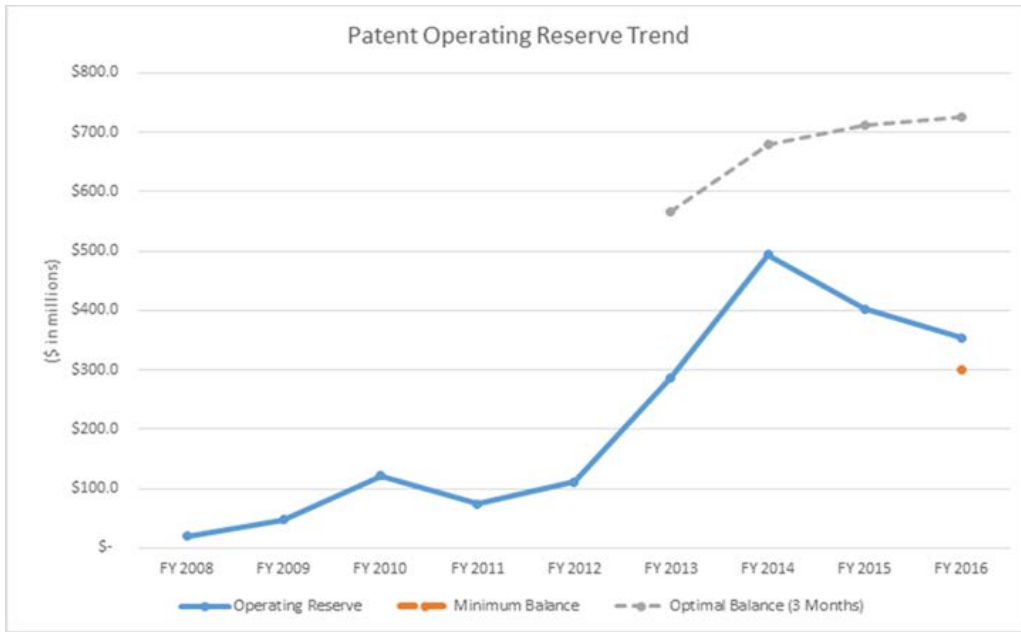
The above chart shows quarterly patent collections and spending from July 1, 2015 to June 30, 2016. On the patent spending side, as of the end of the fiscal year, the USPTO had spent \$2.87 billion, using patent fees and other income, very close to projections. The Patent Operating Reserve dipped from \$402.6 million to \$354.2 million over the course of FY 2016.

3. Long-Term Budget Trends



Important trends become apparent by reviewing revenues and spending over a 5-year period as noted in the above chart. While FY 2012 through FY 2014 show continued rapid growth in collections, collections declined in FY 2015. FY 2016 fee collections increased by 1.86% over FY 2015, but it is large part due to both the substantial jump in RCE filings and the increase in maintenance fees collected. Furthermore, fee collections for FY 2016 were still less than in FY 2014.

On the spending side, growth is flattening but it is of concern that both FY 2015 and FY 2016 show spending requirements as greater than fee collections, which supports the need for adjusted fees. In FY 2015, the shortfall was addressed by drawing from the Patent Operating Reserve and again in FY 2016, the Patent Operating Reserve is being tapped. Although the FY 2016 withdrawals from the Patent Operating Reserve were lower than what was planned in the FY 2016 budget, over a two-year period, over \$150 million will have been drawn from the Patent Operating Reserve.



The USPTO management is well aware of these trends shown above, and had projected that without reductions in planned spending, the Patent Operating Reserve balances would become dangerously low by the end of FY 2017. Recognizing that spending at planned levels was unsustainable, the USPTO determined it would be financially prudent to prioritize agency spending across multiple years and establish a minimum Patent Operating Reserve level of \$300 million for patents in FY 2016 and FY 2017 to mitigate the risks of uncertain fee levels, with the expectation that the Patent Operating Reserve would eventually grow to the optimal level of three months' worth of budgetary requirements. The USPTO also established an Operating Reserve Policy, which requires the agency to reassess its financial risks on an annual basis and establish an appropriate operating reserve minimum for a two-year planning horizon that ensures core operations are shielded from potential disruptions.

In the first quarter of FY 2016, the agency undertook a holistic and comprehensive review of USPTO spending, bringing together leaders from across the Agency to help identify and prioritize spending, while at the same time ensuring the USPTO has the healthy foundation it needs to effectively carry out the agency's mission. In implementing this decision, the USPTO placed high priority on financing its fixed operating costs – such as paying for on-board staff, production, and operating requirements – and strategically focusing its investments in improvement initiatives. This included initiatives that required continuous long-term, stable funding during FY 2016 and FY 2017; e.g., patent quality and pendency, international work sharing, PTAB operations and trial activities, and IT related to these improvements. The USPTO also prioritized funding needed to complete IT investments currently bearing the high cost of

maintaining legacy systems. Similar principles guided the USPTO as it reviewed and revised FY 2017 spending requests and FY 2018 budget proposals during the summer of 2016. The PPAC commends the USPTO for proactively managing its budget and prioritizing key needs.

D. BIENNIAL FEE REVIEW AND FEE SETTING

The USPTO is currently engaged in the fee setting process following a fee review that began in FY 2015. The fee review process began with an internal review of the USPTO's long-term needs for revenue to support a world-class examination capability and successful execution of critical long-term initiatives. Having decided that revised fees were justified, Director Lee communicated a new patent fee adjustment proposal to the PPAC on October 27, 2015. The PPAC's statutory role in the fee setting process is to solicit public input, hold a public hearing, and issue a report reflective of public input and its own views. Accordingly, after a public comment period, the PPAC held a public hearing on November 19, 2015 and issued its report on February 29, 2016. On October 3, 2016, the USPTO issued an NPRM inviting public comment on a fee adjustment proposal similar to what was proposed in October 2015, but including some key changes to address issues raised in the PPAC report. After receiving public comment on the NPRM, the USPTO will issue a rule to put new fees into effect. It is expected that the revised fee structure will go into effect in August 2017.

The USPTO fee proposal of October 2015 included increases to many patent fees including filing fees, search fees, examination fees, post-allowance fees, patent trial and appeal fees, but not maintenance fees. The specific decisions as to which fees to raise, and by how much, were driven by internal analysis of the cost of providing service as well as a notion that when set appropriately, higher fees could beneficially influence applicant behavior. The public input mainly focused on whether individual fee increases made sense rather than the appropriateness of increasing the total amount of collections that the USPTO receives from the user community.

In its report, the PPAC was supportive of the USPTO's need for higher fee income to fund operations, complete long-overdue modernization of the IT infrastructure, and continue quality initiatives. The USPTO must have adequate resources to attract and retain a skilled workforce and continue the costly upgrades of its IT infrastructure. The USPTO also requires adequate income to fund both its current operations and a sufficiently large operating reserve to protect against short term fluctuations in revenue. This perspective is consistent with the broad support in the stakeholder community for a well-funded USPTO.

Reflecting both public input and its own conclusions, the PPAC questioned some of the specific choices of fees to increase and by how much. For example, the PPAC was concerned that the increases to RCE fees were excessive and reflected an exaggerated view of the degree to which the need to file an RCE is driven by applicant behavior. The PPAC also questioned a new model for late Information Disclosure Statement (IDS) submissions that would no longer require certification that a reference was newly discovered but instead would impose high fees for prior art disclosed after a first action on the merits. On the one hand, the proposed higher IDS fees seemed unfair to applicants who are being as timely as feasible in bringing relevant art to the attention of the USPTO. On the other hand, some applicants may willingly incur the fee for late submission in the hope that relevant art will be subject to a more cursory review after a first action on the merits.

Although suggesting some areas for further thought, stakeholders and the PPAC were generally supportive of the increases to the fees for post-grant proceedings. Regardless of the USPTO fees, effective advocacy in an IPR, PGR, or CBM review is expensive. It is very important for the PTAB to have sufficient resources for a timely, high quality process of review and adjudication.

The recent NPRM reflects careful consideration of the input that was received from the PPAC and the public. The original proposal to PPAC includes 25% and 18% increases for the fees collected for first and second RCE requests respectively. The NPRM greatly reduces the magnitude of these increases to 12% and 8% respectively and eliminates the USPTO's initial proposal to remove the certification requirement for late submission of prior art. Instead, the NPRM proposes an increase of 33% or \$60 for the submission of an IDS after a first action on the merits and before a notice of allowance. Although the NPRM did not address every issue raised by the PPAC, it reflects careful consideration of the input received from the PPAC and other stakeholders. The PPAC applauds the care taken in operating an open and transparent process for considering patent fee changes. The USPTO is uniquely situated to accurately project its own financial needs and consider stakeholder interests in setting appropriate patent fee levels. The PPAC looks forward to implementation of a new fee structure as planned for in August 2017 that will serve as a solid financial basis for the USPTO's role in the country's intellectual property strategy.

Recommendations:

A. Extend Fee Setting Authority

The fee setting authority provided by the AIA is currently scheduled to sunset in September 2018. Along with all significant stakeholders, the PPAC believes that it

should be made permanent. The USPTO is in the best position to assess its need for revenue and the impact of fee adjustments on the patent system. In the current fee setting process, the USPTO has demonstrated its openness to receiving and considering input from stakeholders and the PPAC. Aside from the fee setting process, the USPTO has acted as a model agency in accepting external input provided by the recent GAO and Inspector General reports and committing itself to proactively addressing the issues that were raised. The extensive budgetary review that was undertaken in FY 2015/2016 shows that the USPTO is a careful steward of the funds that it collects.

The PPAC believes that the USPTO has been responsible in proposing increased fee levels to support improvements in quality, pendency, and IT infrastructure. Further evidence that the USPTO does not exaggerate its needs when proposing fees is the reduction in trademark fees in FY 2014.

B. Continue Stable Appropriations

Successful execution of long-term initiatives requires stable funding. Short term reductions in funding of IT and quality initiatives can only lead to higher spending to achieve the desired outcomes in the long run. The issues raised in the GAO report concerning patent quality and the infrastructure needed to support higher quality examination can only be addressed with adequate resources. The PPAC further supports continued stable appropriations to authorize the USPTO to spend its collected funds and recommends that Congress authorize the USPTO to spend at the level requested by the President's Budget for FY 2017. The PPAC encourages the next Administration to respond favorably to the USPTO's requests for FY 2018 spending. Because it is funded by user fees, the USPTO should be insulated from any interruptions in funding as would be caused by sequestration. Ultimately, the PPAC supports removing the USPTO from the federal appropriation process entirely and granting it more complete autonomy in both collecting and using fees.

C. Move Forward with Targeted Fee Increases to Fund Key Priorities

The USPTO should move forward with its fee setting process to assure that it has the revenue needed to fund operations and critical long-term initiatives. Although the PPAC and other stakeholders critiqued individual fee adjustments that were initially proposed in October 2015, the USPTO should nonetheless be confident in moving forward with a package that raises fees in the aggregate. The recent NPRM addresses some key concerns with the initial proposal and the PPAC looks forward to a final rulemaking that facilitates collection of adequate revenue in the coming years.

D. Plan Long-Term Expenditures Cautiously

Even with a planned fee increase, given the inherent uncertainty of the USPTO's long-term income, it is critical that the USPTO continue to be cautious in making financial commitments. Given the continued pressures on the patent system including uncertainties in § 101 jurisprudence and concerns about patent litigation, it would be imprudent to assume that historical filing growth will return. One would hope that the growth in RCE filings in FY 2016 will not persist but a realistic view is that the slow to flat growth in serialized filings may turn out to be a long-term trend.

The USPTO should continue to fund the most impactful long-term initiatives to improve quality and modernize its IT infrastructure. Particular attention should be paid to initiatives that result in making commitments to long-term non-discretionary funding such as adding head count. The USPTO should also continue initiatives that reduce costs now such as employee telework. Being prudent now can help insulate important but discretionary initiatives in the event of income volatility.

The PPAC continues to be wary of the impact of potential future USPTO participation within a shared services model for functions such as HR and IT within the Department of Commerce. From a financial perspective, the shared services model raises the prospect of USPTO user fees effectively subsidizing other agencies. The stakeholder community is concerned that implementing the shared services model will negatively impact the effectiveness of USPTO functions while diverting user fees to other government functions.

IV. PATENT TRIAL AND APPEAL BOARD

A. INTRODUCTION

The AIA established the Patent Trial and Appeal Board (PTAB or Board) on September 16, 2012. The Board's responsibilities include: reviewing adverse decisions from examiners upon applications for patents pursuant to 35 U.S.C. § 134(a); reviewing reexamination appeals pursuant to § 134(b); conducting legacy interference proceedings pursuant to pre-AIA § 135; conducting derivation proceedings pursuant to § 135; and conducting covered business method (CBM) patent reviews, IPRs, and post-grant reviews (PGRs) pursuant to 18 of the AIA and chapters 31 and 32 of Title 35, United States Code.

B. BOARD STAFF

As of the end of FY 2016, the Board includes 272 judges, with judges located at each of the regional offices. More specifically, the Dallas office has 13 judges, the Silicon Valley office has 22 judges, the Denver office has 15 judges, and the Detroit office has

10 judges. The placement of these regional offices around the country has expanded the ability of the Board to employ qualified individuals to meet the workload faced by the PTAB.

C. EX PARTE APPEALS

The backlog of ex parte appeals pending at the Board stands at 15,448 appeals as of September 30, 2016. The backlog averaged about 18,784 appeals for the year. The backlog trend has exhibited a significant downward trajectory for the year, with the peak reaching 21,543 appeals in October 2015 and decreased to a backlog of 15,448 appeals at the end of FY 2016.

The Board has affirmed or affirmed-in-part 70%, reversed 29%, and remanded or dismissed about 1% of the examiner's decisions. These statistics are consistent with the affirmance, reversal, and remand/dismissal rates of previous years.

The Board continued to consider different pilot programs to decrease the ex parte backlog and to provide expedited review to certain stakeholders. An “Expedited Patent Appeal Pilot” program initiated on June 19, 2015, for example, provided special status to an appeal when another pending appeal from the appellant was withdrawn. This program expired on June 20, 2016, as it was not significantly used by stakeholders because many did not want to abandon one appeal in favor of another appeal. Separately, a “Small Entity Pilot Program,” which started on September 16, 2015, provided an opportunity for small entities to secure expedited review for small entities that had a single pending appeal. Although supported by the PPAC and touted at the PPAC meetings and PTAB outreach events, this pilot program expired on September 16, 2016, due to low participation in the program by stakeholders.

D. AIA PROGRESS

As of September 30, 2016, the Board had received a grand total of 5,680 petitions since the inception of the AIA: 5,143 IPR proceedings, 476 CBM proceedings, 37 PGR proceedings, and 24 derivation proceedings. The majority of the petitions continue to be in the electrical/computer software area. In particular, the petition filings by area of technology since the inception of AIA trials have been: 59% electrical/computer software; 25% mechanical; 9% biotechnology/pharmaceutical; 6% chemical; and <1% design. With respect to IPR, CBM, and PGR petitions filed, patent owners have submitted 4,051 preliminary responses and waived their rights to submit a preliminary response in 754 cases. In addition, 440 petitions have been settled in FY 2016. The PPAC is pleased with the patent owner's usage of preliminary responses, waivers, and settlements because these options were not available in ex parte and inter partes

reexamination proceedings. Lastly, the PTAB has issued 1,214 final written decisions in IPR proceedings, 143 in CBM proceedings, and 3 in PGR proceedings.

The PTAB continued to be busy in FY 2016, receiving a peak of 1,683 IPR/CBM/PGR petitions in FY 2016. A comparison of the number of PTAB petitions to district court filings involving patent litigations in 2016 highlights this point. The PTAB received 1,683 petitions from October 1, 2015, to September 30, 2016. By contrast, in all of FY 2016, 1,920 complaints were filed in the Eastern District of Texas, 465 in the District of Delaware, 319 in the Central District of California, and 185 in the Northern District of California. The number of PTAB filings in FY 2016 thus puts the PTAB ahead of all but one of the federal district courts in terms of patent disputes that they are handling.

More PTAB data and statistics are provided on the USPTO PTAB webpage.

E. PTAB OUTREACH

The PPAC commends the PTAB for its outreach efforts in FY 2016. In particular, the PTAB hosted:

- A program on Ex Parte Appeals and AIA Trials in the USPTO's Dallas satellite office on January 7, 2016;
- PTAB Stadium Tours beginning on February 24, 2016, where actual PTAB proceedings, including live AIA trials, were held in four law schools in 2016, including at Southern Methodist University in Dallas and Emory Law School in Atlanta in February, and University of Missouri and University of Utah in March;
- A "Boardside Chat" webinar about the new AIA Trial Rules on April 26, 2016;
- An AIPLA/USPTO PTAB Bench and Bar Conference on June 15, 2016;
- A "Boardside Chat" webinar on June 23, 2016, to demonstrate a new e-filing system known as PTAB E2E; and
- A "Boardside Chat" webinar on July 27, 2016, to answer questions on PTAB E2E.

The continued outreach by the PTAB has been favorably received by stakeholders. The outreach provides a valuable two-way conduit for the constructive flow of information to and from the PTAB, thus the PPAC recommends continued outreach by the Board.

F. PTAB RULEMAKING

In FY 2016, the USPTO completed a review of the initial PTAB rules that went into effect on September 16, 2012. This review started in June 2014, with the USPTO's request for comments of its AIA trial proceedings in a Federal Register dated June 27, 2014. The Federal Register notice included two parts, one directed to non-rule comments; and a second directed to 17 questions posed by the PTAB to elicit feedback with respect to certain AIA trial rules directed to, among other things, claim construction, claim amendment practice, and patent owner preliminary responses.

The USPTO took a two-step approach in responding to the 37 comments received in response to the June 27, 2014 Federal Register notice. The USPTO referred to the first step as "quick fixes" to the PTAB process. These quick fixes included providing an additional ten pages for a patent owner's motion to amend, allowing a claims appendix in a motion to amend that did not count toward the page limit, and providing an additional ten pages for a petitioner's reply brief. These quick fixes were favorably received by the IP stakeholder community.

The USPTO's second step in response to the June 27, 2014 Federal Register notice was to provide more substantive proposed rule changes. In a Federal Register notice dated August 20, 2015, the PTAB proposed more substantive changes. These changes became effective on April 1, 2016, and had the following effect:

- Allowed new testimonial evidence to be submitted with a patent owner's preliminary response;
- Added a Rule 11-type certification for papers filed in a PTAB proceeding;
- Allowed a district court-type construction approach for claims of patents that will expire before entry of a final written decision; and
- Replaced the current page limit with a word count limit for major briefing.

The PTAB also considered a separate proposed pilot program to consider alternative approaches to PTAB institutions decisions. The goal of that pilot program was to increase efficiency at the institution stage by initially assigning a single PTAB judge to a petition instead of the three judge panels, as is currently practice. The USPTO decided not to implement this pilot program after receiving feedback from the stakeholder community.

In addition to changes to the trial rules, the PTAB issued 7 precedential opinions this year addressing issues arising in AIA trials. Several of these opinions address matters of PTAB practice and set binding precedent for handling of procedural matters in PTAB

trials. Other opinions address matters of statutory interpretation and correspond to cases of first impression.

G. PTAB MOTION TO AMEND CLAIMS

The PTAB published a Motion to Amend study (“Study”) based on its analysis of motions to amend claims requested in IPRs, CBMs, and PGRs as of April 30, 2016. Of the 4,850 total petitions filed, 1,539 had been instituted and completed trials, and patent owners filed a motion to amend in 192 of those trials. The Study noted that the often publicized six granted motions to amend did not account for 39% of the requested motions (74 of the 192 completed trials) where:

- The patent owner requested solely to cancel claims (17 or 9%);
- The motion was rendered moot because the panel of judges found the original claims patentable (16 or 8%); and
- The motion was not decided because the case terminated prior to a final written decision (41 or 21%).

The Study further demonstrated that 58% of the motions were denied because of prior art, a number that includes 41 cases decided on anticipation or obviousness alone and another 24 cases decided on the basis of multiple reasons that include obviousness. In addition, the Study revealed that 15% of the motions failed for substantive reasons (e.g., deemed unpatentable under 35 U.S.C. §§ 101 or 112), and that another 8% of the motions failed for more formal issues (e.g., under 35 U.S.C. § 316 because the motion proposed an unreasonable number of substitute claims or attempted to enlarge the scope of original claims). Although certain metrics are not reassuring for patent owners, they do highlight that some patent owners are not satisfying procedural requirements when requesting PTAB claim amendments. In response to this concern, the PTAB published additional information in a Director’s blog on Monday May 5, 2014, on how to properly request a PTAB claim amendment (“USPTO Message From PTAB: How to Make Successful Claim Amendments in an AIA Trial Proceeding”).

Recommendations:

The PPAC applauds the PTAB for the work it has done since the passage of the AIA. As evidenced by the record, there have been more than 5,500 petitions since the PTAB proceedings went into effect in 2012. In FY 2016, 1,696 petitions were filed. These petitions are often directed to patents in corresponding litigation so the importance of these PTAB proceedings remains critical to stakeholders. The PTAB proceedings took on an additional layer of scrutiny in FY 2016 as the U.S. Court of Appeals for the Federal Circuit and U.S. Supreme Court rendered critical decisions in the PTAB space. Moreover, Congress has been closely following PTAB developments and has held hearings on patent reform where proposed changes to the USPTO's PTAB rules were hotly debated. The PPAC recommends that the PTAB remain vigilant in rendering its decisions and continue its positive outreach efforts to educate the stakeholder community on important developments in the PTAB area.

The PPAC continues to hear concerns from stakeholders with respect to the PTAB only granting six motions to amend claims in PTAB proceedings. The courts have had an opportunity to change the standard for claim construction in the PTAB proceedings but have decided not to do so. However, the USPTO can rectify this problem by providing a more liberal claim amendment process as many stakeholders expected when the AIA went into effect. The rationale for the broadest reasonable interpretation claim standard at the USPTO is that the patentee can amend claims during the PTAB process; however, such amendments are not allowed in a corresponding litigation in a district court. A more liberal claim amendment practice would further balance the PTAB process in favor of patent owners where there is at least a perceived bias in favor of petitioners by stakeholders.

The PPAC supported the motion to amend study conducted by the PTAB as described above. The PPAC recommends that the PTAB continue to update its statistics on its claim amendment decisions and to periodically update stakeholders.

The substantive PTAB rules changes that went into effect in FY 2016 were a positive step forward. For example, an important aspect of the substantive rule changes gave the patent owner the right to file a newly prepared expert declaration in the patent owner's preliminary response; prior to this change, the petitioner had the right to submit such declaratory evidence but the patent owner did not have such opportunity as of right. This change makes the PTAB process more balanced. The PPAC recommends that the PTAB continue to review proposed rule changes to continue to hone the efficiency and fairness of the PTAB process.

The PPAC recommends that the PTAB conduct a comprehensive review of all its post grant proceedings including not only the AIA PTAB proceedings, but also reissue and ex parte reexamination proceedings. Such a review would allow the USPTO to determine whether any petitioners are trying to obtain “two bites at the apple” in filing, for example, both an IPR and ex parte reexamination on the same patent. Such a review would also be helpful to better understand how the USPTO is dealing with such overlapping proceedings, whether, for example, the PTAB is staying a related ex parte reexamination request when a corresponding IPR has been filed on the same patent. Moreover, the PPAC recommends that the PTAB engage the USPTO’s IT department to ensure it has IT support to conduct such an analysis as a manual review is likely difficult and time consuming.

The PPAC recommends that different departments in the USPTO more readily share information about a patent family that is undergoing prosecution. For example, if a patent is subject to an IPR or reexam proceeding, an examiner reviewing a continuation patent application that claims priority to the subject patent involved in the IPR or reexamination proceeding should at least be aware of this and review any new prior art references cited in the IPR or reexamination proceedings.

The PPAC applauds the USPTO’s deployment of its new PTAB E2E IT system on July 11, 2016, to replace the basic filing system deployed on September 16, 2012. The PPAC was encouraged that a PTAB outreach program included a Boardside webchat for stakeholders on July 27, 2016, to answer questions with respect to the PTAB E2E. The PPAC recommends that further enhancements be made to the PTAB E2E to allow stakeholders to search the database to find recent decisions on important areas of the PTAB process including PTAB claim amendments, joinders, and discovery.

The U.S. Supreme Court’s *Cuozzo Speed Techs., LLC v. Lee*, decision held, among other things, that a petitioner did not have a right to appeal a PTAB’s decision denying institution. It is also noted that a significant majority of petitioner’s requests for reconsideration of institution denials are denied by the PTAB. The PPAC recommends that the PTAB continue to review how such petitions for reconsideration are being handled by the PTAB and to make results public. The mechanisms for this reconsideration are not clear, i.e., if they are reviewed by the same three judge panel that rendered the initial denial, or by a different judge or panel of judges. Such a review process by the same panel might be considered fruitless by stakeholders. The PTAB may want to consider using an expanded panel of judges to review such denial of institution decisions.

With respect to AIA statistics, the PPAC recommends that the USPTO continually update stakeholders with the latest and most accurate AIA statistics. These statistics are a valuable tool in making decisions regarding whether to take certain actions during a PTAB proceeding, such as, filing a patent owner preliminary response or filing a claim amendment.

The PPAC recommends that the USPTO continue to evaluate the administrative process of the PTAB proceedings, educate the stakeholder community on current developments and make improvements in the process consistent with the AIA. Some stakeholders continue to believe that the PTAB proceedings unduly favor petitioners while others believe that the proceedings are fair. In fact, in FY 2016, there has been significant debate in Congress with respect to the fairness of the IPR proceedings. The PTAB roundtables, Boardside chats, and rule changes have helped to address stakeholders' concerns, but the USPTO needs to remain vigilant in this regard. In this regard, the PPAC has recently received requests from stakeholders that additional guidance be provided with respect to motions for joinder and separately, recommendations to patent owners to help them respond to 35 U.S.C. § 103 obviousness rejections. The USPTO may want to consider including a discussion of these two points in a Boardside webchat or in a blog from the PTAB.

The PPAC recommends that the PTAB update the PTAB Trial Practice Guide based on the substantive rule changes and latest PTAB decisions.

The PPAC applauds the efforts of the PTAB to make more PTAB decisions “precedential” as stakeholders believe that will lead to more consistent PTAB decisions across different PTAB panels and result in more consistent decisions from the Patent Examining Corps.

The PPAC also applauds the PTAB for the significant drop in ex parte appeals to the Board in FY 2016, from a high of 21,543 appeals in October 2015 to a low of 15,448 appeals in September 2016. This drop was based on PTAB's continued focus on decreasing the backlog in the ex parte appeal area.

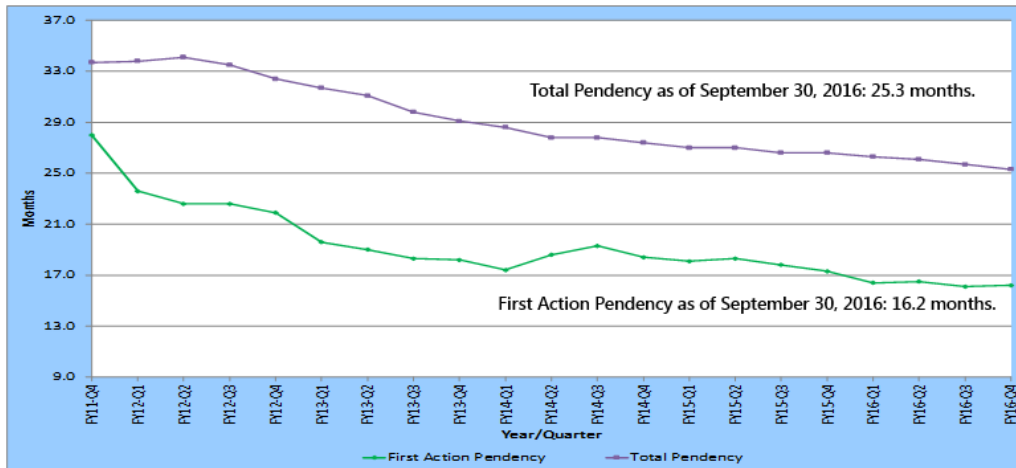
V. PATENT PENDENCY

A. INTRODUCTION

The PPAC and patent stakeholder community consider patent pendency to be second only to patent quality. As laudable though the USPTO's conviction to drive pendency down might be, it is paramount that the quality or durability of an allowed patent is assured.

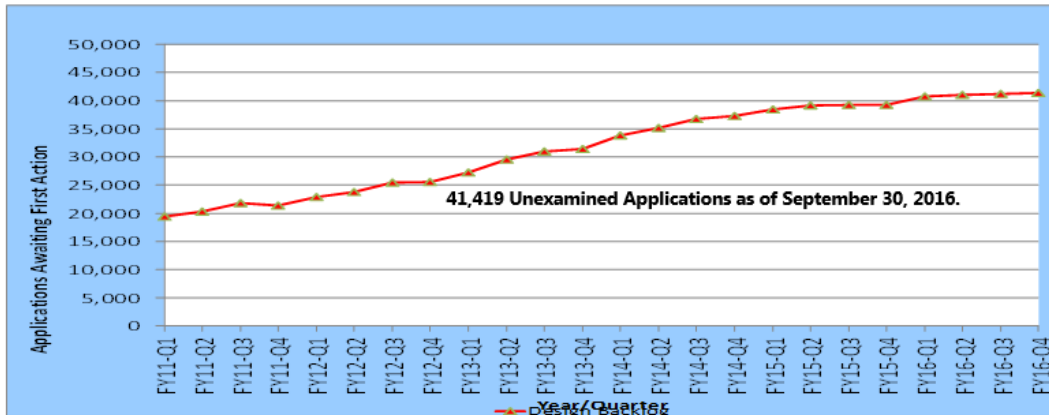
In FY 2016, the average first action pendency decreased from 17.3 months to 16.2 months (about 4.8 weeks), and the average total pendency decreased from 26.6 months to 25.3 months (about 5.6 weeks). The chart below shows the history of both these measures through June 30, 2016.

First Action Pendency and Total Pendency FY 2011 – FY 2016

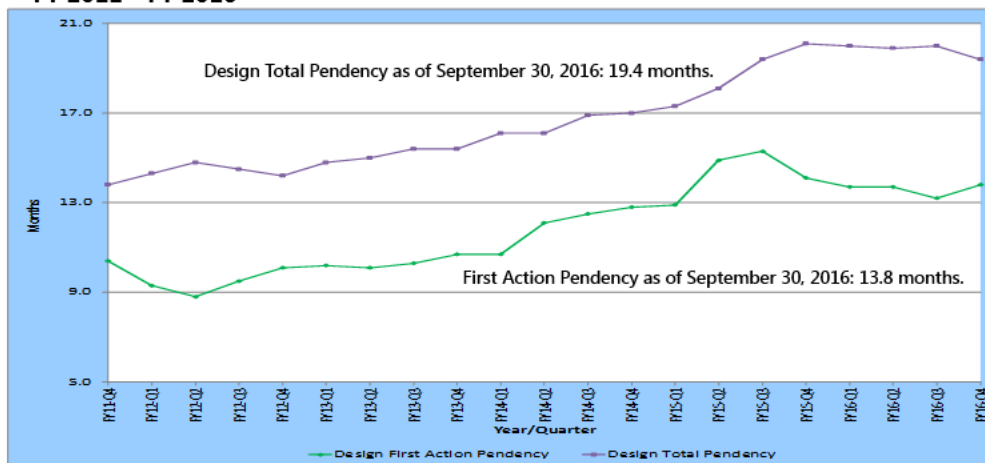


With respect to design applications, 29,990 applications were received through June 30, 2016. Total pendency during FY 2016 was, as of June 30, 2016, 20 months; and first action pendency for the same period was 13.2 months. In comparison, total design application pendency in FY 2015, through July 2016, was shorter at 19.6 months, but first action pendency was longer at 14.6 months. Separately, design unexamined application inventory grew from 39,635 as of July 2015, to 41,230 as of June 30, 2016. For reasons not apparent to the PPAC, these data points indicate slight volatility in the pendency of design applications and unexamined application inventory, but not to any level of concern. As with pendency in general, however, the PPAC encourages the USPTO to continue its efforts both to reduce design application pendencies and unexamined application inventories at a sustained and consistent rate.

Design Unexamined Application Inventory FY 2011 – FY 2016



Design First Action Pendency and Total Pendency FY 2011 – FY 2016



While the USPTO is to be commended for the sustained decrease in both first action pendency and total pendency over the past four years, as reported last year, the PPAC strongly urges the USPTO to adjust its data points so that its metrics are more meaningful to the innovating community. Specifically, a meaningful measure of pendency would be from the date of filing the initial application for patent (i.e., serialized filings) to the date of grant or final abandonment of that serial number. Having clarity of that cycle time will allow the innovating business community to forecast its patent holdings, prepare budgets and plan for future filings, the revenues of which the USPTO would directly enjoy. Lastly, it is noted that tracking pendency consistent with the benchmarks established by the Congress in the American Inventors Protection Act (AIPA), as

discussed in Section B, “Determining Optimal Pendency,” below, and the inclusion of RCE pendency in the total pendency numbers reported will ensure consistency in reporting performance, and provide the innovating business community with meaningful information to be used for measuring and reporting regular application pendency.

B. DETERMINING OPTIMAL PENDENCY

Article I, Section 8, Clause 8 of the U.S. Constitution created the power to grant patents for the promotion of science and the useful arts, which was to in turn promote a strong U.S. economy. The PPAC believes the underlying basis for granting limited monopolies for non-trivial inventions and the requisite quid pro quo transaction price for that monopoly must remain the compass that directs all stakeholders.

Since the Leahy-Smith America Invents Act (AIA) took effect just four years prior to the date of this Report on September 16, 2012, patent quality has come under attack, which puts in question the quality of the USPTO’s performance. Separate but relatedly, patent pendency has become a significant economic issue for the innovation sector, especially those in the technology and life sciences sectors of our economy. As noted in the PPAC’s 2015 Annual Report, pendency levels are of paramount importance to those who pursue, invest in, or rely on patents to protect their innovations and company valuations, because the time spent obtaining patents can have a significant impact on the success and continued operation of small and growing businesses for which quality IP assets are critical to continued market funding.

A recent study titled “The Bright Side of Patents” and conducted by Harvard Business School and New York University (see, [USPTO Economic Working Paper No. 2015-5, December 2015](#))³, examined whether patents help startups grow and succeed. The results of the study was uplifting (hence, the bright side of patents), finding that “patent approvals help startups create jobs, grow their sales, innovate, and reward their investors.” In contrast “exogenous delays in the patent examination process significantly reduce firm growth, and job creation, even when a firm’s patent application is eventually approved.” The study’s results suggest that “patents act as a catalyst that sets up startups on a growth path by facilitating their access to capital.” *Id. at 3*. The causal estimates that the grant of a startup’s first patent increases employment growth over the next five years by an average of 36%, impacts sales growth by about 51%, increases a startup’s ability to continue innovating, and the number of patents the firm is granted by 49%. And, for a

³ The views expressed in the working paper “do not necessarily reflect official positions of the Office of Chief Economist or the [USPTO]. The [paper is] preliminary research being shared ... with the public in order to stimulate discussion, scholarly debate, and critical comment.” USPTO Office of Chief Economist, www.uspto.gov/economics.

common metric of startup success – whether it lists on a stock exchange – early first patent grants more than doubles the probability of listing.

In contrast, every year of delay in the patent approval process reduced a company's employment growth by 21% and sales growth by 28%. Delays also negatively impact subsequent patenting – with each year of delay reducing the number of subsequent patents granted to the firm by 14%. And the probability of a company going public can be reduced as much as 50% for each year of delay. “Economically, a two-year delay has the same negative impact on a startup's growth and success as outright rejection of the patent application.” Given that most nascent companies make or break within the first five years of business, the risks are high.

In terms of securing external financing, the study suggests that a grant of a patent increases a startup's probability of securing funding from venture capitalists (VC's) over the following three years is increased by about 53% over the unconditional probability. Clearly, access to funding puts startups on a growth path where products and services come to fruition, which then generate jobs, revenues, and more innovations. *Ibid.*

It is noted that the USPTO's overall goal for patent pendency for FY 2016 is 14.8 months for first action pendency and 25.4 months for total pendency, which would shorten the first action pendency by 2.5 months (approx. 11 weeks), and total pendency by 1.2 months (5.2 weeks) as compared to FY 2015 metrics. As previously mentioned, however, the average total pendency that does not factor in the eventual patent grant date, or final rejection date in an RCE, or RCE pendency if RCE requests are filed, has little meaning or value to the innovating business community, since the salient metric is the disposition date, i.e., either the patent grant date or final abandonment date.

The PPAC also believes a focus on the targets established by Congress in the American Inventors Protection Act (AIPA) has a number of benefits, including a reduction in the amount of patent term adjustment (PTA) granted in patents. The PTA provisions of the AIPA set up examination timeframes referred to as the “14-4-4-4-36” benchmark, defined as: (1) issue a first office action on the merits within 14 months from the filing date; (2) respond to an applicant's reply to a rejection or appeal within four months of receipt by the USPTO; (3) act on an application within four months of a decision by the Board of Patent Appeals and Interferences (now “PTAB”) or the federal courts; (4) issue a patent within four months from the payment of the issue fee; and (5) issue a patent within 36 months from the filing date.

Related to the pendency issue is the routine issuance of patent term adjustments, PTAs. One way of looking at the PTA is that it is the equity granted a patent holder because of prosecution backlogs or delays. Because transparency and increased certainty assist

agencies and the public, focusing on reducing PTA is a good approach and also good public policy. These congressionally-mandated timeframes target most timeframes of prosecution and would help drive the examination of most applications. Prioritizing the examination of applications based on the amount of PTA that would accrue would ensure handling of all applications without allowing the targeting of any area or type of application while other applications are allowed to develop significant backlogs as occurred with the RCEs. These AIPA targets also would provide greater certainty to applicants and the public for actual expectations on examination timeframes, as from a business standpoint, many applicants would prefer a shorter examination cycle time on the front end than an adjustment on the patent term on the back end. Granting PTA should be the exception, not a routine event. An overall focus on reducing the amount of PTA is urged.

C. UNEXAMINED PATENT APPLICATION INVENTORY

Members of the PPAC continue to support the appreciable reduction of the unexamined patent application inventory. At the end of FY 2015, the unexamined patent application inventory was 553,221 applications. FY 2016, through September 30, 2016, is lower at 537,655 applications; a reduction of 15,566 applications. The USPTO's 2019 target is 385,500 unexamined applications. The PPAC notes that a significant number of cases needs to be removed from the backlog and recommends that the USPTO remains focused on this reduction. Notwithstanding and as recommended last year, in addition to reducing the backlog of applications, a focus should be maintained on reducing the age of the applications in the backlog to examine the applications in order but also focus on reducing any grants of PTA.

D. PENDENCY INITIATIVES

The USPTO has several initiatives in place or soon to be in place that are focused on improving patent quality, which efforts should also help improve patent pendency, including the following:

- Track One (Prioritized Examination)
- Post Grant Outcomes Pilot

The PPAC commends the USPTO for its Track One (Prioritized Examination) initiative. There are businesses, investors, and inventors within the innovating community that make business decisions (including R&D, more patent application filings, hiring, and capital equipment expenditures) based in part on the ability to protect their inventions. For FY 2016, the USPTO's goal was 12 months from petition grant to allowance under

Track One. As of September 30, 2016, petition grant to allowance under Track One is 6.6 months; well below the 12-month goal.

More specifically, the average time from filing of the petition to grant is 1.4 months, from petition grant to first action is 2.1 months, from petition grant to final disposition is 6.6 months, and from petition grant to allowance is 5.2 months. The USPTO implemented the program to grant up to 10,000 applications per year Track One status. Track One utilization has nearly reached this upper limit, further signifying the success and value of this program. The PPAC applauds the USPTO on this program's development and its successful implementation and believes the Track One Program should be made permanent, at least until the desired pendency and aging unexamined inventory levels are reached.

The USPTO announced a new patent quality initiative, the Post Grant Outcomes Pilot, that involves disclosure of IPR records from proceedings before the PTAB. Details of this initiative continues to develop, some of which were discussed at the PPAC Public Meeting in August 2016. In particular, if a patent is the subject of an IPR before the PTAB, the record from the IPR proceeding – including briefs, expert declarations, prior art references, etc. is provided to examiners with pending progeny applications on their docket. The PPAC believes that providing such examiners with prior art is appropriate and even encouraged. As discussed at the August 2016 PPAC Public Meeting, however, a concern about the appropriateness of providing examiners with adversarial arguments was raised. Other inquiries relating to consistency of outcomes by the PTAB and examination of progeny applications, a record in the progeny application prosecution history of what portion of the IPR record was considered by the examiner and on what date, and whether examiners would be allowed more time were also discussed at the Meeting. The PPAC appreciates that issues arise when sharing the IPR record with examiners on progeny applications. For example, disclosure of all relevant prior art can increase patent quality and consistency among the patent in IPR and its progeny applications, provided that the examiners are given proper training on what documents they are receiving and to understand that the IPR petition represents one biased view to be considered in the examination.

Perhaps the most significant issue for the PPAC is the USPTO's current process of not having examiners document in the record whether they accessed the IPR materials during the examination of the progeny application and exactly what was accessed and considered. The PPAC urges the USPTO to reconsider that process as it is imperative that applicants have a full and complete listing of all materials accessed and considered by the examiner. Not informing the applicant of this potentially critical information potentially deprives the applicant the ability to distinguish his/her invention from the

prior art or the third party adversarial materials. Furthermore, introducing third party adversarial materials, such as expert declarations and litigation-intended briefs into a mandated ex parte examination process might transform it into a quasi-inter partes proceeding to some extent. However, the PPAC supports the examiners receiving information from the IPRs but recommends that this program continue to be evaluated and improved during the pilot period with extensive stakeholders input.

The PPAC urges the USPTO to continue to investigate new avenues for ensuring patent quality while reducing pendency, including extending or making a permanent option, the Track One program. Importantly, as discussed in Sections A and B, above, the pendency metrics for regular applications can be more useful and informative if RCE pendency is added.

E. BETTER COMMUNICATIONS

Public Patent Application Information Retrieval (PAIR) provides invaluable data for the inventor or assignee to track progress when an application is examined. That said, for the amount of products and services processed by the USPTO, and given the existence of effective and user friendly tracking applications, the PPAC highly recommends the USPTO consider providing a tool that allows an applicant to pull up a list of all applications, perhaps by customer number and serial number, that could easily be accessed for the status of each application. This would allow applicants to stay informed as to the status of all of its pending applications in one place (Public PAIR requires individual searches for each matter) and facilitate better forecasting of its IP assets and budgets, as well as make more accurate valuations of its business for financial purposes.

Recommendations:

The PPAC reiterates its urging that the USPTO publish pendency data that actually reflects the entirety of time required from the date of filing to the time a patent grants or final abandonment as the case may be. Current traditional total pendency does not take into account the oftentimes very long period required for action on RCEs. And, the PPAC urges the USPTO to utilize available technologies to both provide stakeholders with timely and meaningful data, and provide the Patent Examining Corps with tools, technologies, and resources that will improve patent quality and reduce pendency at the same time.

The PPAC notes that reducing pendency in a vacuum brings little if any value to the patent holder if the patent granted lacks durability when challenged in post-grant proceedings before the PTAB or the courts.

The PPAC sees tremendous value in the Track One initiative where the petition grant to allowance cycle is 6.6 months. The PPAC also continues to urge the USPTO to appreciably reduce the unexamined inventory with an appropriate sense of urgency.

The PPAC, however, believes further evaluation of the details and process of sharing all information under the Post Grant Outcomes Pilot program submitted in IPR proceedings to examiners with progeny applications is mandated given the potential issues that can arise. As before, the PPAC looks forward to working with the USPTO to develop initiatives that couple patent quality and patent pendency. These steps must be closely tied to initiatives directed to improving patent quality, reducing pendency, and addressing the RCE backlog.

VI. REQUESTS FOR CONTINUED EXAMINATION

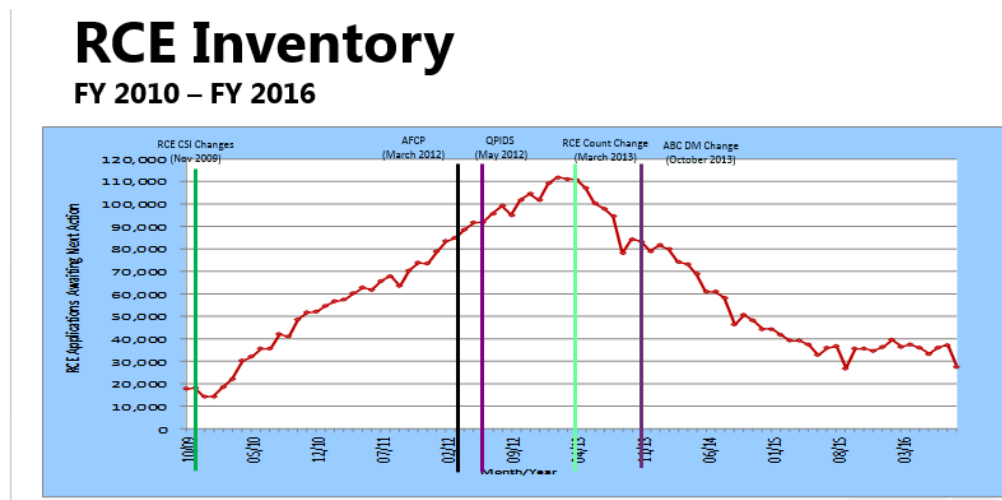
A. INTRODUCTION

The use of Requests for Continued Examination (RCEs) has become a significant factor in the protraction of the average length of total patent pendency, as perceived by patent applicants. Traditional total pendency as reported by the USPTO does not include RCE pendency. Widely viewed as undesirable, RCEs are now a routine, often unavoidable, measure to reach an allowance in the context of current compact prosecution. While the aim of compact prosecution—to ensure the final disposition of an application in a timely and efficient manner—is indeed laudable and serves the interests of multiple stakeholders across the patent system, its implementation has left the applicant with only a single opportunity to amend pending claims in response to a rejection before potentially facing a final rejection. Due to the increasing difficulty in reaching an agreement on allowable subject matter, a single opportunity is often insufficient to accomplish the task. Filing an RCE, along with the requisite fee, allows the applicant to respond to the final rejection and continue prosecution. In essence, the RCE allows additional time for the applicant and the USPTO to come to an agreement on allowable subject matter. However, amended applications in which an RCE has been filed are not treated as regular amended applications. Rather, these applications have been subject to special docketing and processing procedures that led to a backlog of RCEs awaiting examination. As a consequence, applications in which an RCE has been filed have been subjected to additional delays, interrupting the examination process which was already well underway. In fact, based on the respective averages at the end of FY 2016, the average total patent pendency for applications in which at least one RCE has been filed is more than twice the average total patent pendency for applications in which no RCEs have been filed. While there is still progress to be made, the PPAC commends the USPTO on the tremendous strides made over the past three fiscal years in reducing the backlog of RCEs awaiting examination, as well as the average length of time from filing an RCE to

the issuance of an office action in an application. Efforts made by the USPTO, which have resulted in new and updated initiatives designed to give applicants alternatives to filing RCEs, and revised internal docketing procedures to reorder the identification of RCEs for action on an examiner’s docket, have significantly contributed to the progress made. However, the average total pendency of applications in which one or more RCEs have been filed remains a challenge.

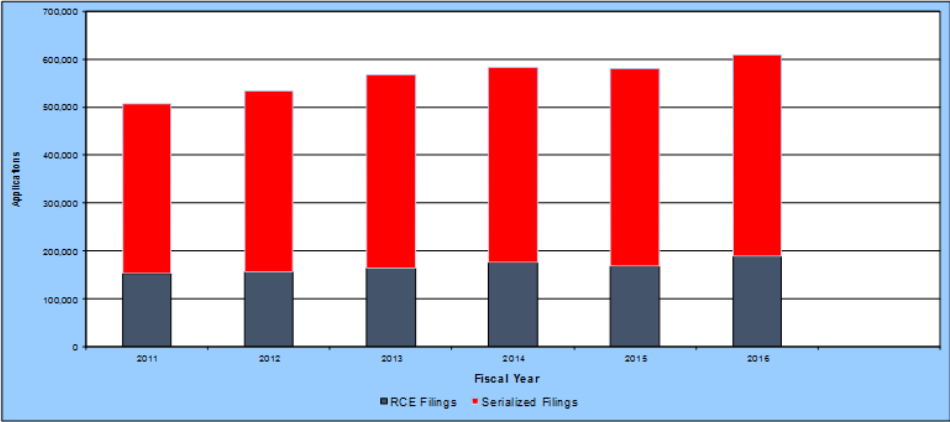
B. RCE INVENTORY & BACKLOG

As shown in the chart below, following the move of RCEs from the examiner’s amended docket to the special continuing docket, the backlog of RCEs ballooned from about 17,000 in October of 2009 to almost 112,000 in February of 2013; however, focused attention on RCEs reduced the backlog to 78,272 by the end of September 2013. Further implementation of initiatives provided continued progress toward reducing the backlog of RCEs from 46,441, as of October 1, 2014, to 26,901 by the end of FY 2015. The backlog of RCEs rebounded by about 32% at the very beginning of FY 2016 and remained relatively steady on a quarter-over-quarter basis throughout FY 2016, and finished out FY 2016 at 27,394, as of September 30, 2016. The PPAC commends the USPTO for the reduction in the RCE backlog by nearly 76% since the high point of FY 2013.



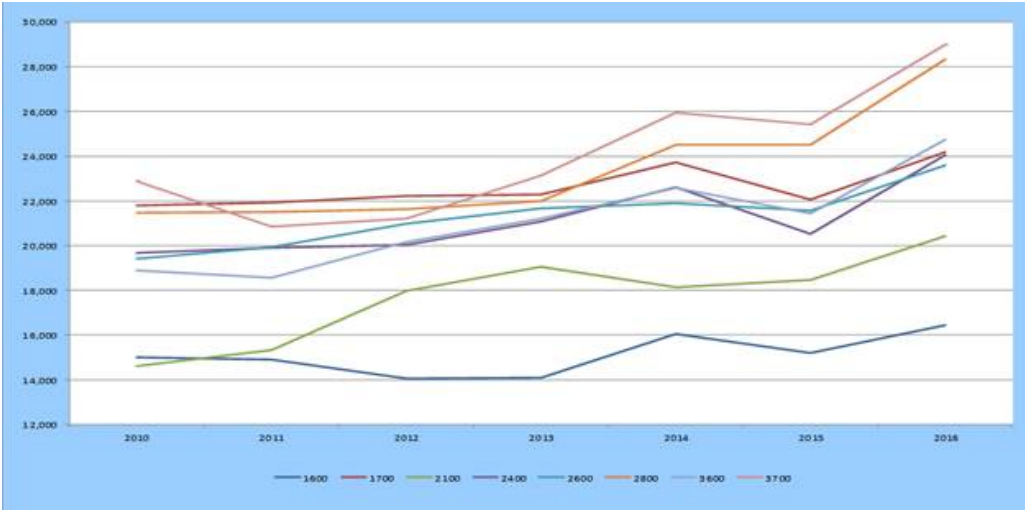
As can be seen in the chart below, the USPTO experienced an increase in filings of Utility, Plant and Reissue (UPR) patent applications of 5.1% overall with cumulative serialized filings of 418,513 (preliminary) during FY 2016. In comparison, in FY 2015 the USPTO experienced a decline of about 0.3% overall, while in FY 2014 the USPTO experienced a filing growth rate of 2.8%. Preliminary cumulative RCE filings in FY 2016 came to 191,123, as compared with the cumulative RCE filings in FY 2015 of 168,594, and the cumulative RCE filings in FY 2014 of 175,066.

Serialized and RCE Filings FY10-16



Every Technology Center (TC) experienced an increase in RCE filings in FY 2016. However, as shown in the chart below, the increase was not evenly distributed across the TCs. The developing jurisprudence in patent law, as well as the new and updated examination guidance reflecting the developing case law, likely played a role in the increase and distribution pattern in the RCE filings made in FY 2016.

TC RCE Filings FY 2012-2016

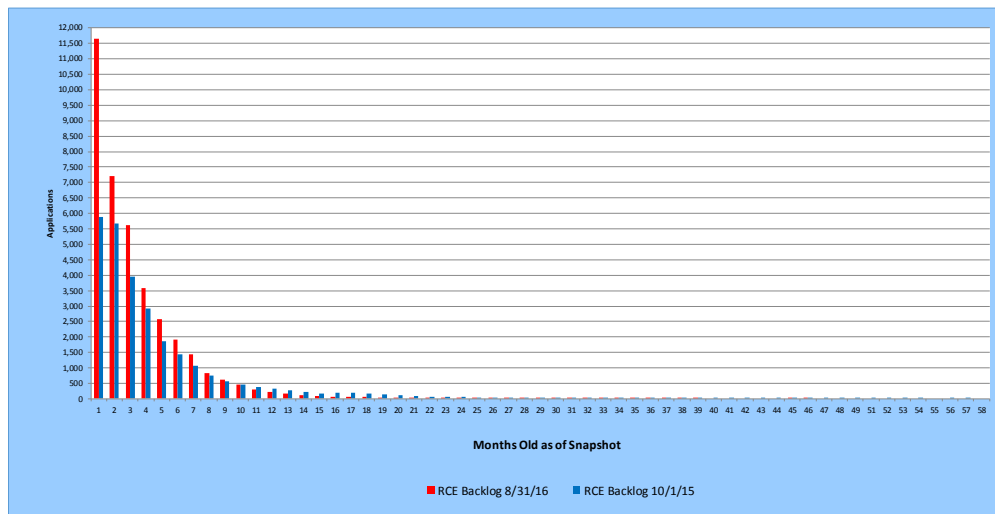


During FY 2016, the USPTO continued to focus efforts on moving the oldest RCEs, resulting in 28.4% (7,815 RCEs) as of October 1, 2016 of the RCE backlog being over four months from filing as of the end of FY 2016, compared to 32.7% (8,972 RCEs) of the RCE backlog at the end of FY 2015, 52% of the RCE backlog at the end of FY 2014, and 73.4% of the RCE backlog at the end of FY 2013. This is a commendable

achievement in reducing the RCEs awaiting action and handling them in a more timely fashion.

The chart below shows a comparison of the age distribution of the backlog of RCEs for FY 2016 compared to FY 2015.

Distribution of RCE Backlog by Age



As a result of the backlog of RCEs and removal of them from the amended docket, the average pendency of RCEs rose dramatically. However, the reduction of the backlog was accompanied by a reduction in the percentages of the oldest RCEs awaiting examination. As of September 30, 2016, the average time between the filing of an RCE and an office action was 2.7 months, which represents an improvement over FY 2015, which ended with the average time being 3.3 months. As can be seen in the above chart, the tail of RCEs has been shortened, with the distribution of RCEs moving to earlier ages. The PPAC congratulates the USPTO for continuing the impressive downward trend in the average time between RCE filing and the next office action. However, the PPAC recommends continued focus on reducing the age of the backlog of RCEs to reduce the amount of Patent Term Adjustment (PTA) granted and to reduce the wait time in the middle of “continued examination”. Because RCEs technically are amended applications and PTA begins accruing at four months from the RCE request, all RCEs older than four months will receive PTA of varying amounts of time when actions are completed on them. Of real concern are those pockets in which RCEs have been waiting for longer than four months for the next office action to issue. As a public policy matter, the public should have certainty about when they will be able to utilize patented technology. Granting PTA should be an unusual event; it should not occur in large numbers of applications.

C. TOTAL PENDENCY FOR APPLICATIONS WITH AN RCE FILING

The total pendency time for applications with at least one RCE was 56.2 months at the end of FY 2016, which is less than a 1% decrease from the end of FY 2015. While the total pendency time for such applications has decreased by about 10% since FY 2014, which ended with an average total pendency time of 63.1 months, it is still more than twice the total pendency time for applications in which no RCEs have been filed which, at the end of FY 2016, was 26 months. See the chart below for a comparison of total pendency time for applications in which no RCEs were filed and applications in which one or more RCEs were filed in FYs 2014-2016.

	Traditional Total Pendency (months)	Pendency of Applications which Include at least one RCE (months)
FY 2014	28.0	63.1
FY 2015	26.9	58.8
FY 2016	26.0	56.2

While an overall longer pendency would be expected for an application in which an applicant has elected to continue prosecution beyond a final office action, it is unclear why filing one or more RCEs should more than double the average total pendency as compared to an application in which no RCE is filed. In FY 2016, the average total pendency of an application in which no RCE was filed was 26.0 months, of which an average of 16.4 was spent awaiting first office action and an average of 9.6 months was spent in active prosecution. It would stand to reason that filing one or more RCEs may proportionately increase the average time spent in active prosecution but not double the average total pendency. The spirit and intent behind compact prosecution should not be lost to the applicant upon the filing of one or more RCEs.

The USPTO eliminated a deadline for completing RCEs with the move of RCEs from the amended docket, and as a consequence, significant delays in the prosecution have occurred. This is particularly problematic because, when an RCE is requested, an abandonment is counted and the pendency for that application is captured in the traditional total pendency numbers. However, the pendency for the continued examination of an RCE is not included in the traditional total pendency statistics (see also, discussion in Pendency section, above). It is captured only in RCE pendency and traditional total pendency including RCEs statistics reported on the USPTO Patent Dashboard. While the reduction in the average waiting time to 2.9 months is impressive, to provide real continued examination in RCEs, all applications must be picked up for

examination quickly and an established goal for completion of an action in every application is essential. It is not enough that the average pendency for RCEs from filing to the next office action is 2.9 months as of July 2016 because a significant percentage of RCEs are still awaiting examination more than four months from RCE filing, and consequently accruing PTA. It should be a rare exception that any application experiences a wait time longer than 4 months between the filing of an RCE and the next office action. RCEs are amended applications and should be treated consistently as such, and efforts to eliminate PTA at all stages of prosecution should be made. The PPAC again suggests that the USPTO to return RCE applications to the regular amended docket to align with the PTA timeframes mandated by congress for completion of amended applications.

D. PROGRAMS AND INITIATIVES

The PPAC commends the USPTO on the significant progress made in many facets of RCE practice. While filing an RCE may be the most practical path forward in many instances, the USPTO has recognized the need for alternative programs for applicants in the interest of timely and efficient prosecution. The USPTO has continued certain programs that have been positively received by stakeholders, made improvements to other programs, and offered newly-designed programs based on stakeholder input. Highlighted below are some of the USPTO initiatives and programs that provide alternative or additional paths to RCEs.

1. Quick Path Information Disclosure Statement

The Quick Path Information Disclosure Statement (QPIDS) pilot program is part of the USPTO's on-going efforts towards compact prosecution and pendency reduction. The QPIDS pilot program eliminates the need to file an RCE with an IDS filed after payment of the issue fee in order for the IDS to be considered. In the event that none of the disclosed information in the IDS is determined to necessitate reopening prosecution, the USPTO will issue a corrected notice of allowability. Currently, the QPIDS pilot program is scheduled to run through the end of the FY 2017.

2. Pre-Appeal Brief Conference Pilot Program

Under the Pre-Appeal Brief Conference pilot program, an applicant has an opportunity, before filing an appeal brief, to request review of the legal and factual basis of a rejection. A panel comprising at least the examiner, the examiner's SPE and another individual (who is identified under individual Technology Center mandates) will meet to review the request and decide if an issue in the file is appropriate for appeal. Alternatively, the panel may conclude that the application should be allowed or prosecution re-opened.

Applications that are indicated on the decision as being allowed or re-opened will be returned to the examiner's regular amended application docket.

3. After Final Consideration Pilot 2.0

The After Final Consideration Pilot 2.0 (AFCP2.0) program authorizes additional time for examiners to search and/or consider responses after final rejection. Under the AFCP2.0 program, examiners will also use the additional time to schedule and conduct an interview to discuss the results of their search and/or consideration with the applicant, if the applicant's response does not place the application in condition for allowance. In this way, the applicant will benefit from the additional search and consideration afforded by the program, even when the results do not lead to allowance. The program is intended to assist in the achievement of the pendency reduction goals, encourage compact prosecution and improve stakeholder satisfaction.

4. Post-Prosecution Pilot Program

The Post-Prosecution Pilot (P3) program was developed under the USPTO's Enhanced Patent Quality Initiative (EPQI). The P3 program is available to applicants during the period subsequent to final rejection and prior to the filing of a notice of appeal. It includes effective features from both the AFCP 2.0 program and the Pre-Appeal Brief Conference Pilot Program. While the P3 program provides applicants with an opportunity to present arguments to a panel, the program does not provide for any back-and-forth discussion between the applicants and the panel at the conference. The PPAC suggests that the goals of the pilot program would be better served if the conference allowed for the applicants and the panel to discuss the applicants' arguments and the potential to overcome the outstanding rejections. The P3 program launched July 11, 2016 and will run for 6 months or when 1,600 requests have been accepted, whichever occurs first.

5. Track One Prioritized Examination

One additional option to reduce the delay associated with filing an RCE is Track One Prioritized Examination. This program offers prioritization of utility and plant patent applications by giving an application special status without requiring the applicant to conduct a pre-examination prior art search. Prioritized examination may be requested at the time of filing of an original utility or plant application or at the time of filing an RCE. Track One provides applicants with greater control over when their applications are examined and promotes greater efficiency in the patent examination process. The goal of Track One application is to provide a final disposition within twelve months on average from when the prioritized status granted.

Recommendations:

The PPAC recommends that a goal for the completion of RCEs be established. The USPTO has defined pendency goals for first office actions and for total pendency, but neither of those measures includes the pendency of RCEs. There is no logical reason for the absence of a target goal for the completion of an action in the RCE. As amended applications, the RCEs should be handled in the same way as other amended applications and completed on the same timeline. They should be returned to the amended docket or at least have a goal set for picking up the RCE completion, preferably four months to be in alignment with the congressionally mandated timeframes and to avoid giving PTA stemming from the USPTO delays in action.

The PPAC recommends providing more alternatives other than the filing of RCEs during prosecution. Increasingly, applications require more than one response in order to reach allowable subject matter. Providing the opportunity of the entry of two responses as a matter of right in each application and/or providing an option for paying for the consideration of one more amendment after a final rejection could assist both applicants and the USPTO in reducing the number of RCEs and total backlog of work.

The PPAC recommends that the USPTO permit applicants to participate in an interview in the P3 program conference, pre-appeal brief conference and/or the appeal conference. It is believed that having the opportunity to make arguments and to participate in person in a real-time discussion with the USPTO would reduce the need for RCEs and appeals to the PTAB. Also, it seems that even more understanding by the USPTO and practitioners of the invention and prior art occurs when there are supervisors present in the interviews, leading to more significant advancement of the prosecution toward agreement. Thus, providing these interview opportunities with the examiner, a supervisor, and in some instances, another senior person, would assist the USPTO and applicants in finding resolution in the cases without the need for an RCE or appeal. This is a desired outcome from all perspectives. It appears that the investment of more time for these interviews would pay dividends in the reduction of overall work for examiners and the PTAB, making it a wise investment. Perhaps the P3 program could be modified to test this proposal.

Applicants appreciate the efforts that the USPTO has made in providing programs that permit the entry of amendments after final rejection. The PPAC recommends that the USPTO continue developing and enhancing programs, such as AFCEP 2.0, and other programs, which would permit consideration of amendments after final rejection.

Because RCEs represent a significant proportion of new filings as reported by the USPTO but in fact are actually amended applications, the PPAC recommends that the

new filings reported instead be characterized as new serialized filings and new RCEs to more accurately capture the distinction between truly new filings and RCEs.

VII. INTERNATIONAL COOPERATION, WORK SHARING AND OUTREACH

A. SUBSTANTIVE PATENT LAW HARMONIZATION

Progress continues in the study of substantive patent law harmonization topics by the Group B+ Patent Offices. Following the suspension of the Tegernsee Group in 2014, a subgroup of the Group B+ Patent Offices was organized to explore how to advance work on patent harmonization. The subgroup includes representatives from Canada, Denmark, the EPO, Germany, Hungary, Japan, Korea, Spain, the United Kingdom and the United States.

Since its formation, the subgroup of the Group B+ Patent Offices has published an Objectives and Principles Document which includes higher level objectives for the patent system, such as the premise that the global patent system should be coherent and balanced offering a fair level of protection to inventors/applicants from all backgrounds. The Document also includes specific principles directed to the Tegernsee issues (i.e., grace period, prior user rights, conflicting applications, and publication of applications). For example, in the area of the grace period, an agreed upon principle is that inventors whose inventions have been disclosed prior to filing a patent application should, in certain circumstances, be given an opportunity to patent their invention. The subgroup has also issued studies on mandatory declarations in the context of the grace period and the treatment of conflicting applications.

In late 2015, the subgroup agreed that further work should be done in an effort to determine “best practices” for each of the items for discussion. This work is being completed via three work streams: (1) non-prejudicial disclosures/grace period; (2) conflicting applications; and (3) prior user rights. In addition, a fourth work stream is dedicated to exploring options for implementation. Each work stream has a selected chair – the grace period work stream is chaired by the EPO; prior user rights is chaired by the JPO; implementation options is chaired by the HIPO (Hungary); and conflicting applications is chaired by the USPTO. Particularly, with respect to conflicting applications, the USPTO is completing a study to determine the frequency with which “secret” prior art is used by examiners in rejections. The other work streams have issued papers that further explore particular facets of each of the issues.

B. TECHNICAL AND PROCEDURAL HARMONIZATION: WORK SHARING AND OTHER INTERNATIONAL COOPERATION PROGRAMS

1. IP5 Offices

Recognizing the continuing evolution and growth of initiatives, the IP5 Offices follow a program management model proposed by the USPTO. The model formalizes basic project management principles across the program which, until the adoption of this agreement, was inconsistently applied. A key element of the model requires stakeholder benefits to be clearly defined for each of the projects and calls for periodic assessment to ensure those benefits are being achieved. The assessment is done by the program managers who represent the executive leadership of the IP5 Offices. This seemingly simple approach ensures that resources dedicated to the program are commensurate with the value they deliver.

The IP5 Offices continue to meet regularly at the Heads and Deputy Heads levels and at the Working Group Level. There are currently four Working Groups. Work Group 1 (WG1) deals with classification and related topics, including Cooperative Patent Classification (CPC). Work Group 2 (WG2) deals with IT-supported business practices, including the Global Dossier initiative and the Priority Document Exchange. Work Group 3 (WG3) deals with work sharing and quality, including PPH. The Statistics Work Group deals with the annual compilation of patent statistics for the IP5 Offices.

In June 2016 in Tokyo, Japan, the Heads of the IP5 Offices met for the 9th Meeting with IP5 Industry and reaffirmed the mission of providing better services for stakeholders and the public. The Heads of the IP5 Offices confirmed that each patent office strives to:

- *Continue to consider users' opinions;*
- *Consider implications of technology advancements on the patent system; and*
- *Work together to continue to provide quality services thereby aiding in the acquisition of stable patent rights among the IP5 [Patent] Offices.*

The IP5 Offices agreed that to meet these goals, they need to advance the following three initiatives:

a. Enhancement of the Relationship with Users

The IP5 [Patent] Offices will further enhance their relations with users. The IP5 [Patent] Offices strive to incorporate the opinions of a broader range of users, by, for example, further improving the IP5 website and expanding Public Relation (PR) activities of IP5 initiatives. Also, the IP5 [Patent] Offices will enhance user

satisfaction by sharing best practices of user services of each Office in order to identify areas of potential improvement.

b. Continue Providing High-Quality and Reliable Examination Results

The IP5 [Patent] Offices undertake to strengthen their cooperation so as to enable their users to obtain high-quality and reliable examination results in a user-friendly way. This will be achieved through deepening of work sharing, quality and patent harmonization initiatives, such as IP5 Patent Prosecution Highway (PPH) program, Global Dossier, the PCT Collaborative Search and Examination pilot program, Quality Management and Patent Harmonization Expert Panel (PHEP).

c. Exploring the IP [Patent] Offices' Readiness to Respond to Emerging Technologies

The IP5 [Patent] Offices will explore cooperation on office responses to emerging technologies, such as the Internet of Things (IoT) and Artificial Intelligence (AI). This may be accomplished through sharing of information, exchanging of opinions, or studies on the effects of these technologies.

One of the topics that was addressed by the representatives was the ongoing planning and development of the Global Dossier Initiative, which is discussed in further detail below.

2. Global Dossier Initiative

The Global Dossier Initiative is a set of business services that will give users and stakeholders secure, online, one-stop access to and management of dossier information of all applications that comprise a family and that have been filed in multiple patent offices by establishing a common user interface to each patent office's electronic database system. However, the Global Dossier initiative is not directed to a single IT application or system. Rather, it can be viewed as a collection of services designed to meet the business needs of multiple users and stakeholders of the patent systems of the IP5 Offices.

The information available via the Global Dossier Initiative includes searching and examination results, combined with increasingly sophisticated machine translation of foreign-language documents. For example, the USPTO examiners received access to the IP5 dossier information as part of the PE2E rollout beginning in the spring of 2015. Such information has allowed examiners to build on the results from the partnering IP5 Patent to help strengthen the patent record that they are creating as well as to assist in improving

overall patent examination quality.

The Global Dossier platform was released for public access in November 2015 and has provided stakeholders and users the ability to access the file history information on patent application family data from all IP5 Offices. It has benefited the stakeholder and user community as a whole by providing the ability to track and manage related applications across all IP5 Offices. It will arguably also make it easier for examiners to search and review patent families as well as allow users to have quicker and cheaper access to such data for performing due diligence, technology transfer, litigation and appeal processes.

With respect to accessing such data, the USPTO reports that as of August 2016 the Global Dossier platform was being accessed over 30,000 times daily by users and 10,000 times daily by examiners. These numbers do not represent individual users of the platform but represent the number of times information was accessed in the Global Dossier platform. In FY 2016 to date, the USPTO received over 2.4 million requests for data from examiners in the other IP5 Offices compared to 1.8 million requests in FY 2015.

The Global Dossier platform is now accessible to stakeholders, users and USPTO examiners on a daily basis 24 hours a day/seven days a week. The USPTO continues to encourage all IP5 Offices to strive to provide the same 24/7 accessibility.

A Global Dossier Task Force (GDTF) was created in 2013 to ensure that the needs of the stakeholder and user community drive the development of the Global Dossier system. The GDTF includes representatives from the IP5 Offices, WIPO, and the IP5 Industry Groups (the American Intellectual Property Law Association (AIPLA); Business Europe (BE); Intellectual Property Owners Association (IPO); Japan Intellectual Property Association (JIPA); Korea Intellectual Property Association (KINPA); and Patent Protection Association of China (PPAC)).

As a result of the GDTF discussions, the IP5 Offices agreed that each patent office would define the scope of a particular short-term/high-priority goal that the industry groups identified as follows:

- USPTO - “Document Sharing (Proof-of-Concept for Inter-Office Exchange)” – sharing documents between patent offices, including, for example, supporting documents for other initiatives, e.g., PPH, CSP, etc., prior art exchanges, and bib data updates. This is viewed as a first step toward cross-filing.
- EPO - “Alerting” – An automated mechanism whereby each patent office alerts all the other patent offices, applicants and their representatives of changes in status to the application.

- JPO - “XML” – Enabling each patent office, and possibly applicants and their representatives, to download all application-related data from applications pending in other offices, in XML format.
- KIPO - “Applicant Name Standardization” – An automated mechanism that will assign a single unique name to entities with applications pending in multiple offices, including in instances where those entities may have used multiple names or variations of a single name to identify themselves.
- SIPO - “Legal Status” – A mechanism to allow one patent office to view the legal status of an application in another office.

Document Sharing, led by the USPTO, will allow the sharing of documents and information between the IP5 Offices, including, for example, supporting documents for other initiatives, e.g., PPH, CSP, prior art exchanges, etc. This capability is viewed as a first step toward cross-filing among patent offices. The USPTO has been working closely with stakeholders and the user community on document sharing to better understand the functionality and systems that would deliver the greatest benefit to its users as well as to eliminate certain administrative tasks to alleviate the burden on patent offices and their users.

In addition to working on document sharing, the USPTO continues to enhance Global Dossier functionality and services. In July 2016, updates included enhancing the Office Action indicator to allow for direct access to Office Actions, providing additional alerts regarding availability of the IP5 Offices’ dossier systems, and providing users with greater sorting abilities.

In December 2016, the USPTO plans to link the Global Dossier platform to WIPO CASE (Centralized Access to Search and Examination) to provide access to dossier information of additional patent offices. While originally intended to be for offices only, WIPO CASE is moving toward providing that information to the public. This is advancing on an office-by-office basis. WIPO CASE was initially developed by WIPO’s International Bureau in response to a request from the Vancouver Group offices (the patent offices of Australia, Canada and the United Kingdom). Based on their requirements, an initial system was deployed in 2011. However, since March 2013, any patent office may join the system by notifying the International Bureau that it is willing to participate according to the framework provisions of the system. These provisions were updated on June 1, 2015. There are two different levels of participation available to patent offices:

- Providing Office – A patent office acting as a Providing Office shares its dossier information with other participating offices.

- Accessing Office – A patent office acting as an Accessing Office is permitted to access WIPO CASE to retrieve dossier information from Providing Offices who have confirmed such access.

WIPO, IP Australia and others proposed to link Global Dossier to WIPO CASE as a way to accelerate the inclusion of additional patent offices. On behalf of IP5 Offices, the JPO tested this linkage in 2014. Further this past summer, JPO, KIPO and SIPO each submitted notifications to WIPO that they will participate in WIPO CASE.

The USPTO is currently a Providing Office to WIPO CASE, and plans on becoming an Accessing Office to WIPO CASE by the end of 2016. The USPTO is a strong supporter of the expansion of WIPO CASE and is encouraging other patent offices to participate.

3. Procedural Patent Law Harmonization

In April 2014, the IP5 Patent Harmonization Experts Panel (PHEP) agreed to explore potential harmonization in the following areas: unity of invention, citation of prior art, and written description/sufficiency of disclosure.

a. Unity of Invention

U.S. law provides that a patent application can be required to claim only one invention. If the application describes multiple inventions, the applicant may be required to limit the application to a single invention (i.e., restriction practice) and/or to file divisional applications for the additional invention or inventions. Where domestic (as opposed to Patent Cooperation Treaty (PCT)) applications are concerned, the standard for finding multiple inventions in a single application is low: a U.S. examiner may find that multiple inventions are described even in a single claim. However, where PCT applications are concerned, the USPTO applies a unity of invention standard, if there is any special technical feature between purportedly separate inventions, the inventions are regarded as one. In virtually all jurisdictions outside of the U.S., the unity of invention standard is applied in the examination of all applications, regardless of whether they are filed domestically or via the PCT.

In Tokyo in June 2016 at the IP5 Industry meeting, the IP5 Offices acknowledged the similarities and differences existing in their respective systems and recognized the benefits of future alignment of unity of invention practices. The IP5 Offices agreed to work toward reaching a harmonized IP5 practice for unity of invention for international applications by the end of 2018 and pending internal constraints, the alignment of practices with respect to applications entering the national/regional phase shall also be considered. At this juncture, the alignment of IP5 Offices' practices in international applications shall focus in particular on the consistent application and better

implementation of the unity of invention standard embedded in the PCT.

b. Citation of Prior Art

The prior art discussions are centered around a suggestion from industry that the EPO, JPO, KIPO, SIPO, and USPTO develop a system to enable each IP5 Office to view prior art that the other IP5 Offices have cited during examination. During these discussions, industry representatives have further suggested that, rather than requiring applicants to furnish such prior art themselves, the IP5 Offices should instead, where applicable, establish an automated system that would allow the IP5 Offices to view and have access to such prior art. Representatives of the IP5 Offices are in continuing discussions regarding what legal issues and technology changes would be required in order to implement and adopt such a system. In parallel to the work of the IP5 Offices, the USPTO has formed an internal team to consider potential solutions to this issue.

c. Written Description/Sufficiency of Disclosure

Past Trilateral and other studies have shown that the patent offices have different practices regarding the written description/sufficiency of disclosure requirement. Users have suggested that the offices revisit this issue to consider possible alignment of practices. To that end, the JPO (lead office) had proposed a work plan asking offices to provide analysis of their respective findings regarding the written description requirement that arose in a sample of applications that were filed in all five IP5 Offices. The JPO compiled the results of the case study. At the May 2016 Heads Meeting, it was agreed that the scope of the case study should be expanded to include more cases and technology areas.

4. Collaborative Search Pilot Program

Work sharing with other patent offices is a top priority for the USPTO. Work sharing brings forth many benefits not only to the applicants themselves but to the entire IP system. In 2015, the USPTO launched two Collaborative Search Pilot (CSP) programs – one with the JPO and the other with the KIPO. The purpose of these pilot programs, based in the USPTO on the First Action Interview Program, is to provide stakeholders with prior art from two offices early in the examination process. In return, this information should assist applicants in determining next steps in the patent prosecution process resulting in compact prosecution and enhanced quality.

In the JPO pilot program, the USPTO and the JPO exchange search results and the examiners evaluate the other office's results prior to each examiner fully forming their initial communication. This yields a work product that contains both offices' input. In the KIPO pilot program, the USPTO and the KIPO contemporaneously and

independently search the common claims; the first correspondence from the USPTO includes both the U.S. examiner's resulting pre-interview communication and the KIPO search report. These differences point to whether it is necessary for examiners to consolidate the prior art and proposed rejections for the applicant (i.e., JPO pilot program) or whether it is sufficient for the applicant to have two independent views on the claims in order to determine its next course of action (i.e., KIPO pilot program).

The pilot programs allow for up to 400 petitions. As of September 30, 2016, the USPTO has granted 34 petitions for the JPO pilot and 60 for the KIPO pilot. The JPO pilot is expected to end on July 31, 2017 and the KIPO pilot on August 31, 2017. The USPTO is regularly presenting to a variety of organizations about these pilots to increase and encourage participation by the user community.

Some potential advantages of using CSP are:

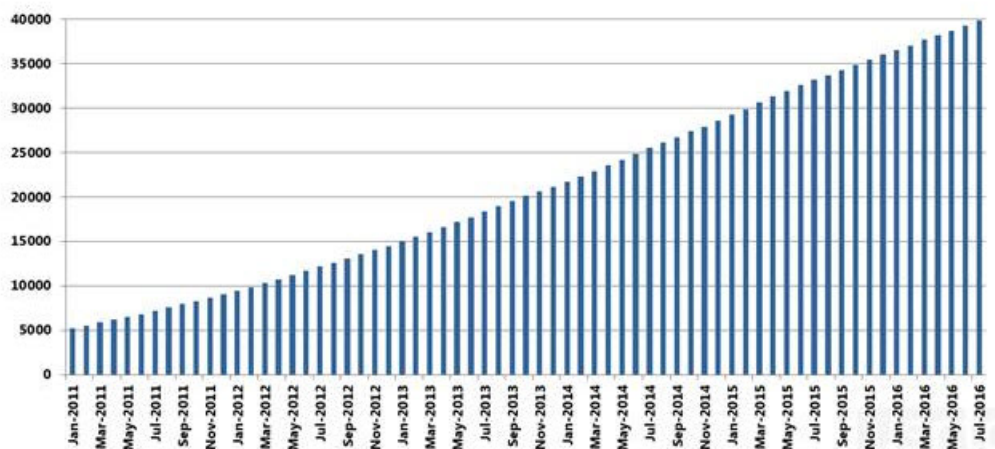
- There is no fee for filing a CSP petition and, if granted, initial prosecution of the application will be expedited at no charge;
- Greater consistency in examination across patent offices leading to more certainty of IP rights;
- Early examination of applications in participating offices;
- The need for RCEs may be reduced as prior art is identified early in the pendency of examination;
- Costs are reduced as prosecution is shortened; and
- Potential quicker access to the PPH process in other offices.

5. Patent Prosecution Highway

As of September 2016, the number of Patent Prosecution Highway (PPH) applications with petitions reached approximately 41,000 with the USPTO receiving an average of approximately 565 requests per month. The chart below shows new PPH requests by month since January 2011 and demonstrates the program's continued and ongoing growth and acceptance by the stakeholder and user community.

PPH Program Growth

Cumulative Filings from 2011 to Present



In response to increased popularity of the PPH program and a growing backlog of undecided PPH requests, several measures have been taken to ensure prompt decisions will be made in pending and future PPH requests. As a result of these efforts, applicants who file PPH requests can expect to receive a decision within four months. The USPTO is working toward an ultimate goal of applicants receiving a decision within two months of filing the PPH request.

Recognizing the need and opportunity for greater efficiency, the USPTO and several other patent offices have consolidated and replaced existing PPH programs with the goal of streamlining the PPH process for both patent offices and applicants. This has been accomplished through creating a centralized PPH framework called the “Global PPH” pilot program.

The Global PPH pilot program includes the following offices: Australia (IPAU), Austria (APO), Canada (CIPO), Denmark (DKPTO), Estonia (EPA), Finland (NBPR), Germany (DPMA), Hungary (HIPO), Iceland (IPO), Israel (ILPO), Japan (JPO), Korea (KIPO), Nordic (NPI), Norway (NIPO), Portugal (INPI), Russia (ROSPATENT), Singapore (IPOS), Spain (SPTO), Sweden (PRV) and the USPTO.

The USPTO also has bilateral PPH agreements currently with 8 other patent offices including Colombia (SIC), Czech Republic (IPOCZ), Mexico (IMPI), Nicaragua (NRIP), Philippines (IPOP), Poland (UPRP), Romania (OSIM), and Taiwan (TIPO). Three of these offices, IMPI, UPRP, and OSIM, have bilateral agreements under global principles.

At the end of 2015, the USPTO and Brazil's patent office, the National Institute for Industrial Property (or INPI), agreed to establish a PPH pilot program. This agreement was the centerpiece of the 13th U.S.-Brazil Commercial Dialogue, a forum for expanding trade and investment between the two countries. The PPH Pilot Program highlights the commitment both countries have made to provide a high quality and efficient intellectual property system. This program complements efforts already under way in both countries to reduce patent backlogs and shorten patent pendency by leveraging the patent expertise and work product of patent examiners at both offices.

6. Cooperative Patent Classification

The USPTO has completed its transition to a new classification system, i.e., Cooperative Patent Classification (CPC). CPC is in partnership with the EPO, in which both patent offices manage and maintain the system. During FY 2016, the USPTO planned significant development around CPC automation tools that involve means for examiners to collaborate between offices, tools to maintain schemes and publish revisions, and updates of classification tools for examiners in general.

Currently, 12 patent offices classify using CPC and 45 offices use CPC for search. The Israel Patent Office (IPLO) is the most recent office to become part of the CPC international family. IPLO signed the Memorandum of Understanding in April 2016 and will transition to CPC on September 1, 2016. The USPTO continues to provide training to patent offices around the world, providing general training on CPC classification and searching as well as field-specific training in chemical, electrical, and mechanical/surgical areas of interest.

Examiner training also continues with more advanced CPC training sessions and classes on effective searching proficiency in CPC. As CPC is used every day by examiners, a large drive toward quality in all aspects of examination and classification is being performed.

Along with improved access to more documents from the patent offices around the world, improvements in consistency of classified search results across patent offices are also being achieved. The USPTO believes that CPC is one way to provide greater work sharing capabilities across multiple patent offices now and in the future, which helps advance patent quality globally.

In addition to CPC, the USPTO continues to seek other opportunities for harmonizing classification. In February 2016, a Memorandum of Cooperation (MOC) was signed by the USPTO and the JPO to cooperate in exploring the potential for harmonizing classification for industrial designs.

7. Patent Cooperation Treaty – Systemic Improvement

The USPTO continues to pursue improvements to the PCT process. Recent improvements include: (i) mandatory top-up searches in Chapter II; and (ii) public availability of the Written Opinion of the Searching Authority at the time of international PCT application publication.

The IP5 Offices recently agreed to strengthen communication and coordination in development of the PCT. The IP5 Offices agreed to prioritize four areas of work: (i) work sharing between International Authorities and national offices; (ii) standards to improve accessibility to international PCT documents and facilitate their utilization; (iii) collaboration to enhance the quality of international searches and preliminary examinations under the PCT; and (iv) utilization of the PCT by small and medium enterprises (SMEs) and users. The PCT Working Group, at its most recent session, agreed to send proposed amendments to the PCT Regulations to the PCT Assembly for adoption, and the amendments were adopted in the PCT Assembly. Those amendments will improve work sharing and access to information by automating the transmittal of prior search results and classification information to the International Searching Authority and requiring patent offices to provide information concerning national phase entries to WIPO within prescribed time limits.

8. Overall USPTO PCT Statistics

Table 3 below shows the USPTO data for PCT procedures through July 2016.

Table 3: PCT Timeliness

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 (thru July)	FY 2016 (thru August)
RO/US Receipt to record copy mailing	10 days	10.67 days	13 days	22 days	16 days	13 days
DO/EO/US Receipt to release	159 days	95 days	85 days	109 days	116 days	100 days
ISA/US Mailing of ISR/WO within 16 months from priority	81%	55%	76%	40%	75%	75%
Mailing of ISR/WO within 18 months of priority	92%	88%	92%	85%	90%	93%
IPEA/US Mailing of IPER within 28 months from priority	21%	29%	59%	73%	88%	90%
Mailing of IPER within 30 months of priority	27%	36%	67%	80%	93%	94%

9. Geneva Act of the Hague Agreement Concerning the International Registration of Industrial Designs

The Geneva Act of the Hague Agreement concerning the International Registration of Industrial Designs (“Hague Agreement”) went into effect for the U.S. on May 13, 2015. An international design application may now be filed either directly with the International Bureau of WIPO or indirectly through the patent office of the applicant’s contracting party. The USPTO serves as an office of indirect filing for applicants having a sufficient connection to the U.S.

As of September 26, 2016, approximately 263 applications have been filed by U.S. applicants with the USPTO as an office of indirect filing and approximately 1,656 applications in which the U.S. is designated and which have been forwarded to the USPTO from WIPO for examination. When serving as an office of indirect filing, the USPTO performs certain checks, such as performing a national security review, and

transmits the application to WIPO, if appropriate. In 2015, there were 4,111 international applications filed worldwide, with a combined total of 16,435 designs.

10. Industrial Design 5 Forum

Industrial Design 5 Forum (ID5) is a partnership of the five largest design patent offices, which includes the USPTO, SIPO, European Union Intellectual Property Office (EUIPO), JPO, and KIPO. Additionally, WIPO is a participant in an advisory role. The inaugural ID5 meeting was hosted by the USPTO in December 2015 and resulted in thirteen projects. The USPTO is the lead or co-lead on five of these projects. The goal of ID5 is to better understand practices from all partner offices and strive towards more universal convergences in design patents.

The 2016 Annual Meeting will be held in SIPO in November 2016 and will continue to address the agreed projects of ID5.

Recommendations:

Over the past two years, the PPAC has watched the USPTO continue to focus its international initiatives, projects and goals for the betterment of the USPTO's operations. The PPAC commends the USPTO for the creation and implementation of the OIPC, which clearly has had a positive impact on the USPTO. The PPAC applauds the extensive efforts and work of both the OIPC and the OPIA and strongly encourages and recommends that the USPTO look for new and innovative ways to expand and enhance its international initiatives and outreach.

The PPAC recognizes the ongoing financial needs of the USPTO for a secure and modern IT infrastructure to support the USPTO's commitment to these initiatives. Extensive budget cuts in prior years to the USPTO's IT infrastructure greatly impacted the timeliness of development, implementation, maintenance and expansion of the USPTO's international projects. The PPAC strongly supports and recommends stable IT funding along with continued upgrades to the IT infrastructure on a regular basis so as not to negatively impact the USPTO's global leadership position.

The PPAC commends the USPTO in its international cooperation and work sharing initiatives with multiple patent offices around the world and recommends more in depth dialogue on "global quality" with these offices. The PPAC applauds the continued expansion of PPH and the implementation of Global Dossier and commends the USPTO for seeking stakeholder input on these projects. The PPAC further encourages the USPTO to remain committed to CSP programs with other patent offices and to continue to educate stakeholders on these programs. The PPAC again recommends that the

USPTO repeatedly review its efforts to ensure that its initiatives promote quality and timeliness as well as the overall objectives of harmonization and international work sharing.

The PPAC commends the USPTO on its extensive outreach during FY 2016 through a variety of forums. The PPAC strongly supports and recommends continued ongoing educational training and updates regarding the USPTO's international initiatives and programs via roundtables, webcasts and e-mail notices and applauds the USPTO for its multiple efforts during FY 2016. The PPAC continues to recommend that a general calendar regarding all international initiatives as well as other USPTO outreach activities be accessible and searchable on the USPTO website. The PPAC encourages the USPTO to include more entities having a variety of perspectives regarding the patent system to provide input regarding international initiatives to foster earlier acceptance of new procedures and processes within the USPTO as well as in the global patent arena.

The PPAC applauds the USPTO for its international efforts in FY 2016 and encourages and recommends that it find new and innovative ways to improve and enhance such efforts, while being mindful of the needs and concerns of the stakeholder and user community with regard to a changing global patent arena, in FY 2017.

VIII. HUMAN CAPITAL

A. INTRODUCTION

The value in an organization comes from its people, and the USPTO has been fortunate to build and retain a workforce of dedicated examiners. Quality of examination of patent applications is the heart of the mission of the USPTO, and the work done to hire, train and retain examiners is critically important to the success of the USPTO.

There have been many activities related to human capital in FY 2016. The USPTO has hired new examiners consistent with recent and projected fee collections. The regional offices have been hiring and are likely to be fully staffed by FY 2017. In addition, the USPTO has undertaken a significant amount of work to train its workforce, while continuing to embrace initiatives that attract new talent and improve retention. Further, several third party reviews of The USPTO operations have taken place, and the USPTO has taken affirmative steps to implement specific improvements in response to recommendations from these third party reviews. Importantly, the USPTO continues to do internal surveys to solicit input from employees on what things are working well, and to identify areas for improvement, which is a sign of a healthy organization. The following is a summary of initiatives and a highlight of key developments in 2016.

B. EXAMINER HIRING AND RETENTION

The USPTO hired an additional 282 examiners by the end of FY 2016. The USPTO saw a decrease in the attrition rate from FY 2015 to FY 2016, from 5.6% in FY 2015 to approximately 3.5% in FY 2016; excluding Transfers and Retirees from the data, the attrition rates fall to 4.3% in FY 2015, and approximately 3.3% in FY 2016. This drop in attrition rate is noteworthy, and is a result of efforts at the USPTO to provide a positive working environment through responsiveness to employee feedback, improved systems and training. These efforts are described in more detail below.

Of the 282 new examiners hired in FY 2016, none were experienced patent professionals. The USPTO continues to look for examiners with previous patent experience because they would require less training and thus would have the ability to start examining patent applications sooner. However, the number of experienced applicants/hires has declined since the start of the program because the USPTO believes there is a limited pool of such candidates and many of those suitable for the open positions have already been hired.

Fiscal Year	New Hire Goal	Actual New UPR Hires	UPR Examiner Attrition	Total Number of UPR Examiners	Net Change (Year-Over-Year)
2016	275	282	340	8,195	-60
2015	340	340	502	8,255	-211
2014	1,000	934	360	8,466	538
2013	1,000	538	413	7,928	97
2012	1,500	1,496	293	7,831	1,146
2011	1,200	836	231	6,685	557

In 2012, the first regional office in Detroit, Michigan, opened for business. In addition to the Midwest regional office in Detroit, there are now permanent regional offices open in Denver, Colorado, Silicon Valley, California, and Dallas, Texas. In FY 2016, 164 UPR Patent Examiners were hired in the regional offices, with 24 hired in Detroit, 75 in Dallas and 65 in San Jose. In addition, 11 Design Patent Examiners were hired in San Jose, for a total of 175 UPR and Design Patent Examiners hired into our regional offices by the end of FY 2016.

Satellite Office	UPR + D Examiners	Judges
Detroit	114	9
Denver	68	15
Silicon Valley	69	23
Dallas	74	14

C. EFFECTS OF UNCERTAINTY VERSUS STABILITY IN BUDGETS ON HIRING

The hiring goals for the USPTO need to be consistent with fee collections. Fee collections for FY 2016 were very close to forecast. Also, the USPTO initiated a fee setting process, proposing targeted fee increases. The PPAC recommends that the USPTO continue to carefully evaluate its hiring needs consistent with both the expected attrition rate and the projected fee collections for FY 2017 so as not to be in a position of over-hiring for expected future needs.

D. INITIATIVES TO INCREASE EXAMINATION CAPACITY AND QUALITY

To continue its focus on productivity and quality, the USPTO has instituted and furthered a number of initiatives to make the most of its current Patent Examining Corps. Several of these initiatives are described below:

1. Target Overtime and Backlog Areas

The USPTO has used overtime and awards as an efficient way to manage its workload and reduce the backlog of applications in addition to new examiner hires. The PPAC believes that continued judicious use of overtime and incentives can be helpful in reducing the backlog of applications.

2. Nationwide Workforce

The USPTO has been successful in developing a nationwide workforce. The USPTO's workforce includes employees who work at locations other than the Alexandria Headquarters, thus allowing employees to choose where they desire to live. This segment of the USPTO employees either participates in telework programs such as the PHP or TEAPP, or works from the USPTO regional offices in Detroit, Denver, Silicon Valley, or Dallas.

There are currently 4,715 examiners who participate in the PHP. This group is comprised of two segments: employees whose worksite is within 50 miles from the Alexandria Headquarters and those with a worksite greater than 50 miles from the Alexandria Headquarters. As of August 2016, 8,800 or 92% of eligible patent employees work remotely at least part time in the telework program, including 5,209 teleworking full time.

TEAPP is the Telework Enhancement Act of 2010 and authorizes the USPTO to conduct a test program allowing employees to waive the right to travel expenses for a reasonable number of mandatory trips to the USPTO. TEAPP allows employees to work anywhere in the contiguous U.S., greater than 50 miles from the Alexandria Headquarters, without a routine reporting requirement back to campus. While enrolled in TEAPP, employees change their duty station to an alternate worksite in the city in which they live. The employee must travel to the USPTO and directed by the agency as outlined in the TEAPP agreement.

The PPAC continues to support TEAPP as an effective means for the USPTO to attract and develop a nationwide workforce. TEAPP began in January 2012, and participation was limited to 25% of full-time teleworkers (hotelers). In July 2013, the TEAPP Oversight Committee reached agreement with the three bargaining units to expand the participation level in the pilot program to 25% of all employees eligible for the PHP (i.e., GS12 and above).

TEAPP status as of 7-1-2015

Bargaining Unit	Slot Count Allowed	Slot Count Assigned	Slot Count Remaining	Slot Count in Wait Queue
POPA	2338	1871	467	0
NTEU 243	145	21	124	0
NTEU 245 (TM & TTAB)	133	85	48	0
Non Bargaining	152	38	114	0
Totals	2768	2015	753	0

As of the end of August 2016, the table above shows the number of participants in TEAPP. The USPTO currently has 2,266 total participants.

3. IT Systems

A very tangible example of initiatives to increase examiner capacity and quality is the new IT tools available to examiners. During the second quarter of FY 2015, the USPTO made available to the entire Patent Examining Corps a new system called DAV, the first of a planned series of rollouts of the new PE2E functionality. This new software provides integrated case management, improved ability to prioritize tasks, and numerous

features to automate tasks examiners previously carried out by hand. The number of trained DAV users has steadily increased within the Patent Examining Corps with a deadline for transition set for no later than December 31, 2016.

The DAV deployment sets the stage for the rollout of the other key components of PE2E, such as a new advanced examiner search tool and authoring tool for official correspondence (e.g., office actions), as well as the eventual retirement of legacy systems at the USPTO whose outdated custom design dates back to the 1980s. Further, the USPTO has made progress in the implementation of several key projects to support international cooperation and work sharing.

While all of these tools will improve efficiency and help the Patent Examining Corps to improve quality, to achieve these improvements there is required a significant investment of time and effort in training for the new users. This investment will certainly pay off, with the recognition that there could be some short term impact on productivity as the transition to the new systems takes place.

4. New and Ongoing Programs

New programs allow employees to take law school courses, and technical courses to enhance their legal and technical knowledge. As part of an ongoing program, the Patent Examining Corps are also being afforded opportunities to visit companies to gain technical knowledge in their areas of expertise, thereby enhancing their ability to fulfill their examination duties.

E. TRAINING

The USPTO has dedicated significant resources to training to cope with the rapid pace of change in the external patent world, as well as new processes in the USPTO, to enable the Patent Examining Corps to function efficiently and with quality.

IT-specific training was referred to above. This section of the report will focus on Patent Training at Headquarters (PaTH) events and Supervisory Training. These events brought teleworking examiners together with examiners working at the Alexandria Headquarters for communication and team-building, with the goal to increase their level of engagement as employees, boost morale, and enhance examination quality.

1. Patent Training at Headquarters

PaTH is a mandatory event that focuses on encouraging one-on-one and group interactions and collaboration among Headquarters, Hoteling (PHP/TEAPP/50Mile Option), and regional office patent employees, including both managers and examiners.

The events are designed for 500-800 employees in related technologies to participate at the Alexandria Headquarters for in-person workshops directed to team building, time management skills, communication skills, and quality work product. The last four completed events included 1,557 participants, as follows:

Date	Number of Participants
July 2015	200
October 2015	508
May 2016	409
August 2016	440

In addition, 402 TEAPP employees attended the PaTH events (53 in July; 120 in October; 109 in May; and 120 in August), as well as 49 regional office employees (13 in July, 17 in October, 16 in May; and 3 in August).

Five events are scheduled for FY 2017:

- Mar 8-9, 2017: TC 1600- 240(1), TC 2900- 206(13), Make up- 20 => 466 total (14 regional)
- May 3-4, 2017: TC 1700- 480(10), Make up- 20 => 500 total (10 regional)
- May 17-18, 2017: TC 1700- 466(10), Make up- 20 => 486 total (10 regional)
- July 26-27, 2017: TC 2100- 480(23), Make up- 20 => 500 total (23 regional)
- Aug 9-10, 2017: TC 2100- 463(23), Make up- 20 => 483 total (23 regional)

PaTH attendees, over 1,557, participated in interactive group trainings, art unit meetings, panel discussions and technology specific quality discussions. Additional PaTH training topics include: Creating a More Powerful Team through Teambuilding Exercises, Quality Virtual Communications, Change Management, Time Management/Work Life Balance/Managing Stress, & Patent & Trademark Office (PTO) Career Advancement. On the second day of the PaTH event, an Expo was held including: Scientific & Technical Information Center (STIC) presentations, Information Technology Resource Provider (ITRP) product demos, Office of Human Resources (OHR) on wheels, a POPA booth, an Employee Assistance Program (EAP) booth as well as a myriad of other USPTO Affinity group booths.

In addition to PaTH, the USPTO has other ongoing significant training programs for the Patent Examining Corps, including:

- Guidance on Patent Subject Matter Eligibility
- New Examiner Training Program, a.k.a. Patent Training Academy (Entry Level)
- Examiner Refresher Training Program
- Advanced Examiner Patent Practice Training Program
- SEE Trip Company Visits
- New Supervisory Primary Examiner Training
- PE2E

Further, in accordance with a White House executive action call to strengthen our patent system and foster innovation, the USPTO is expanding its Patent Examiner Technical Training Program (PETTP) in which the USPTO requests voluntary assistance from technologists, scientists, engineers, and other experts from industry and academia to participate as guest lecturers and provide technical training and expertise to patent examiners regarding the state of the art. Guest lecturers have relevant, historic and current technical knowledge, including industry practices/standards in technological areas of interest.

2. Supervisory Training

A key element of a highly motivated and engaged workforce is a group of supervisors who have the appropriate knowledge, skills and abilities to make their organization successful. In this regard, it is critically important that supervisors have the training necessary to obtain the needed knowledge, skills and abilities, with practical guidance on how to best implement them in their day to day work. The USPTO has provided significant training to supervisors in FY 2016, including the following.

“Staying Connected with Employees and WebTA Guidance” was a compulsory two-part training given to all Patents Managers from February 2016 to May 2016. The first part, “Staying Connected with Employees” emphasized the importance of being engaged with employees on a daily basis. The second part of the training presented the management guidance document created in response to the NAPA report, entitled “Management Guidance on Certifying Time and Attendance” and consisted of training on the document itself followed by scenario-based training to reinforce the principles in the document. These principles included basic management responsibilities, identifying time and attendance concerns, and appropriately addressing these concerns in a timely manner.

The Strategic Leadership Forum available for all Patent Managers, held May 18, 2016, included a roundtable discussion on the five different strategic leadership styles as referred to in “Leadership: Theory and Practice (Seventh Edition)”, by Peter G. Northouse. The leadership styles are as follows:

- Transformational Leadership;
- Adaptive Leadership;
- Team Leadership;
- Servant Leadership; and
- Authentic Leadership.

At least one Patent Employee Engagement Council (PEEC) member was a facilitator for each table and lead the discussion on the chosen style for that particular table, which allowed each manager the opportunity to share their experiences with their peers, learn about other leadership styles and develop new skills that will help them become better engaged managers.

F. THIRD PARTY REVIEWS

1. National Academy of Public Administration

With respect to the PHP discussed above, NAPA issued a report on July 31, 2015, titled “The United States Patent and Trademark Office: An Internal Controls and Telework Program Review”. The USPTO sought NAPA’s review regarding possible time and attendance violations by certain USPTO patent examiners. The NAPA report indicated that the USPTO has taken steps to address the concerns related to time and attendance and other issues raised by the OIG while recommending “that the USPTO should continue its Telework and Hoteling Programs, while enhancing the tools it uses in strengthening their management practices as recommended in the report.”

2. Government Accountability Office

The GAO issued two reports in June 2016: GAO-16-490 titled “Patent Office Should Define Quality, Reassess Incentives, and Improve Clarity”, and GAO-16-479 titled “Patent Office Should Strengthen Search Capabilities and Better Monitor Examiners’ Work”.

In report GAO-16-490 the GAO was asked to review issues related to patent quality. As part of the review, GAO conducted a survey of a generalizable sample of the USPTO examiners and interviewed officials from the USPTO and knowledgeable stakeholders. This report identified seven recommended actions, two of which focused on human capital: the time examiners need to perform a thorough patent examination, and how

current performance incentives affect the extent to which examiners perform thorough patent examinations. The USPTO concurred with each of the recommended actions. Details of the USPTO response may be found on pages 49-52 of the report.

In report GAO-16-479 the GAO was asked to identify ways to improve patent quality through use of the best available prior art. This report identified seven recommended actions, two of which focused on human capital: the time required by an examiner for a prior art search and the technical competence of examiners to complete thorough prior art searches. The USPTO concurred with each of the recommended actions. Details of the USPTO response may be found on pages 80-83 of the report.

3. Inspector General Report

The U.S. Department of Commerce, Office of Inspector General (OIG) issued report OIG-14-0990-I in August 2016 titled “Analysis of Patent Examiners’ Time and Attendance”. The OIG’s findings in a report issued August 2015 regarding an “Examiner A”, other related matters, and Congressional interest, suggested to the OIG 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 the USPTO’s approximately 10,000 patent examiners. The OIG made 6 recommendations, all related to human capital, which may be found on page 24 of the report. The recommendations will be reviewed by the USPTO. While that review is being undertaken, the PPAC would note that the data in the OIG report was from 2014 and 2015, which was at a time before the USPTO implemented a number of improvements related to time and attendance in response to the NAPA report.

The PPAC believes that the USPTO takes very seriously the requirement that examiners work the full number of hours for which they are paid and has taken actions against some examiners for whom it could be documented that they were not following the policies for time and attendance. Footnote 2 of the OIG report acknowledges that it did not recommend any actions against examiners be taken based on this report because of possible noncompliance with Federal Rules regarding such actions.

The potential unsupported time alleged by the OIG was about 2% which fell to 1.6% after implementation of steps resulting from the NAPA report. Being able to document 98% or greater of employees’ time seems quite good. While the tools used by the OIG in its evaluation were designed for other purposes, the USPTO does have a robust set of measures that track the output and quality of the work patent examiners perform, including percentage achievement of a production goal, achievement of pendency goals and quality assessment. These measures hold examiners accountable for completing a dictated amount of work within set time periods at a proscribed level of quality, establishing, it is contended, a level of accountability beyond what many workers, in the public or private sector face.

Production goals for examiners are set based on a complexity factor assigned to the art area in which they examine, their GS-grade (higher grade equals more work expected), and the time claimed on their timesheet. Thus, examiners in more complex art are allocated more time for the work, as are more junior examiners and for every hour worked, there is a computer generated report detailing expected and achieved production. This means that for all time claimed by examiners on their time sheet, they were required to complete the amount of work based on their production goal.

Although the examiners rely on electronic means for doing their work, many continue to print out documents for review and analysis, consult with other examiners or the SPE off-line, or do occasional work on another computer. Thus, the PPAC contends that the lack of a digital footprint is not evidence that an examiner was not working. Additionally, patent examiners frequently work hours that they do not claim on their time sheets, that is, voluntary overtime (VOT), to achieve the necessary level of work and quality but this time was disregarded by the OIG.

The USPTO is evaluating the time allocated to examiners to do the examination of patent applications. It is noted, however, that the GAO report found that perhaps examiners need more time to do their work- the exact opposite of the suggestion by the OIG. Computers used by the examiners to identify prior art locates more art than in the past and the job of evaluating that prior art and the claims remains an intellectual process requiring time and at least for now, a person.

Recommendations:

The PPAC recommends that the USPTO continue to support, promote, and expand the PHP and other telework programs, which permit examiners to work from remote locations. These programs allow the USPTO to attract and retain technical talent to achieve its mission that might not otherwise be available to work as an examiner. In this regard, TEAPP ends or expires on December 8, 2017, and the PPAC strongly urges that legislative action be taken to extend this program. TEAPP has been very successful in attracting and retaining talent, and the loss of this additional tool would have significant negative consequences for the USPTO and its user community. Additionally, implementing an exit strategy would be disruptive to ongoing USPTO operations.

The PPAC recognizes the significant efforts undertaken to provide training to teleworking examiners and supervisors to improve employee engagement, moral, and enhance quality, and the effort to train supervisors responsible for the examiners in order to address issues identified in third party reports. The PPAC strongly supports these efforts and urges the USPTO to continue its efforts in this regard to inculcate these improvements in the culture of the organization. Further, the PPAC encourages the

USPTO to reach out to the PPAC and others for continued input and suggestions on ways to sustain and maintain the expected improvements from this training.

The PPAC recommends that the USPTO consider the OIG report and continue to evaluate the policies and procedures to ensure that employees understand and are following the time and attendance rules.

The PPAC recognizes the efforts of the USPTO to implement changes in response to third party reports, which are very visible and tangible. However, with three significant third party reports issued in FY 2016, it is recommended that the USPTO be given time to provide the training and support necessary to implement these changes, and to be given time to have the changes take hold, before further third party reviews are requested.

The PPAC understands that the USPTO is continuing to evaluate a shared services model as part of a broader program within the Department of Commerce. This proposal would include a new model for providing human resources support to the USPTO. The PPAC strongly encourages the USPTO to review this proposal carefully to ensure that its potential impacts are fully and well understood before implementation. It is very important to maintain the positive work environment that resulted in the USPTO being ranked the #1 among agency subcomponents as the Best Place to Work in the Federal Government in FY 2013 and #2 in FY 2014.

IX. USPTO OUTREACH INITIATIVES

A. INTRODUCTION

The mission of the Office of Innovation Development (OID) is to increase the transparency and accessibility of the patent system to unrepresented and/or under-resourced inventors. These inventors can be found in startups, incubators, universities, meet up groups, inventor groups, and working alone in workshops and garages. To help these stakeholders, OID conducts educational outreach programming and to that end OID has added several new initiatives to its repertoire of outreach programs and events. For the past several years, OID has conducted university outreach using the talents of a pool of outreach SPEs from the Patent Examining Corps; the universities are chosen based on USPTO hiring goals/job fairs and the number of engineering students, with attention to numbers of minority students. Since the 1990s, OID's flagship event has been its inventor conference and this year's event was held in partnership with the Rocky Mountain Regional Office in Salt Lake City. This free event was attended by over 120 inventors and entrepreneurs and generated very positive feedback.

In 2016, OID expanded its effort to reach out to independent inventor groups such as the Minnesota Inventors Network and the Florida-based Edison Innovators Association; these groups of inventors sponsor gatherings where they share information and best practices. Unfortunately, many of these groups have become less active or inactive; OID visits have helped to invigorate the groups and by welcoming OID speakers, the groups have given OID easy access to venues and appropriate audiences.

By partnering with the Patent and Trademark Resource Centers (PTRCs), OID can find help in reaching new, appropriate inventor and small business audiences in many areas of the country. These facilities were designated by the USPTO to support the public with patent and trademark assistance. The PTRCs work to bring in educational facilities and they provide an easy way for OID to find venues in many locales that do not have organized inventor groups. OID has thus begun partnering with the PTRCs to provide educational programming.

Another way that OID is actively seeking new audience for its programs is by looking to non-English speaking entrepreneur groups. OID is bringing the first live Spanish language program to Mi Casa in Denver in September, in partnership with the Rocky Mountain Regional Office.

In addition to bringing its programs to new audiences, OID is also developing new programs. As an adjunct to the popular Women's Entrepreneurship Symposium, OID has worked with the Under Secretary's Office to build roundtables based on the gender gap in patenting and entrepreneurship. OID has received requests for this program content from across the country and presented that content in both New York and Wilmington, Delaware. Additional programs on this gender gap are scheduled for next year as well.

B. REGIONAL OFFICES

By virtue of their locations across the nation, the Regional Offices (ROs) are situated to serve USPTO stakeholders in their own backyards. Thus the ROs can provide programming customized to the varying needs of stakeholders in their regions and can participate in third party hosted events there as well. Further, as changes are proposed to the USPTO practice, the ROs can engage with stakeholders through roundtables to both provide those stakeholders with information and to hear from those stakeholders regarding proposed changes and report feedback on changes back to the Alexandria Headquarters in a manner not achievable in the past. In addition, the ROs has and will continue to host high level gatherings for visits from the Department of Commerce or the Under Secretary, Deputy Under Secretary, Commissioners, Directors and other personnel of the USPTO as well as visiting dignitaries from various countries around the world. Each of the Regional Offices works within the unique ecosystem of the region they serve

while also sharing ideas for programming across the regions that work for specific sets of stakeholders. This has allowed for unique and innovative programs to be established and proven before the USPTO rolls out those programs on a nationwide level. Some examples include Midwest's International Patent Drafting Competition, Silicon Valley's Speed Dating for Startups, Rocky Mountain's Spanish IP Basics Seminar, and Texas' presence at South by Southwest. In addition to the above, the Regional Offices partner with the USPTO Office of Governmental Affairs to establish and build upon relationships with local, state and federal elected official to further the messaging and mission of the USPTO. Each of the Regional Offices has partnered with elected offices in the region on STEM events or other technology related topics.

But, to view the Regional Offices as only outposts for outreach is to sell the mission and purpose of the Regional Offices short. The Regional Offices partner with every business unit of the USPTO to ensure that USPTO messaging is amplified to all areas of the nation and our stakeholders and to support all USPTO initiatives both internally and externally. Regional Office staff is often the only USPTO presence in some of our regions and the Regional Offices act as the "face" of the USPTO to those stakeholders, either as problem solvers for particular sets of stakeholders or as sounding boards for new ideas about IP policy. Each of the Regional Offices has hired patent examiners, PTAB Judges and Outreach staff that would not otherwise have been attracted to working for the USPTO but for the ability of those employees to work and live in their hometowns and the RO employees contribute to every mission of the USPTO. While the ROs are in a ramp-up phase, the partnering of the ROs with OID, among other business units, has provided a vehicle for hosting programs within the regions. Thus, a particular area of focus in FY 2016 has been the coordination of the OID activities by the Alexandria Headquarters and the ROs. Each of the ROs has a Director in place, and OID and the Regional Directors have regular contact to discuss outreach opportunities and coordinate closely on outreach to communities served by the regional offices. For example, if a request for a speaking opportunity comes in to someone in a RO, the RO reviews to determine if assistance from the Alexandria Headquarters is necessary and coordinates with whichever business unit would be appropriate to engage on that particular topic depending on its size, location, timing, etc. This coordination provides an outstanding ability of the ROs to play a significant role in reaching audiences to discuss the USPTO, the patent system, and the importance of IP and its role in fostering innovation that might not have otherwise occurred.

Regarding specific events, in addition to the Salt Lake City and Spanish Language events mentioned above, other partnering events have included: a booth and presentation at the San Mateo Maker Faire; Seminars in El Paso and San Antonio; and Lunch and Learn sessions in Detroit.

The ROs have hosted numerous and varied programming focused on all areas within the USPTO. In fact, the Midwest Regional Office has reached over 9,000 stakeholders in over 250 events. The Rocky Mountain Regional Office has reached over 18,000 stakeholders in over 220 events since January of 2016. The Silicon Valley Regional Office has reached nearly half a million stakeholders in over 180 events including several national conferences. The Texas Regional Office has reached over 14,000 stakeholders in over 180 events. During 2016, some examples of RO events have included: watch event at SV Office for Patent Quality Chat Webinar; Trademark Tuesdays at the Midwest Regional Office; Petitions Seminar at the Texas Regional Office; and a seminar on Legal and Policy Considerations of Intellectual Property in 3D Printing at the Rocky Mountain Regional Office.

C. OTHER PARTNERSHIPS

OID continued its long history of partnering with other government agencies both within Commerce and in the broader federal government. In that regard, OID participated in SBIR's Road Tour and coordinated with the Regional Offices for participation in SBIR's Bus Tours around the country. OID's webinar series in partnership with MBDA continues to be popular.

As part of OID's efforts to increase its outreach to under-resourced groups, OID has begun work with Operation HOPE to plan outreach to would-be entrepreneurs transitioning from prison to home life. Traditional jobs are beyond the reach of many of those leaving prison and entrepreneurship can be their only lifeline. The first of these events is planned for the week of October 12 which is Global Dignity Day.

To increase its reach to independent inventors, OID has begun working with the United Inventors Association of America; this non-profit alliance has helped connect OID to inventor groups around the country. Visits and presentations to those groups has begun and OID will continue building those connections in the coming year.

In addition, the USPTO is continuing its partnership with Cornell University; a partnership which is spearheaded by the Office of the Under Secretary. The partnership with the Smithsonian Institution continues to be valuable to the USPTO and has brought a varied of speakers to events for employees, including Alan and Ann Rothschild, authors of "Inventing a Better Mousetrap: 200 Years of American History in the Amazing World of Patent Models." The USPTO has also re-committed to the many partnerships it has around the country, such as Volunteer Lawyers for the Arts New York, focused on ensuring the success of the Patent Pro Bono Program.

Recommendations:

The PPAC continues to strongly support the outreach efforts of the OID. The PPAC recognizes in importance of the ROs in enhancing the outreach efforts of the USPTO. With the newness of the ROs, it is natural that there will be some intersections in these outreach efforts. It is recommended that the Regional Directors and OID continue their close cooperation on outreach efforts, with particular attention given to those in the local communities that may not have been adequately served when all outreach activities were centered in the Alexandria Headquarters but ensure that fiscally responsible principles are applied.

The PPAC also recommends that the OID and Regional Directors strive to ensure that all outreach efforts are evaluated to determine the most cost effective and efficient means to support those efforts. The PPAC also recommends developing plans for at least one or more PPAC quarterly meetings to be held at ROs, to further the goals of both the ROs as well as the PPAC in gathering relevant stakeholder involvement in USPTO public engagement.

X. LEGISLATION

A. INTRODUCTION

Enactment of additional patent reform in the remaining months of the 114th Congress (2015-2016) is unlikely. Largely similar bills, H.R. 9 (the Innovation Act) and S. 1137 (the PATENT Act), were approved by the House and Senate Judiciary Committees, respectively, in June 2015. Both bills were designed to address allegedly abusive patent litigation practices and attempt to increase transparency in the patent system. Progress of the bills was stalled when consensus could not be reached among stakeholder groups on several controversial provisions including, in particular, substantive changes to the scope and administration of the USPTO's post-grant review proceedings and litigation fee shifting provisions. However, discussions continue regarding a possible path forward that might include crafting a new, scaled-back package of reforms that combines a venue provision along with certain parts of the House or Senate bill, such as the customer-suit stay, demand letter and transparency provisions. Venue reform in patent infringement cases is of particular interest to many stakeholders because of statistics indicating that active forum shopping has resulted in the great majority of cases being filed in a limited number of federal district courts.

While stakeholders have different views regarding the appropriate composition of a new patent reform bill, the PPAC was pleased to see that most all were united in supporting enactment of S. 1890, the Defend Trade Secrets Act of 2016. The bill was signed into law (P.L. 114-153) on May 11, 2016, following near-unanimous votes of 87-0 in the

Senate and 410-2 in the House. The new law establishes a Federal civil private cause of action for trade secret theft that provides U.S. businesses with a more uniform, reliable, and predictable means of protecting their valuable trade secrets anywhere in the country. Effective protection of valuable trade secrets helps promote the innovation that is a key engine of our nation's economy.

The Fee Setting authority for the USPTO, provided under AIA, is scheduled to expire in 2018. It is a key priority of the USPTO to reauthorize that authority. The PPAC has continued to play a role in assisting the USPTO and providing comment in setting fees for its services. The PPAC agrees that the fee setting authority should be reauthorized.

B. CONGRESSIONAL HEARINGS

Commissioner for Trademarks Mary Boney Denison provided testimony on February 11, 2016, before the House Judiciary Subcommittee on Courts, Intellectual Property, and the Internet at a hearing captioned “Resolving Issues with Confiscated Property in Cuba, Havana Club Rum and Other Property.” USPTO’s Office of Policy and International Affairs Attorney-Advisor Conrad Wong testified on April 27, 2016, before the Senate Judiciary Committee at a hearing on “Counterfeits and Their Impact on Consumer Health and Safety.” On June 7, 2016, Mark Cohen, Senior Counsel, China, in the USPTO’s Office of Policy and International Affairs, provided testimony before the House Judiciary Subcommittee on Regulatory Reform, Commercial and Antitrust Law on the issue of “International Antitrust Enforcement: China and Beyond.” On September 13, 2016, Director Lee testified before the House Judiciary Committee’s Subcommittee on Courts, Intellectual Property, and the Internet at an oversight hearing of the USPTO.

The PPAC commends the USPTO leadership in its testimony before these various Congressional bodies, given the wide-ranging nature of questioning and the technical and complex nature of the USPTO's operations.

C. PENDING LEGISLATION

- H.R. 9, Innovation Act (Rep. Goodlatte, R-VA-6) – comprehensive patent reform bill approved by House Judiciary Committee on 24-8 vote on June 11, 2015.
- S. 1137, Protecting American Talent and Entrepreneurship (PATENT) Act of 2015 (Sen. Grassley, R-IA) – introduced April 29, 2015 – patent litigation reform bill approved by Judiciary Committee on 16-4 vote on June 4, 2015.
- S. 632, Support Technology and Research for our Nation’s Growth (STRONG) Patents Act of 2015 (Sen. Coons, D-DE) – introduced March 3, 2015 – alternative to S. 1137.

- H.R. 1832, Innovation Protection Act (Rep. Conyers, D-MI-13) – introduced April 16, 2015 – ensures USPTO’s full access to all user fee collections.
- H.R. 2045, Targeting Rogue and Opaque Letters (TROL) Act of 2015 (Rep. Burgess, R-TX-26) - approved by House Energy and Commerce Committee on 30-22 vote on April 29, 2015 – attempts to address abusive patent “demand” letters.
- H.R. 1896, Demand Letter Transparency Act of 2015 (Rep. Polis, D-CO-2) – introduced April 20, 2015 – requires certain detailed disclosures in patent demand letters with USPTO oversight.
- S. 2733, Venue Equity and Non-Uniformity Elimination (VENUE) Act of 2016 (Sen. Flake, R-AZ) – introduced March 17, 2016 – addresses forum shopping by requiring more significant contact by a plaintiff or defendant with a particular judicial district.
- H.R. 1057, Promoting Automotive Repair, Trade and Sales (PARTS) Act – (Rep. Issa, R-CA-49) and 22 co-sponsors – hearing conducted by Judiciary Committee’s Subcommittee on Courts, Intellectual Property and the Internet on 2-2-16 – effectively limits design patent protection to 2½ years for exterior car parts (e.g., hood, fender, tail light, side mirror).
- S. 560, Promoting Automotive Repair, Trade and Sales (PARTS) Act – (Sen. Hatch, R-UT and Sen. Whitehouse, D-RI) – referred to Senate Judiciary Committee on 2-25-15 – Senate companion to H.R. 1057.

The PPAC actively reviews and advises the USPTO on proposed legislative and administrative changes including those aimed at patent quality issues and potentially abusive patent assertion activities, and other adjustments to the patent laws, and the USPTO's fee setting authority, and will continue to monitor and consult with the USPTO on any such changes.

Recommendations:

The PPAC recommends that the USPTO continue to engage decision makers and other stakeholders to help ensure that any proposed legislative or administrative changes are appropriately crafted and narrowly targeted without adversely affecting the overall patent system, especially in terms of balance and fairness to all stakeholders, the efficient operation of the examination process, the quality of patents issued, or the overall costs and burdens to patent owners and other participants in the patent system. The PPAC also recommends that the USPTO stay abreast of potential suggested legislative changes regarding subject matter eligibility (35 U.S.C. § 101). Further, the USPTO should work within the Administration and with Congress to ensure that it continues to retain its

current fee setting authority as well as access to all future fee collections regardless of any government-wide sequestration or other limitation.

In addition, as noted TEAPP ends or expires on December 8, 2017, and the PPAC strongly urges that legislative action be taken to extend this program, to continue to support, promote, and expand the PHP and other telework programs, which permit examiners to work from remote locations. TEAPP has been very successful in attracting and retaining talent, and the loss of this additional tool would have significant negative consequences for the USPTO and its user community and be disruptive to ongoing USPTO operations.



ESTHER M. KEPPLINGER, CHAIRMAN

Ms. Kepplinger is currently the chief patent counselor at Wilson, Sonsini, Goodrich & Rosati. Her responsibilities include serving as the firm's liaison to the USPTO. She served for five years as the deputy commissioner for patent operations at the USPTO. During her tenure at the USPTO, she assisted in the development of policy for the Patent Examining Corps, played an active role in Trilateral meetings and projects, and she led several international negotiations working with other patent offices and the World Intellectual Property Organization to draft agreements, rules, and standards. She has 43 years of experience in intellectual property protection, spending 32 years at the USPTO. She received her bachelor's degree in biology from the University of Pennsylvania. Ms. Kepplinger is currently serving her second term as a PPAC member.



MARYLEE JENKINS, VICE CHAIRMAN

Ms. Jenkins is a partner and former chairperson of the Intellectual Property Group in the New York office of Arent Fox LLP. Marylee counsels Fortune 500 companies, international businesses and emerging technologies regarding intellectual property disputes and strategies, portfolio enforcement and management and technology development and protection. Her clients represent a variety of industries including computer hardware, software, Internet and various computer-related technologies; electrical and electromechanical devices and systems; the information and financial sectors; biotechnology; consumer products; fashion design; health care; medical devices; and real estate and construction. Ms. Jenkins is a past Chairperson of the American Bar Association (ABA) Section of Intellectual Property Law and a past President of the New York Intellectual Property Law Association. She currently serves on the ABA Standing Committee on Technology and Information Systems and is Co-Chairperson of New York Law School's Innovation Center for Law and Technology Advisory Board. Ms. Jenkins received a bachelor's degree in mechanical engineering from Columbia University School of Engineering and Applied Science; a bachelor's degree in physics from Centre College of Kentucky; and her law degree from New York Law School. She is serving her first term as a PPAC member.



WAYNE P. SOBON

Mr. Sobon is an intellectual property and business consultant, leveraging a wide-ranging legal and business background and over thirty years of experience to provide integrated intellectual property, business, and strategic consulting services tailored to start-ups and mid-sized companies. Previously Mr. Sobon served as Associate General Counsel and Director of Intellectual Property for Accenture for over a decade, and was most recently Senior VP and General Counsel of Inventergy Global, Inc., a publicly-traded IP value creation firm. He lives and works in the San Francisco Bay Area.

Mr. Sobon is a frequent speaker and lecturer on intellectual property issues, is a Past-President of the American Intellectual Property Law Association (AIPLA), a member of the board of Invent Now.org of the National Inventor Hall of Fame, and a prior member of the board of the Intellectual Property Owners Association (IPO). Mr. Sobon received a bachelor's degree in physics and a bachelor's degree in German studies from Stanford University. He received his law degree and master's in business administration from the University of California, Berkeley. Mr. Sobon is currently serving his second term as a PPAC member.



PETER THURLOW

Mr. Thurlow is a patent attorney and partner at Polsinelli law firm in New York. He has significant experience in all aspects of domestic and international patent prosecution, including Patent Trial and Appeal Board (PTAB), reissue and reexamination proceedings. As a patent prosecution attorney, his experience includes drafting, filing, and prosecuting United States patent cooperation treaties and international patent applications. Mr. Thurlow provides litigation support for patent litigation in the District Courts, the International Trade Commission, and before the Court of Appeals for the

Federal Circuit. Mr. Thurlow is the current Second Vice President for the New York Intellectual Property Law Association (NYIPLA). Mr. Thurlow has been active in the implementation of the America Invents Act (AIA), representing the NYIPLA's views before the USPTO. Mr. Thurlow received his bachelor's degree in marine engineering from the United States Merchant Marine Academy; his master's in business administration from Pace University in New York; and his law degree from Brooklyn Law School. Mr. Thurlow is serving his second term as a PPAC member.



MARK GOODSON

Mr. Goodson is the founder and principal engineer of Goodson Engineering in Denton, Texas, where he leads a team of professional engineers with specialties in electrical, mechanical, fire protection, and forensic engineering. Mr. Goodson is a consultant for public sector agencies, as well as commercial and industrial concerns. He is experienced in electrical death and injury analysis, carbon monoxide death analysis, and mechanical fire causation. His work has been published in numerous professional journals. He was the first engineer to serve on the State of Texas Electrical Board. Mr. Goodson served as a Court Special Master from 1989-1991. He was recently named editor of the new journal JFire. He is the engineer serving on the Texas Fire Marshal's Science Advisory Workgroup, where fire-related criminal convictions are being reviewed for accuracy of scientific evidence. In 2014, Mr. Goodson was appointed to the NIST panel on forensic sciences (NIST –OSAC). In 2015, UL named him as the electrical engineer that serves on their new fire investigation panel. He has testified in excess of 450 instances as an expert witness. Mr. Goodson holds a BSEE from Texas A&M, and attended UT Southwestern where he studied forensics. He is a licensed engineer in 15 states. Mr. Goodson is an independent inventor, holds eight patents and has several more pending. Mr. Goodson is currently serving his first term as a PPAC member.



DAN LANG

Mr. Lang is vice president, intellectual property, and deputy general counsel at Cisco Systems located in San Jose, California. He leads a team responsible for Cisco's intellectual property program, including portfolio development, patent licensing and acquisition, and policy. He has overall responsibility for leading a telecommunications industry portfolio of over 12,000 U.S. patents. Mr. Lang is also registered to practice before the USPTO. Mr. Lang is serving his first term as a PPAC member.



P. MICHAEL WALKER

Mr. Walker retired as the Vice President, Assistant General Counsel and Chief Intellectual Property Counsel for DuPont. He began his legal career in a law firm in Philadelphia, Pennsylvania, in 1986, and joined DuPont in 1990. While at DuPont, he has held a number of positions of increasing responsibility in the patent organization, including manager for the European patent organization in Geneva, Switzerland. He was named Associate General Counsel for Intellectual Property in 2001, and became Chief Intellectual Property Counsel in 2003. He is a former board member of the Intellectual Property Owners Association and a former president of the Association of Corporate Patent Counsel. As Chief Intellectual Property Counsel, Mr. Walker was responsible for all legal issues and policy matters related to DuPont patents and related intellectual property, including patent application preparation and prosecution, client counseling, patent opinions, and intellectual property aspects of transactions. Mr. Walker is serving his first term as a PPAC member.



JULIE MAR-SPINOLA

Ms. Mar-Spinola holds a dual business and legal role as Finjan Holdings, Inc.'s Chief Intellectual Property Officer and Vice President of Legal. She is responsible for the Company's revenue-based operations, including IP assets, cyber technology innovations, enforcement programs, licensing best practices, public policy initiatives, and mentorships. In 2016, Ms. Mar-Spinola was appointed to the Board of Directors for subsidiary, Finjan Mobile, Inc. Ms. Mar-Spinola has dedicated her entire professional career in representing high technology companies of all sizes and business models on all things IP, including IP portfolio development, M&A's, acquisitions, divestitures, enforcement (licensing and litigation), as well as preservation and monetization of proprietary technologies and patents.

Ms. Mar-Spinola is Chairman Emeritus and co-founder of ChIPs (www.chipsnetwork.org), a non-profit dedicated to advancing women at the confluence of law, technology, and regulatory policy. She serves as a court appointed mediator specializing in patent and other complex disputes, since 2011, and is a member of the High Tech Advisory Board at Santa Clara University, School of Law, since 2014. Ms. Mar-Spinola received her J.D. degree from Santa Clara University, School of Law, and

her B.A. degree in Chemistry from San Jose State University. Ms. Mar-Spinola has also been recognized for her contributions in the fields of technology and law, including most recently by the Silicon Valley Business Journal and the Recorder. Ms. Mar-Spinola is serving her first term as a PPAC member.



JENNIFER CAMACHO

Ms. Camacho is the Chief Legal Officer for Gen9, Inc. She is responsible for all aspects of the company's legal affairs and intellectual property. Prior to joining Gen9, Ms. Camacho was a partner in the international law firms of Proskauer Rose, LLP and Greenberg Traurig, LLP where she represented multiple clients in the life sciences industry, including biotechnology and synthetic biology companies, pharmaceutical and medtech companies, investment banks, venture capital firms, and other industry stakeholders. Ms. Camacho has been recognized for her work in the fields of intellectual property and life sciences law and has multiple awards and honors, including the Tech Luminary and Innovation All-Star Award from Boston Business Journal and Mass High Tech. She received her bachelor's degree in Cell and Structural Biology from the University of Illinois, and her law degree from Boston College Law School. Ms. Camacho is currently serving her first term as a PPAC member.

Appendix 2:

Fee Setting Report



**UNITED STATES
PATENT AND
TRADEMARK OFFICE**



PATENT PUBLIC ADVISORY COMMITTEE

Fee Setting Report

29 FEBRUARY 2016

PATENT PUBLIC ADVISORY COMMITTEE MEMBERS

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Background

The United States Patent and Trademark Office (USPTO or Office) is funded by user fees. Under the America Invents Act (AIA), the USPTO was given the ability to set its own fees but this authority is subject to the USPTO taking specific steps to collect and consider public input. The Office is now invoking this process as part of its first biennial review since the enactment of the AIA. After completion of a biennial fee review, Director Michelle Lee communicated a new patent fee adjustment proposal to the Patent Public Advisory Committee (PPAC) on October 27, 2015. The PPAC responded as required by collecting public input and holding a public hearing on November 19, 2015. This PPAC Fee Setting Report takes into consideration the submitted public comments and input gathered from the public hearing. After considering the PPAC's input, the USPTO will then issue a fee adjustment proposal by publishing a Notice of Proposed Rulemaking to invite further public comment. The Office will then adopt the new fee schedule by Rulemaking with the new fees proposed to go into effect in the summer of 2017.

How to Analyze the USPTO Patent Fee Proposal

The PPAC believes that it is important to provide the USPTO with fee income sufficient to operate a world-class patent examination capability. The Office relies entirely on user funding. The USPTO's statutory authority permits the setting of fees, which in the aggregate are sufficient to operate the Office and support efficient implementation of critical initiatives in the areas of quality, pendency, and information technology (IT). Evaluating the aggregate fee level requires forming considered views on the USPTO's actual needs and the value to the Nation's intellectual property system of increased spending to support the USPTO's goals of quality, timeliness and organizational excellence. The perceived efficiency of the Office in spending money and the rigor with which expenditures are evaluated and prioritized are also critical. Another related lens for viewing the proposal is the life cycle cost for obtaining and maintaining patent protection. Will an increase in costs excessively deter applicants from protecting their intellectual property? Does the USPTO's financial model adequately consider the prospect that price sensitive applicants will limit filings leading to lower than projected income?

A separate issue is whether the aggregate increase has been translated optimally into individual fee adjustments. Most of the public input has focused on this important aspect rather than the USPTO's overall financial model. The levels of specific fees such as Request for Continued Examination (RCE) fees, extension of time fees, and Information Disclosure Statement (IDS) fees can influence the behavior of applicants and can indirectly affect incentives and behavior within the Office. As the report will explain, the PPAC agrees with much of the public comment that criticizes the incentive/behavior-based rationale for certain adjustments. However if one accepts that the aggregate revenue enhancement target is correct, criticism to the effect that certain fees are too high necessarily implies that other fees should be raised instead.

The PPAC Supports USPTO Fee Increases to Support the Office's Needs

The USPTO requires sustained and adequate funding to maintain its position as the best patent office in the world. Maintaining and increasing quality will require continued adequate funding in order to continue to attract and retain a skilled workforce and continue the implementation

of a necessary and overdue but intrinsically costly upgrade of its IT infrastructure. A robust and secure IT system is essential.

With any fee structure, the USPTO's income cannot be predicted with certainty. Recent years saw a decrease in income compared to projected levels due to lower than expected filings. Because of this uncertainty, the USPTO's fee income should be sufficient to fund not only current operations but also its operating reserve and assure that multi-year initiatives are not impeded by short-term fluctuations in revenue.

The public input received by the PPAC as part of the fee setting process did not emphasize the implications of fee increases for the USPTO's overall revenue. However, the broad spectrum of stakeholders understands the importance of an adequately funded USPTO as evidenced by their consistent strong advocacy for the USPTO to keep the fees it collects and have the autonomy to set them. The PPAC agrees that the Office should set its fees to establish an adequate revenue stream over a sustained period to fund the people and infrastructure essential for a high quality, low pendency examination process, and to fund its operating reserve.

However, the PPAC also believes that as part of the fee setting process, the USPTO should be more detailed about the rationale for higher fees to avoid a perception of arbitrariness. Numerous public comments emphasized the need for greater transparency in the allocation of costs, historical aspects of the costs, and explanations as to why particular fees should be increased and how the increased revenues would be used (for example the quality improvements). It would be appropriate and helpful, for example, for the USPTO to outline the likely practical consequences for the USPTO's operations if the current fee structure were not changed. The public also would benefit from greater understanding of how the USPTO is prioritizing expenditures and how they are allocated between core examination functions and overhead. It also would be beneficial to understand to what extent the PTO has considered alternative approaches that involve greater adjustments on the expenditure side but a smaller fee increase. The PPAC believes that further justification is required which should help build public support for any new fee schedule.

Certain Fee Increases Raise Concerns

RCE Fees

The fee setting proposal includes significant increases to Request for Continued Examination (RCE) fees and the proposed revised RCE fees have attracted criticism from multiple commenters. Given that the work of processing an RCE occurs after the Examiner has already reviewed the patent application, performed a search, reviewed prior art, and prepared office actions, one would expect that the time involved in the RCE review would be much less than for an initial examination, even taking into consideration that some additional work must be completed on the RCE. The new fees (for large entities \$1500 for first request and \$2000 for second and subsequent requests) therefore seem arbitrary and/or excessive. The PPAC acknowledges that the unit cost figures for RCE work given by the Office exceed the current fees but it is not understood how these costs have been allocated among the steps of

prosecution or how they can be so high for a case that has already been in front of the same Examiner.

The high RCE fees seem to be as a means of trying to discourage applicants from stringing out prosecution with “unnecessary” RCEs. However, the widespread perception in the applicant community is that RCEs are a necessity rather than a choice given inefficiencies in the examination process and the current system in the USPTO that incentivize the Examiner to push for the filing of an RCE. The examination seems to vary considerably depending upon the Examiner assigned to the application. As a consequence one applicant may need one or more RCEs to navigate prosecution, while another applicant may not require any RCEs. The PPAC expects that even with higher fees, applicants will continue to file RCEs in similar numbers because they file RCEs for a quick route to patent issuance. Additionally, this problem is attenuated by the fact that the filing fees are only a small component of the overall expense of preparing and filing an RCE which mostly consists of patent attorney or agent fees. In the view of the PPAC, the enhanced RCE fees would be an added incidental expense imposed on applicants based on the vagaries of individual examinations. The PPAC urges the Office to reconsider the proposed increases to RCE fees. The PPAC recommends that the USPTO continue to focus on initiatives directed to reducing the need for RCEs and which are aligned with the Office’s goals of reduced pendency and improved quality.

Enhanced Claim Fees

The new proposed excess claim fees also seem high relative to the incremental work to be done in search and examination. If additional patent claims are legitimately deemed to be directed to dissimilar subject matter then a restriction requirement is appropriate and the applicant will be required to submit a divisional application subject to separate search and examination fees. The PPAC urges the Office to reconsider whether the new proposed excess claim fees are in fact justified or are the best solution to achieve patent quality, enhanced revenues, and maximum efficiency.

It also seems unfair that excess claim fees are assessed prior to restriction practice such that applicants are often forced to pay them even when the claims are fated to be canceled and pursued, if at all, in a separate application. The PPAC suggests that the Office consider implementing a refund scheme so that most or all of excess claim fees are refunded whenever excess claims are canceled in response to a restriction requirement. The costs for claims should reflect the claims actually examined, not just filed.

New IDS Model

The new fee proposal incorporates a significant change in the procedure for filing an Information Disclosure Statement (IDS) after a first action on the merits (FAOM). Under the proposed structure, certification under 37 C.F.R. 1.97(e) would no longer be needed nor would it be necessary to employ Quick Path Information Disclosure Statement (QPIDS) or file an RCE to obtain consideration of an IDS. There would, however, be a significant increase in fees for consideration of an IDS submitted after the FAOM or allowance.

Although good faith applicants will submit prior art prior to examination wherever possible, post-FAOM IDS practice is often unavoidable. New art often arises in related foreign prosecution or in adversarial proceedings such as litigation or post-grant reviews or reexamination of related cases, or simply in the course of an applicant's on-going research and development. The proposed increase in fees may appear to be an unfair and unjustified financial penalty on applicants who are being as timely as feasible in meeting their legal duty and bringing art to the attention to the Office. Raising IDS fees in fact can serve as a disincentive to complying with the requirement to file promptly when new prior art is discovered.

Although the PPAC appreciates the advantages of streamlining application procedures, we are also concerned that eliminating certification as a requirement may have unintended consequences on the efficiency of the examination process and patent quality. Examination works best when the Examiner has all the relevant prior art when preparing the FAOM, because realistically, that is when the Examiner can give the case maximum attention and focus. Significant new art received post-FAOM can substantially undermine the Examiner's initial analysis. Often this is unavoidable because of, e.g., developments in foreign prosecution and newly identified references. An unfortunate side effect of the proposal is that perhaps some applicants may willingly incur the fee for a late submission and delay the disclosure of significant prior art in the hope that it will be subject to a more cursory review after a FAOM. Either efficiency, quality, or both suffer in this scenario since the Examiner must consider the new references, revisit the claims, potentially redo the search, and undertake additional work to determine patentability.

Currently, an applicant can submit prior art with a certification under 37 C.F.R. 1.97(e) and if submitted within 30 days of receipt, the prior art will be considered and there is no impact on Patent Term Adjustment (PTA) for any patent issuing from that application. The new proposal would eliminate this option and perhaps result in a disincentive to early submission of new prior art because each submission of prior art after an FAOM would result in a fee. Such a scheme could result in applicants waiting to submit all new prior art until late in prosecution so the fee is paid only once. This outcome would have a negative effect on quality, pendency, and efficiency of examination.

The PPAC would suggest smaller increases to IDS fees to avoid penalizing applicants whose late prior art submissions are unavoidable while continuing the certification requirement to deter intentional delays in disclosing prior art.

[Notice of Appeal and Forwarding Fees](#)

The proposal includes substantial increases to notice of appeal and appeal forwarding fees. A likely consequence is to discourage the invocation of the appeal procedures. However, the reversal rate statistics suggest that the procedure is more frequently invoked out of necessity rather than choice. It would be inappropriate to use a targeted fee increase to discourage what are often meritorious appeals.

Fees for Post-Grant Proceedings

The PPAC and, based on the tenor of the public comments, the stakeholder community are supportive of the adjustments to the fees for Inter Partes Review (IPR), Post-Grant Review (PGR) and Covered Business Method (CBM) review. Effectively filing and defending in these proceedings is realistically an expensive proposition irrespective of the USPTO's fees. It is important that the Patent Trial and Appeal Board (PTAB) have sufficient resources to maintain a robust and timely process that fulfills the statutory mission of the AIA. However, there is room for further refinement in how fees are distributed through the process. One would think that there is more work for the PTAB post-institution and it would seem logical to impose a higher percentage of the fees at that point. It may also be sensible to subdivide the fees more finely (pay as you go) so that there might be savings if there is no oral argument or even a refund if a case settles. Mindful that some petitioners are small entities or individuals, the PPAC also suggests that the Office adopt a scaled petition fee schedule, perhaps based on the petitioner's annual revenue. However, because this process is relatively new and still contains significant uncertainties, such as the percentage of cases that will settle and thus lower the back end costs, it may be necessary to raise the fees and wait for more data that permits more finely drawn costs assessment.

OED (Office of Enrollment and Discipline) Fees

The PPAC, of course, recognizes the importance of having an effective process for ensuring compliance with the rules governing the Patent Bar. However, the PPAC is concerned about charging high fees to members of the Patent Bar who are subject to disciplinary proceedings when the outcome may well be exoneration after the facts are thoroughly vetted. It is not clear how the fee was set, how or when it would be assessed or even the rationale for the fee. The PPAC urges the USPTO to consider revising the proposal to at least allow for a refund of fees when the practitioner is ultimately found to be not at fault, or preferably by imposing the fee upon determination that disciplinary action is appropriate.

Design Patent Fees

There is broad concern in the stakeholder community that the proposed design patent fees are excessive and will deter innovators from seeking design patent protection. Although the increases would ostensibly be justified by the USPTO's stated costs, the PPAC would prefer the USPTO to intensify its focus on making the examination process more cost-efficient before imposing a fee increase of this magnitude.

Sequence Fees

More information is needed regarding the fee increases for the submission of mega-sequences, and whether the fees are to cover processing, storage or both. Understanding how the fees would be utilized would answer users' questions and clarify the need for the increases. Although the PPAC understands that citation of a sequence is under the control of applicant, the public has questioned the current rules requiring all sequences to be included within the sequence listing.

Additionally, more information is requested on the costs and any implications to the examining process for a late submission of a Sequence Listing to better understand the creation of this fee.

Copy Fees

Questions have been raised about the very high charges for copies of granted patents in the proposed fee schedule. Although this may be an infrequently utilized service, it would be beneficial to have more explanation of the apparently extremely high costs of providing it.

Conclusion

The efficacy of the US patent system depends largely on an adequately funded USPTO. An effective high quality large-scale examination system requires resources to train and maintain the knowledge of the Examiners, particularly at this time of evolving case law. For example, to promote high quality examination, the Office has been working to train examiners to rigorously and consistently apply section 112. This issue is critical to the quality of patents issued throughout the Office. Through the Enhanced Patent Quality Initiative, the USPTO has also proposed a number of ambitious initiatives, including a clarity of the record pilot, application of a Master Review Form in reviewing examination quality, and review of post-grant outcomes for application in prosecution. These require resources. But the real world consequences of inadequate application of the statutes and case law, including uncertain rights and unnecessary litigation, are far more expensive.

The USPTO must complete long overdue IT upgrades to provide the Examiners the right tools to do their jobs efficiently and effectively. Continued funding of the IT initiatives to complete key pieces of Patents End to End (PE2E), including a modernized search capability and replacement of antiquated systems utilized to track patent applications is essential. Furthermore, it is essential that the IT infrastructure be robust and secure.

The PTAB has become an important tool to ensure the quality of issued patents. Funding it appropriately is important to assure its effectiveness and credibility.

Quality and IT initiatives require sustained long-term funding to be successful. Given the variability and unpredictability of fee income as well as the continued possibility of interruptions to the Office's access to collected fees, the PPAC appreciates the need for a robust operating reserve.

Although the need for adequate resources is clear, the public case for higher user fees would benefit from greater transparency around the Office's ongoing efforts to prioritize expenditures, reduce inefficiencies or waste, and increase productivity. It would also be useful to understand the practical consequences of continuing the current fee structure. Because the USPTO is user funded and has raised fees several times over the past few years, it is important that it operate with transparency to allow users to understand that the fees are being properly assessed, and efficiently utilized.

But even appreciating the need for increased funding, the PPAC would prefer a different approach to selecting fees to increase. The Office's proposal seeks to minimize the costs of

entry to the patent examination system while raising costs at various points in the prosecution cycle such as RCE, late IDS submissions, and appeals. Raising these fees may be intended to have an incentivizing effect on the applicant community. However, a number of these actions are not necessarily under the control of the applicant. Additional prior art may be received in foreign prosecution necessitating an unexpected late IDS. Even with a good understanding of the prior art, the applicant may not know if the course of an examination will require an RCE or an appeal. Statistics evidence a non-uniform outcome of examination. Some Examiners have more RCEs filed than others in comparable arts, the pre-appeal and appeal conference statistics reveal a fair number of final rejections which are found to be non-sustainable, raising the costs and lengthening prosecution for those applicants. Furthermore, USPTO fees are but one component of the overall cost to the applicant, often being outweighed by patent practitioner fees, thereby attenuating the incentive. The practical effect on applicants of emphasizing mid-prosecution fees is to increase the uncertainty of the cost of obtaining a patent.

There are alternative approaches to fee setting that are not primarily focused on applicant incentives. One straightforward approach is to simply raise most fees across the board to the extent deemed necessary to achieve the needed revenue level. This approach does not target any behaviors and thus might be perceived as more fair. The IPR and PGR fee increases seem relatively uncontroversial and might be retained in this approach.

An alternative approach is to increase the front-end costs of filing, search, and examination, as well as issuance, rather than appeals, RCE, and other unforeseeable events. This approach may be in tension with the longstanding philosophy of encouraging entry into the patent system with lower front end costs. However, focusing the increase in fees on events that necessarily occur during the course of prosecution from filing to issuance, while limiting the increase in fees on unforeseeable events, is a possible option to distribute the fees across all applicants and perhaps mitigate against some of the current uncertainties.

The current proposal leaves maintenance fees undisturbed, an attractive feature to many stakeholders given their already high level, especially at the third stage. But there may be an opportunity to both increase revenue and decrease the controversial third stage fee by raising the maintenance fees at the first two stages, or alternatively only the second stage maintenance fee. The maintenance fee distribution has remained unchanged in recent decades even while the mix of patented technologies with associated disparate value profiles over time has changed. For example, a software patent may experience its peak value early in its term whereas a pharmaceutical patent for an approved drug will often remain very valuable at the end of the term. A reevaluation of the maintenance fees for each stage may be appropriate.

In the long run, however, maintenance fee income may be negatively impacted as the changing legal environment limits patent grants or further contribute to uncertainty about already granted patents in certain fields of technologies. If this occurs, it may become necessary to increase fees in the early stages of prosecution, essentially ending the approach of back-loading fees to encourage easier entry into the system.

The PPAC agrees that an overall increase in fees is necessary at this time to improve quality, complete the long overdue modernization of the IT infrastructure, and make up for the shortfall in revenues due to lower than expected filings experienced in 2015. However, the USPTO should continue to identify and implement cost-cutting initiatives to maintain its status as an efficient and well-run organization.

The PPAC views the biennial fee review process as invaluable. The USPTO is in the best position to assess its funding needs and to set fees accordingly. The current fee-setting authority with the requirement for public notice and public comment, along with the review and report from the PPAC provides a robust mechanism for the review of and regulator to the resulting fees. To better provide the USPTO with the flexibility needed to permit regular reviews and modifications of their fees and ensure a steady revenue stream to fund the world class patent office, the PPAC recommends that the USPTO's fee setting authority be extended beyond 2018 and made permanent.

The PPAC appreciates the hard work and thorough analysis of the USPTO staff in preparing the new fee adjustment proposal. Meeting the USPTO's funding needs is critical for our innovation system and our Nation's economy. We hope that this report is beneficial in refining the proposal and thereby supporting a successful US patent system.



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