PPAC

Patent Public Advisory Committee

2015 Annual Report

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UNITED STATES
PATENT AND TRADEMARK OFFICE

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PATENT PUBLIC ADVISORY COMMITTEE OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

November 2, 2015

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

Dear Mr. President:

It is my pleasure and privilege to present you with the 2015 Annual Report of the Patent Public Advisory Committee (PPAC) of the United States Patent and Trademark Office (USPTO). A significant and important change during FY 2015 was the confirmation in March 2015 of Michelle Lee as Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office. Through her skillful leadership, she is successfully guiding the USPTO on Intellectual Property (IP) policy and day-to-day operations and providing stability, and she will ensure continued progress through the remainder of your term.

In alignment with the importance of the issuance of high quality patents with a reasonable pendency, Under Secretary and Director Michelle Lee established patent quality as the major focus of her tenure, announcing an Enhanced Patent Quality Initiative in February of 2015, which focuses on excellence in work product, excellence in measuring patent quality, and excellence in customer service. To gather input from stakeholders on quality, the USPTO held a two-day Quality Summit and utilizing this information, the USPTO is developing initiatives directed to improving the quality of the work product, customer service and the processes involved in delivering and measuring quality work.

In FY 2015, the USPTO continued to focus funding on Information Technology (IT) initiatives, delivering significant progress in replacing antiquated technology and providing new systems for use by patent examiners, patent applicants and other stakeholders, that will result in more functionalities with improved capabilities and better interfaces for interactions with the USPTO. Some of the necessary IT improvements underway at the USPTO to modernize the computer

systems essential to the patent examination process should provide tools that will enhance the abilities of the examiners to deliver quality examination.

During FY 2015, the fees collected were lower than projected stemming from lower patent filings. However, in FY 2014, $148.2 million in patent and trademark fees had been deposited in the Patent and Trademark Fee Reserve Fund (PTFRF) established by the Leahy-Smith America Invents Act (AIA). The USPTO worked closely with Congress, submitted a reprogramming notification and pursuant to congressional approval, and the $128.7 million of previously collected patent fees was transferred from the PTFRF to the USPTO Salaries and Expenses Fund on December 17, 2014. This first time utilization of the PTFRF allowed the USPTO to continue funding critical IT programs to update essential infrastructure, hire judges to handle a growing caseload of ex parte appeals and new trials, and hire patent and design examiners to reduce pendency and the backlog of applications. 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 the Global Dossier project, which will deliver improved efficiency and greater access to patent documents for examiners and the public.

The linkage between IP and the U.S. economy is clear. 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. And, as you are well aware, a strong, 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,

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

Enclosure: Patent Public Advisory Committee Fiscal Year 2015 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 Minority Member, Senate Judiciary Committee
The Honorable John Conyers, Jr., Ranking Minority 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
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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EXECUTIVE SUMMARY

I. INTRODUCTION

The Patent Public Advisory Committee (PPAC or Committee) thanks the United States Patent and Trademark Office (USPTO or Office), 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. PPAC PROCESSES

The PPAC holds quarterly meetings at the USPTO to address patent-related matters. These meetings are announced in advance, are open to the public, are Web cast, and have telephone call-in numbers so interested persons can provide real-time feedback and ideas. We encourage members of the public to submit comments and questions via telephone, e-mail, or via the PPAC website. The Committee also participates in hearings, roundtables, and other publically announced events to share information and to obtain input regarding matters of significance to the USPTO and the innovation communities.

The Committee has several standing subcommittees to address topical areas that are focused upon issues that require action over time. The subcommittees consist of up to four members. Subcommittees meet informally from time to time, either in person or via teleconferences. The topical areas discussed in detail below represent matters of ongoing interest to the USPTO and the Committee. Topical area subcommittees interact with USPTO personnel to obtain information, engage in in-depth discussions, and provide suggestions to assist the USPTO.

Members of the subcommittees have greatly appreciated the high level of cooperation and trust afforded by Office personnel. For this trust, the Committee sincerely thanks Director Michelle Lee, former Commissioner for Patents Margaret Focarino, current Commissioner for Patents Andrew Hirshfeld, and other Office personnel for helping to create a very positive, effective working relationship for the benefit of the entire user community.

Brief descriptions of the PPAC's activities and how those have furthered the USPTO 2014 - 2018 Strategic Plan are below. More detailed descriptions are provided in the individual sections.

III. PATENT QUALITY

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 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, announcing an Enhanced Patent Quality Initiative in February 2015.

The USPTO proposed six initiatives to enhance patent quality (80 Fed. Reg. 6475, Feb. 5, 2015). These six initiatives are built around three pillars: Excellence in Work Product, Excellence in Measuring Patent Quality, and Excellence in Customer Service. The USPTO accepted email comments to the Federal Register notice, held town hall meetings and forums with patent examiners, and sponsored a two-day Patent Quality Summit in Alexandria to gather input from internal and external stakeholders. The emerging themes from the responses and input are: having examiners clearly articulate their position on the record is a critical component of quality; the USPTO needs to differentiate between measures of patent process and patent product; and the quality of the interview is much more important than the type of interview (i.e. telephonic, in-person or videoconferencing). Currently, the USPTO is continuing to accept comments for improving patent quality though the World Class Patent Quality (WCPQ) mailbox (worldclasspatentquality@uspto.gov), is evaluating those suggestions and comments received and developing proposals for next steps based on this input.

Significant necessary IT improvements underway at the USPTO to modernize the computer systems essential to the patent examination process should provide tools that will enhance the abilities of the examiners to deliver quality examination.

In August 2015, the USPTO made available on its website a tool that is a timeline that provides information about what petition types are available to a patent applicant or patentee at any stage of prosecution or life of the patent. Covering all petitions within the patents organization, this webpage gives information about filing the petition, pendency times, grant rates and deciding offices. It allows an applicant to utilize the information for any stage of prosecution to understand which petitions are available to them at that stage of prosecution.

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 the reviews and deliver the feedback, but they must be allowed an adequate amount of time to perform these functions and have an understanding 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 Procedures (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. Also, the PPAC recommends that claim interpretation training focus on, among other things, the "Broadest Reasonable Interpretation (BRI) standard" for interpreting claims, including examples of how broadly a claim may be interpreted and examples of unreasonable interpretations. Details on further training regarding claim interpretation and BRI should be made available to the public, as the USPTO is currently doing with other Patent Examining Corps training materials, in order to assist applicants as well as examiners in understanding of how examiners interpret claims.

The PPAC urges the USPTO to provide an additional option for resolution of prosecution, such as an interview during one or both of the pre-appeal brief conference or the appeal conference to afford applicant the opportunity to verbally participate in the discussion about the merits of the rejections. It is believed that this investment in time will actually reduce subsequent work of both the USPTO and applicant by reducing the need for a Request for Continued Examination (RCE) or appeal. 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 applicant and the USPTO. The opportunity to interview at all stages of prosecution, in particular before a first office action, to help get the application in condition for allowance more quickly with fewer actions and responses is also a valuable area for enhancement.

IV. FINANCE

In FY 2015, the USPTO experienced a dip in filings, which caused the agency to collect less revenue than anticipated. Nonetheless, the USPTO was able to maintain funding for key long-term IT initiatives and continue improvements in pendency. This reflects careful financial management. The USPTO worked with the House and Senate Committees on Appropriations to successfully reprogram prior year collections to the salaries and expense operating reserves. The transfer provided the agency with a continuity of funding to continue steady progress against these initiatives.

It is uncertain whether and when the long-term growth of filings will resume. This uncertainty is quite properly impacting the USPTO's financial planning and the PPAC commends the USPTO's cautious approach. The USPTO is conducting the biennial process of reviewing its fees. The PPAC will play its statutory role of collecting public input.

Recommendations: Congress should continue to assure stable funding for the USPTO. The USPTO is funded by user fees and Congress should continue to allow the USPTO to access fees that were previously collected. The user fee funding model should also serve to exempt the USPTO from any future sequestration or any other limitation in access to fees collected from users. It is inappropriate to block the USPTO's access to funds collected from users during sequestration when the Office is not reliant on tax collections. The sequestration of 2013 interrupted the overall functions of the USPTO including critical IT efforts, substantially raising their long term costs and delaying needed improvements to the infrastructure for patent examination.

The USPTO should continue to prudently navigate the uncertainties in fee collections. This includes carefully aligning available funds to priorities and minimizing the addition of long-term commitments to non-discretionary spending.

V. 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, when plans had been dramatically curtailed during sequestration. 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.

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, 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 a software tool, such as searching and claim tracking, can be consistently streamlined across tools and applications.

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 the DAV rollout so far. 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 legacy systems at the USPTO whose outdated custom design dates back to the 1980s. Although the PPAC is delighted with the progress so far, we recognize 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.

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 Geneva Act of the Hague Agreement Concerning the International Registration of Industrial Designs (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. In May 2015, the USPTO also delivered functionality to allow foreign patent offices to access application and patent data from the USPTO and developed a web-based system to allow public access in the United States to foreign patents scheduled to deploy in late November 2015. These international initiatives continued to receive attention and priority, even in a few cases where work had not previously been scheduled for FY 2015.

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. OCIO plans aggressive development on the new examiner search system and official correspondence

(OC) tool in FY 2016, with deployment early in FY 2017, but legacy system retirement will continue even well after those releases.

Recommendations: With the decline in fee collections for FY 2015 and the commensurate decline in the projected fee collections for FY 2016 and reduction in available funds from reserves, it will be a challenge to protect mission-critical IT projects from future spending plan adjustments. The PPAC notes that slowing IT modernization will cause 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.

VI. PATENT PENDENCY

The USPTO continued to make improvements to decrease pendency to first action and total pendency during FY 2015, achieving 26.6 months for total pendency and 17.3 months for pendency to first action. These data points indicate a continued downward trend in pendency over the last several years.

The maturation of new examiners, as well as the continued hiring of examiners, is responsible for this favorable trend. It is further noted that Track One has given the stakeholder a priority examination option. The Office's recent emphasis on conducting interviews including, for example After Final Consideration Pilot 2.0 (AFCP 2.0) during FY 2015, appears to be bringing about an improvement in pendency. 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 totaltotal cost.

Recommendations: The Track One program is nearing its annual capacity of 10,000 applications. The PPAC recommends that the USPTO consider whether expansion of the program is warranted. It is further recommended that changes in PPH continue to be monitored for determining efficacy to the user community. The PPAC recommends continued improved communications and education of stakeholders with regard to prosecution options that include Track One, AFCP 2.0, and PPH.

VII. REQUESTS FOR CONTINUED EXAMINATION

The PPAC is pleased to report that progress was made during FY 2015 in reducing the backlog of Requests for Continued Examination (RCEs) to 26,901 at the end of 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 over 110,000 in March of 2013. However, focused attention on RCEs had reduced the backlog to 78,272 at 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 to26,901 at the end of FY 2015. Additionally, the USPTO focused efforts to move the oldest RCEs. This resulted in 32.8 percent being over four months from filing compared to 52 percent of the RCEs being over four months from filing on October 1, 2014, and 73.4 percent of the RCEs on October 1, 2013. This is a commendable achievement in reducing the total number of RCEs awaiting action and handling them in a more timely fashion.

Recommendations: The PPAC recommends exploring an avenue for resolution of issues in prosecution other than an appeal to the Patent Trial and Appeal Board (PTAB), such as permitting applicant participation in the pre-appeal brief conference or the appeal conference that would permit an interview with multiple primary examiners in addition to the examiner of record. Because RCEs represent a significant number of the applications being filed, the PPAC recommends that the reported numbers on filings not be reported as "new" applications but rather as "new serialized" applications and new RCEs. The PPAC also recommends that the Office place RCEs on the amended docket or establish a goal of four months to completion of an action. 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 AFCP 2.0, and other such programs to provide entry of amendments after final rejection. 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 is supported by the PPAC.

VIII. PATENT TRIAL AND APPEAL BOARD

The Patent Trial and Appeal Board (PTAB or Board) continued to be busy in FY 2015, receiving a peak of 1,902 inter partes review/covered business method/post-grant review (IPR/CBM/PGR) petitions in FY 2015. As of September 30, 2015, the Board had received 3,984 total petitions since inception of the AIA: 3,578 IPR proceedings; 382 CBM proceedings; 13 PGR proceedings; and 11 derivation proceedings. The majority of the petitions were in the electrical/computer software area. In particular, the petition filings by area of technology were: 61 percent electrical/computer software; 25 percent mechanical; 6 percent chemical; 8 percent biotechnology/pharmaceutical; and <1 percent design.

The backlog of ex parte appeals pending at the Board continued its downward trajectory in FY 2015, with the peak reaching 26,014 appeals in October 2014 and the lowest levels reaching 21,293 appeals in September 2015. The Board implemented an Expedited Patent Appeal Pilot program and a Streamlined, Expedited Patent Appeal Pilot for Small Entities to provide new initiatives to expedite the review of ex parte appeals and to reduce the ex parte backlog.

The PTAB continued its outreach efforts in FY 2015. In particular, the PTAB hosted six roundtables in the Midwest region in November 2014 and co-hosted roundtables in Santa Clara, California; Dallas, Texas; and Alexandria, Virginia in August 2015 in November 2014 to share

information about the AIA trials including statistics, lessons learned, and techniques for successful motions practice. In addition, in 2015 the Board initiated "Boardside chats," which is a lunchtime webinar series hosted by PTAB judges to update stakeholders on current Board activities and statistics as well as to receive feedback about the PTAB process. The Office also issued several Federal Register notices related to the PTAB process to implement quick fixes and to make proposals to provide more substantive changes to the PTAB process.

Recommendations: The PPAC applauds the outreach efforts the PTAB has made to attend roundtables around the country including in the Midwest region in November 2014 and in Santa Clara, California; Dallas, Texas; and Alexandria, Virginia in August 2015. Moreover, the PTAB Boardside chats and Director Lee's blogs related to ongoing PTAB developments have been particularly helpful and well received by stakeholders. The PPAC recommends that the PTAB continue these outreach efforts as stakeholders find the updates and updated PTAB statistics helpful when making decisions related to the PTAB process.

The PPAC recommends that the USPTO continue to evaluate the conduct of 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 believe that the PTAB proceedings unduly favor petitioners while others believe that the proceedings are fair. In fact, in FY 2015, concerns have been raised with Congress with respect to the fairness of the inter partes review proceedings. The PTAB roundtables, Boardside chats, "quick fixes," and proposed rule changes have helped to address stakeholders' concerns, but the Office needs to remain vigilant in this regard.

With respect to AIA statistics, the PPAC recommends that the USPTO continue to update stakeholders with the latest and most accurate AIA statistics because stakeholders use these statistics to make 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 review pilot programs to expedite the review of ex parte appeals and to reduce the backlog of ex parte appeals. The PPAC recommends that the Office remain focused on reducing the backlog, and consider other pilot programs and initiatives to address these ongoing issues.

IX. LEGISLATION

Legislative activity on patent issues in the 114th Congress (2015-16) has thus far mainly focused on proposals to curtail arguably abusive patent litigation practices. Separate bills advanced through the House and Senate Judiciary Committees in June 2015 and floor action in both the House and Senate may happen in the latter part of 2015. Both bills address similar issues primarily focused on managing specific features of patent litigation, arguably to lessen opportunities to unnecessarily delay resolution of disputes or for claims of low or no probable value.

Prior to floor action, Judiciary Committee Chairmen in both Houses made commitments to various stakeholders to explore and craft amendments to improve USPTO's administration of the post-grant review proceedings established pursuant to the 2011 AIA. Concurrently, the USPTO conducted substantial outreach to stakeholders and promulgated draft rules to work to improve the efficiency and effectiveness of the proceedings based on its experience with the proceedings and the input from stakeholders. The PPAC has continued to work closely with the USPTO as it has reviewed and enacted changes to the administrative proceedings and will continue to do so. The PPAC is cautiously optimistic that the implementation of the proceedings to date, the USPTO's willingness to examine and revise their rules, and the pending court review of certain key cases, will continue to improve the operation of the post-grant review proceedings. With these improvements, the PPAC believes that the post-grant proceedings can continue to play their role in improving patent quality and serving as a timely and lower cost alternative to court litigation in resolving questions of the validity of issued patents while addressing stakeholder concerns. Accordingly, the PPAC would caution against any wholesale legislative changes to the proceedings at this point in time.

Recommendations: The PPAC recommends that any legislative or administrative actions should be carefully and thoughtfully targeted to specific issues, without unduly burdening patent owners or other participants in the patent system. Any such action must not impair the rightful assertion of patent rights, that is, to exclude others from practicing new, non-obvious, and useful inventions for a limited time, which has been a cornerstone of U.S. technology and economic policy since its foundation. Inevitably, there is a diversity of perspectives among stakeholders about the desirability of legislative changes to the patent system. The USPTO should continue to make its expertise available to Congress, seeking out diverse stakeholder input, as that body works to craft possible legislation.

Considering possible budget uncertainties in the future, the PPAC further recommends that the USPTO continue to work with the Administration and Congress to ensure that the USPTO has access to all of its fees.

X. INTERNATIONAL COOPERATION AND WORK SHARING

The USPTO's creation of the Office of International Patent Cooperation (OIPC) last year reflected the USPTO's strong commitment, in concert with the stakeholder community, to make current and future improvements to the complex and costly international patent filing system. During the past year, OIPC has worked to create a cohesive and strategic approach regarding international initiatives and activities throughout the USPTO, while also seeking extensive feedback and input from the user/stakeholder community to help improve quality, efficiency, timeliness and predictability with regard to U.S. and global patent prosecution.

The PPAC supports the efforts made by the USPTO this year in its international cooperation and work sharing initiatives among multiple patent offices and encourages the continued development, expansion and outreach of these efforts, particularly, for example, international patent law

harmonization via the IP5 Patent Offices (representing, outside of the United States, China, Korea, Europe, and Japan) and Group B+ Patent Offices, the Global Dossier Initiative and its implementation by the USPTO, the Collaborative Search Pilot Programs (CSP) with the Japan Patent Office (JPO) and the Korean Intellectual Property Office (KIPO), the continued usage and extension of the PPH to additional countries, and the Hague Agreement.

Recommendations: The PPAC commends the focused increase in activity with regard to international initiatives and programs within the USPTO during the past year. However, previous budget cuts are still showing their effect and concerns remain on the impact of such cuts on the USPTO's IT infrastructure, as well as the USPTO's ability to develop, implement and maintain its international initiatives, programs and processes. The PPAC recommends stable IT funding along with regular and consistent upgrades to the IT infrastructure so as not to negatively impact the USPTO's global leadership position.

The PPAC supports the strides made by the USPTO this year in its international cooperation and work sharing initiatives among multiple patent offices and strongly supports the USPTO in its efforts to encourage other patent offices to make their own dossier information accessible via the internet twenty four hours a day/seven days a week to the user community and examiners. The PPAC encourages further outreach through a variety of forums to extend discussions among multiple patent offices, as well as to continue to provide best practices training and dialogue across such offices. The PPAC further encourages the USPTO to do more outreach, and include more entities having a variety of international patent perspectives, to foster earlier acceptance of new procedures and processes within the USPTO, as well as in the global patent arena. Finally, the PPAC recommends that the USPTO diligently review its efforts on an annual basis to ensure that the international initiatives promote the overall objectives of harmonization and international work sharing, while at the same time promoting best practices to improve quality, efficiency, timeliness and predictability.

XI. HUMAN CAPITAL

The value in an organization comes from its human capital, i.e., 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 USPTO's mission, and the work done to hire, train, and retain examiners is critically important to the success of the Office.

There have been many activities related to human capital in 2015. The Office hired an additional 340 examiners in FY 2015. The hiring goals for the Office need to be consistent with reduced fee collections, and in FY 2016, the Office intends to hire 125 utility, plant, and reissue (UPR) examiners, including one class of about 25 experienced hires, and an additional 30 design examiners.

To continue its focus on productivity and quality, the Office has instituted and furthered a number of initiatives to make the most of its current Patent Examining Corps. These include extensive

training, an investment in IT tools, and the development of 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 USPTO employees either participates in the Patents Hoteling Program (PHP), the Telework Enhancement Act Pilot Program (TEAPP), or works from the USPTO regional offices in Detroit, Denver, Silicon Valley, or Dallas.

With respect to the PHP, the National Academy of Public Administration (NAPA) issued a report on July 31, 2015, titled "The United States Patent and Trademark Office: A Telework Internal Control and Program Review". The USPTO sought NAPA's review following the USPTO's actions on, and significant Congressional interest in response to, whistleblower allegations received by the Department of Commerce Office of Inspector General (OIG) in 2012 about possible time and attendance violations by USPTO patent examiners alleged to be teleworking. The USPTO requested NAPA to evaluate its telework program, including the PHP and the time and attendance process. The NAPA report was overall very positive about the Teleworking and Hoteling programs and noted that it would appear unlikely that time and attendance abuse is widespread or unique to teleworkers, but did indicate that NAPA believes the USPTO can do more to strengthen its telework program and made a number of recommendations in that regard.

Recommendations: With the decline in fee collections for FY 2015 and the commensurate decline in the projected fee collections for FY 2016, the PPAC recommends that the Office continue to carefully evaluate its hiring needs consistent with both the expected attrition rate and the projected fee collections for FY 2016 so as not to be in a position of over-hiring for expected future needs.

The PPAC further recommends that the Office continue to advance distributed workforce initiatives to attract a larger pool of well-qualified candidates and further enhance retention of experienced examiners for an entire career. In this regard, the Office should continue to support, promote, and expand the PHP and other telework programs. The PPAC recommends that the Office continue to improve its processes to properly manage its nationwide workforce, to measure productivity, and to monitor potential abuse.

XII. USPTO OUTREACH INITIATIVES

The Office of Innovation Development (OID) is an outwardly facing component of the USPTO and oversees its efforts to support American innovation, entrepreneurship, and job creation. Often working closely with other U.S. Government officials and agencies, the OID designs and implements outreach assistance programs to a wide range of stakeholders including independent inventors, women, pro se applicants, entrepreneurs, small business concerns, colleges and universities affiliates, museums, minorities, and other underserved communities. For example, the USPTO and Smithsonian jointly sponsored an Innovation Family Festival in FY 2015 as part of a five-year collaboration to showcase American Innovation. These outreach activities are in addition

to those conducted by other offices of the USPTO on issues related to substantive examination, patent trials, and available initiatives and specific programs.

The OID also assists the Office's educational outreach programs that promote IP protection and the valuable role it plays as a key driver of the U.S. economy. These programs are designed to educate the public about IP in general, as well as, the specifics of the patent application process, including the intricacies of patent prosecution and post-grant patent issues. The post patent grant education includes the importance of patents and other forms of IP in starting, building, and growing a business.

The OID employs a variety of tools and techniques to quantify the reach of its programming and direct assistance with stakeholders. Some examples of these techniques and tools are maintaining logs of stakeholder's direct calls and emails to the OID staff, the volume of participants to in-person and Web casted programming and use of Google® analytics to measure hits to the OID Web pages and Web information provided.

A noteworthy achievement in 2015 relates to the Pro Bono program. In a February 2014 Executive Action, President Obama tasked the USPTO with dedicating educational and financial resources to assist inventors who lack legal representation and to expand the existing pro bono programs. As announced by the White House on August 4, 2015, the USPTO Pro Bono Team was successful in establishing a patent pro bono program in all 50 states, meeting its goal of reaching this milestone by the end of FY 2015.

Recommendations: The PPAC commends the USPTO on its expansion of outreach efforts to reach an ever-growing number of the public and stakeholder community. The PPAC recommends that the USPTO continue to grow its programs in this area to disseminate information concerning innovation and the USPTO's role and avenues for assistance and information.

TOPICAL AREAS

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, announcing an Enhanced Patent Quality Initiative in February 2015. Director Lee validated patent quality as a primary goal for the USPTO by, among other things, establishing a Deputy Commissioner for Patent Quality position. The PPAC applauds this emphasis on quality and the initial steps undertaken in FY 2015 to enhance patent quality.

B. QUALITY INITIATIVES – FEDERAL REGISTER NOTICE

As a first step, the USPTO proposed six initiatives to enhance patent quality (80 Fed. Reg. 6475, Feb. 5, 2015). These six initiatives are built around three pillars: I. Excellence in Work Product, II. Excellence in Measuring Patent Quality, and III. Excellence in Customer Service. The proposals for work products were 1). Applicant requests prosecution review of selected applications, 2). Automated pre-examination search, and 3). Clarity of record. For measuring patent quality, the initiative was 4). Review or suggest improvements to quality metrics. For excellence in customer service, the initiatives were 5). Review of current compact prosecution model and its effect on quality and 6). In-person interviews capability with all examiners. The USPTO accepted email comments to the Federal Register notice, held town hall meetings and forums with patent examiners, and sponsored a two-day Patent Quality Summit in Alexandria to gather input from internal and external stakeholders.

The USPTO received 107 official responses to the Federal Register notice and these responses were stratified into 1,206 submissions or suggestions on various quality topics. The emerging themes from these responses are: having examiners clearly articulate their position on the record is a critical component of quality; the USPTO needs to differentiate between measures of patent process and patent product; and the quality of the interview is much more important than the type of interview (i.e. telephonic, in-person or videoconferencing). Currently, the USPTO is continuing to accept comments for improving patent quality though the World Class Patent Quality (WCPQ) mailbox (worldclasspatentquality@uspto.gov), is evaluating those suggestions and comments received and developing proposals for next steps based on this input. The PPAC endorses this focus and appreciates the opportunity to provide feedback and suggestions to the USPTO on these efforts.

The Deputy Commissioner for Patent Quality established regular Quality Chats, focusing on different aspects of patent quality. For example, the August 11, 2015 chat included an overview of the structure of the Office of Patent Quality Assurance (OPQA), the quality surveys regularly administered, the reviews undertaken by OPQA of work product and the quality metrics utilized by OPQA. 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.

C. QUALITY MEASUREMENT

Below is a chart of metrics used by the Office to measure patent quality, with results since FY 2010, including the quality composite score and its components.

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
FY15Q3	**96.3%**	**95.3%**	**96.2%**	**90.3%**	**90.8%**	**5.6**	**5.0**	**58.5**
FY15Q2	96.3%	95.3%	96.3%	90.5%	91.1%	5.6	5.0	60.2
FY15Q1	97.0%	95.6%	97.4%	90.8%	91.3%	6.4	6.1	76.9
FY14Q4	**96.9%**	**95.5%**	**97.2%**	**90.6%**	**91.2%**	**6.4**	**6.1**	**75.0**
FY14Q3	**96.6%**	95.5%	97.4%	90.5%	91.3%	5.7	6.5	72.7
FY14Q2	96.6%	95.9%	97.4%	91.1%	91.3%	5.7	6.5	75.9
FY14Q1	**96.2%**	96.1%	97.9%	91.6%	91.1%	5.8	7.4	74.4
FY13Q4	**96.2%**	**96.3%**	**97.6%**	**90.5%**	**90.8%**	**5.8**	**7.4**	**71.9**
FY13Q3	96.2%	96.2%	97.4%	90.7%	90.2%	6.4	5.1	64.9
FY13Q2	96.5%	95.6%	97.1%	90.4%	89.9%	6.4	5.1	63.6
FY13Q1	96.6%	95.9%	96.8%	90.6%	89.8%	5.2	9.4	72.0
FY12Q4	**96.6%**	**95.9%**	**97.2%**	**90.9%**	**89.8%**	**5.2**	**9.4**	**72.4**
FY12Q3	96.6%	96.1%	96.6%	90.8%	90.1%	5.0	5.1	66.1
FY12Q2	96.3%	96.0%	97.0%	91.3%	89.6%	5.0	5.1	65.5
FY12Q1	95.4%	95.2%	95.7%	90.8%	89.5%	3.0	4.3	35.2
FY11Q4	**95.4%**	**95.2%**	Baseline 94.6%	Baseline 90.9%	**89.5%**	**3.0**	Baseline 4.3	Baseline 00.0
FY11Q3	95.4%	94.7%			89.1%	2.7		
FY11Q2	95.3%	94.8%			88.9%	2.7		
FY11Q1	96.2%	94.9%			88.9%	3.6		
FY10Q4	96.3%	94.9%	N/A	N/A	89.3%	3.6	N/A	N/A
FY10Q3	96.0%	94.6%	N/A	N/A	89.5%	1.8	N/A	N/A
FY10Q2	95.7%	94.4%	N/A	N/A	89.1%	1.8	N/A	N/A
FY10Q1	94.5%	94.1%	N/A	N/A	87.9%	1.2	N/A	N/A
FY09Q4	Baseline 94.4%	Baseline 93.6%	N/A	N/A	Baseline 85.9%	Baseline 1.2	N/A	N/A
FY09Q3			N/A	N/A			N/A	N/A
FY09Q2			N/A	N/A			N/A	N/A
FY09Q1			N/A	N/A			N/A	N/A

The measurement of patent quality is a challenging and time-consuming endeavor, but such analysis is critical to high quality and continued improvement and consistency of the work. The current quality metric is a composite that blends a range of separate measures of quality of the work product, internal performance, and customer satisfaction. It includes, for example, scores for First Action on the Merits (FAOM) completeness and search in random samples of examiner actions on patent applications, surveys of external stakeholders and patent examiners, measurements of internal process parameters (e.g. rates of 2nd action non-finals, restrictions after FAOM, etc.), and actual compliance rates of final dispositions (e.g., allowances and final rejections).

Because the elements of the composite gauge different aspects of examiner behavior, and because even a given contributor to the composite, such as a survey, can combine perceptions of USPTO services and responsiveness with the apparent correctness of actions, it has been extremely hard to use the composite to gain insight in specific areas. For example, it is difficult to assess from the composite or even from its individual components whether the quality of issued patents has improved or not. These problems have been 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).

Although the quality composite may have been severely flawed, it has served its purpose up to now, at least to some degree. At a coarse level, it shows the Office has 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 have been 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 is on making sure the emphasis is on the most important measures and improving the effectiveness and clarity of the metrics.

Initial feedback from the Patent Quality Summit indicated that the USPTO should separate the measures of patent product quality from measures of customer satisfaction or process. The individual component measures of various aspects of patent quality are valuable indicators and should be maintained; however, the PPAC has also suggested that the composite as a single number is not a fair representation of patent quality and it is important to report the segregated measures without combining them into a single number. The PPAC also recommends reporting each number on an appropriate scale of correctness, effectiveness or compliance, rather than as a percentage of a goal.

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 PPAC recommends aggregating these available data in key areas such as claim allowance and rejection and supplementing with additional information. For example, the data from pre-appeal brief conferences and appeal 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 are already available and should be merged into the total quality evaluation in some manner.

The USPTO is committed to continuing to measure patent quality and refining the metrics used, including finding a suitable set of measurements to replace the current patent quality composite and engaging stakeholders on how best to gauge and improve patent quality. The PPAC supports these efforts and looks forward to continued work with the Office on these initiatives.

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 Office 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, and to consider together feedback gained from the metrics along with the SPEs' evaluations of the examiners' work.

The PPAC is ready to assist the USPTO with an evaluation of the current measures and suggest alternatives and/or additions for consideration.

D. NEW QUALITY INITIATIVES

The USPTO has developed a significant number of initiatives directed to improving the quality of the work, training of employees (both patent examiners and supervisors), and the interview process for individual patent applications.

In one initiative, the USPTO is expanding the GS-14 Trainer program to provide more such trainers and thus enhance the one-on-one training necessary for the development of skilled patent examiners and high patent quality. This is an excellent step because this direct one-on-one training is crucial to the development of the junior examiners who generally require explanations, feedback, and guidance on treating various matters that arise in the applications. Without this input, many examiners could flounder, be delayed in their professional development and/or fail to produce quality work.

The USPTO has initiated a Joint Work Sharing Pilot Program with the JPO to study whether the exchange of search results between the offices for corresponding counterpart applications improves patent quality and facilitates examination in both offices. Additionally, the USPTO has initiated a Collaborative Search and Examination Pilot with the KIPO in which each office will concurrently conduct a prior art search for its corresponding counterpart application. The search

results will then be exchanged between offices and both sets of search results will be sent to the applicant in each of the corresponding applications.

In order to provide enhanced evaluation of the quality of the work product and to provide feedback to the examiners for quality improvement, the USPTO is expanding the number of individuals in the OPQA. While the PPAC understands that these additional employees will augment the ability of the USPTO to assess the quality of the work product, the PPAC does not believe that reviews by OPQA are the most effective way to improve the quality of the work at the USPTO. The PPAC recommends that the SPEs be utilized more effectively to assess the work of the examiners in each art unit, document those reviews and provide tailored feedback to each examiner for improvement. To the extent that OPQA completes reviews of the work, this gathered information must then be used directly to provide feedback to the individual examiners and also consolidated into training and guidance for all examiners. However, the most effective quality feedback and intervention should come from the SPEs and the PPAC encourages greater involvement of the SPEs in quality enhancement.

The USPTO has established an Interview Specialist position in each Technology Center and regional office to serve as subject matter experts on interview practice and the tools available to assist both internal and external participants in having effective interviews. This is a valuable step forward, but the PPAC suggests that having a senior examiner available to actually participate in the interview to help both the examiner and practitioner better understand the arguments and positions being taken would be a valuable modification to this program.

Partnering with the American Intellectual Property Law Association (AIPLA), the USPTO developed a series of quality roadshows in August at the regional offices in Silicon Valley and Dallas, and the Alexandria headquarters. These events provided current information to practitioners about practice and procedure. The participation of USPTO managers was especially valuable.

E. INFORMATION TECHNOLOGY (IT) IMPROVEMENTS

The significant 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. Development of the myriad of legacy IT systems into a single streamlined integrated interface that has been developed using modern interface design techniques has and will continue to ensure user 'buy in' with applications that are designed by and for our end users. In addition, thethe harmonization of the classification system to CPC, Global Dossier, 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 patent issued by the USPTO.

F. EXTERNAL REPORTS

Responding to an IG Report regarding certain teleworking employees, time and attendance, the USPTO asked the National Academy of Public Administration (NAPA) to undertake a review of the telework programs, including time and attendance controls, at the USPTO. The NAPA report found that there did not appear to be widespread abuse in the USPTO's telework and time and attendance programs, and made some recommendations regarding quality. The PPAC supports the suggestion in the NAPA report that additional metrics for measuring quality be explored with a focus on quality of the work, not just quantity of the work. The PPAC supports the nationwide workforce and encourages the USPTO to ensure the provision of adequate training and guidance to supervisors and employees, and the implementation and regular utilization of controls to monitor and enforce compliance with time and attendance rules for both telework employees and those who work at the main campus.

The Inspector General (IG) of the Commerce Department also performed a review of the quality of the work at the USPTO. The recommendations from that report are being analyzed by the USPTO and the PPAC is ready to assist in any way with suggestions or comments on the initiatives which stem from that analysis. The PPAC suggests that the USPTO consider this feedback but also continue to independently explore new mechanisms for improving the quality of the work product and to continue to make the process transparent.

G. PETITIONS TIMELINE TOOL

In August 2015, the USPTO made available on its website a tool that is a timeline that provides information about what petition types are available to patent applicant or patentee at any stage of prosecution or life of the patent. Covering all petitions within the patents organization, this webpage gives information about filing the petition, pendency times, grant rates and deciding offices. It allows an applicant to utilize the information for any stage of prosecution to understand which petitions are available to them at that stage of prosecution. The PPAC is pleased with the delivery of this tool consolidating information concerning petitions into a single usable website to assist applicants in completing the appropriate petition in a timely fashion.
The Petitions Dashboard is available at http://www.uspto.gov/dashboards/patents/main.dashxml and the Patents Petitions Timeline is available at http://www.uspto.gov/patents-application-process/petitions/timeline/uspto-petitions-timeline.

H. GUIDANCE AND TRAINING

To provide guidance to applicants and examiners and gain comments and feedback from the public, the USPTO on July 30, 2015, issued an update to the 2014 Interim Eligibility Guidance providing new sets of examples and relevant court decisions for subject matter eligibility. The

USPTO is accepting comments and feedback on their document and is working on examples for the life sciences to increase the guidance in that area.

Training related to functional claim limitations with a focus on computer and software related claims was completed. The computer based training (CBT) for 35 U.S.C. § 112(a), written description, with a focus on electrical, mechanical and computer/software related claims was completed and workshops on this topic are underway. Future training will cover the enablement aspect of §112(a) for the electrical, mechanical and computer/software claims.

I. EXAMINER INTERVIEWS

A survey of applicants and examiners about interviews was done in FY 2014 with the following results:

- 98% of respondents found interviews to be somewhat (28.8%), very (38.4%) or extremely (30.8%) useful
- Applicants (88.3%) and examiners (87.9%) agreed that you get an explanation of the rejection during an interview
- 97.6% of applicants and 95.0% of examiners believe clarification or a better understanding of positions occurs with an interview
- 93.5 % of applicants and 83.7% of examiners feel that a better understanding of the invention results from an interview
- 81.1% of applicants and 92.6% of examiners feel that an agreement or advancing of the prosecution results from an interview

These results reinforce the value of interviews from the perspective of both practitioners and examiners. With the Patent Examining Corps spread across the country, interviews are possible in a variety of ways. The USPTO has availability for WebEx interviews with robust capabilities for sharing documents, annotating them and viewing each other during the interview. This offers the ability to undertake interviews with visual capabilities for interacting with any patent examiner regardless of their duty station because each examiner has the capability from their work station. Applicants may join the WebEx from their own workstation but the USPTO offices in Alexandria, Detroit and Denver currently have public interview rooms with WebEx capability that may be reserved upon request by applicants at least two days in advance of the interview. Through these rooms, applicants may connect by WebEx to any patent examiner at their duty station. The USPTO offices at San José and Dallas also will soon have these facilities for WebEx interviews at their location. The WebEx capability represents a valuable option for applicants to understand not only the verbal discussion but also the body language during an interview. However, an in-person interview continues to be a favored means of communication with the patent examiner and in some cases, also with the supervisor. As noted in the interview survey, however, the quality of the interview is more critical to the success of the interview than the way the communication occurs. For that reason, the PPAC suggests that the USPTO continue to focus training on interview practice, particularly on resolving differences to the extent possible and identifying any allowable

subject matter, and to provide avenues for applicant to hold the interview with the supervisor or another primary examiner to gain a fresh view on the application.

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 a 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 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). 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 applicant on notice and allow the public to understand the position being taken by the Office. 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. Also, the PPAC recommends that claim interpretation training focus on, among other things, the broadest reasonable interpretation (BRI) standard for interpreting claims, including examples of how broadly a claim may be interpreted and examples of unreasonable interpretations. Ideally, this material could be published to assist both applicants and examiners in understanding what reasonable interpretations include.

C. Additional resolution process

Identifying allowable subject matter and resolving differences as early as possible in the prosecution reduces the cost and effort for both the USPTO and applicant. Discussions with the patent examiner are key to a better understanding of each other's position but in some cases it is more fruitful to include another examiner, either the SPE or a different primary examiner, to assist in clarifying the issues for allowance or appeal. The pre-appeal brief conference and appeal conference currently involve a review of the record by three examiners but permit only a written presentation by applicant. It is well documented that actual interviews are more effective than written communications for advancing prosecution. For this reason, the PPAC urges the USPTO to provide an option for an interview during one or both of these procedures to afford the applicant the opportunity to verbally participate in the discussion about the merits of the rejections. It is believed that this investment in time will actually reduce subsequent work of both the USPTO and applicant by reducing the need for an RCE or appeal.

D. 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 requests that 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.

E. Quality metrics

The PPAC recommends that the USPTO develop new metrics (with an emphasis as has been done in the past) that capture in particular the quality of the work product (especially allowed claims), thereby separating the evaluation of the correctness of the allowances, rejections and other office actions from the service- and process-related measures, such as the number of interviews and customer satisfaction. The Office should evaluate and utilize all available data (e.g. from surveys, existing databases and OPQA reviews) to develop new, more precise metrics of patent quality, as well as identifying other sources of information, such as PTAB appeal and Inter Partes Review (IPR) decisions that can be useful in measuring and improving patent quality. The PPAC also recommends exploring the continued use of data analytics to help focus on key areas for improvements of the quality of the patents issued with an eye on quality-related matters with economic impact, considering the effect of contested claims as well as claims improperly rejected.

F. Quality, not just quantity, as an objective

The PPAC recommends an emphasis on 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.

II. FINANCE

A. INTRODUCTION

Sound financial management underpins the operations of the USPTO. Proper funding is critical to support initiatives such as patent quality and also to carry out the ongoing work of examining patent applications in a timely manner. The USPTO has put great care into managing its funds and financial planning for the long term.

In FY 2015, the USPTO skillfully managed its finances to support its mission. A notable shortfall in anticipated fee collections led the Office to revise its income projections during the year. Use of operating reserves and previously collected fees allowed the Office to successfully execute on long-term initiatives, particularly long-needed IT improvements. Continued careful long-term financial planning will be essential to support successful completion of the IT roadmap and fulfillment of the Director's vision for improved patent quality.

B. THE USPTO BUDGET PROCESS

Although the funds to operate the USPTO are appropriated by Congress as part of the budget process, the USPTO is in fact entirely funded by the user fees it collects. The AIA gave the USPTO the ability to set its own fees for a period until 2018. The USPTO serves a public mission but from a financial perspective it operates akin to a private business. The USPTO must set and adjust its spending priorities in a manner that best serves the nation's IP system, while operating within a budget that is consistent with fee collections. Therefore, the Office is challenged with projecting future rates of application filings and fee collections in the face of potential changes in fees as well as legislative, administrative, economic and judicial influences.

USPTO budget planning is a component of the overall federal government budgeting process. As of now, the Office has just completed FY 2015 operations pursuant to that fiscal year's budget. Congress has not appropriated funds for the USPTO's FY 2016 operations, which means the Office will be operating under a continuing resolution through mid-December. The USPTO is also currently working with the Office of Management and Budget to provide input for the President's FY 2017 budget.

Each fiscal year's budget authorizes the USPTO to spend a designated amount of the fees it collects. The USPTO appropriation is available until expended. This permits the USPTO to carry forward the unobligated (unspent) fees for use in subsequent years. These unspent, but previously appropriated, fees are set aside as an Operating Reserve, often referred to as carryover, and remain in the USPTO's appropriation account maintained in the U.S. Department of the Treasury. The Operating Reserve is critical to allowing the USPTO to consistently fund long-term initiatives, to protect USPTO operations from cyclicality in fee collections, and to allow USPTO operations to continue during periods when government funding is disrupted, such as during the Fall 2013 government shutdown.

Fees that have been collected but not yet reprogrammed for spending accumulate in the PTFRF established by the AIA. These are reserved for use by the USPTO but cannot be spent until the USPTO submits a reprogramming notification to Congress to transfer the funds to the Salaries and Expense Fund. The operation of the PTFRF assures that user fees remain available to the USPTO and are not simply an incremental revenue source to the broader federal government. During FY 2015, the USPTO worked closely with Congress to obtain reprogramming approval, thereby for the first time effecting a transfer from the PTFRP that could be used to fund operations.

Another important aspect of the USPTO budget process is a biennial fee review. One such review started at the beginning of FY 2015 and is now underway. The USPTO is evaluating and analyzing proposals for possible adjustments to the fee structure. If the USPTO concludes that a fee increase or new fees are warranted, the PPAC will hold public hearings and solicit public comment. After receiving comments of the PPAC, the next step would be to issue a Notice of Proposed Rule Making (NPRM) including the specific fee increase proposal. Fees could then be

adjusted as part of the Final Rule Making after receiving public comments in the NPRM proceeding.

C. FINANCIAL OPERATIONS REVIEW

1. Budget And Reserves

The FY 2015 budget passed on December 16, 2014 appropriated $3.458 billion for the USPTO including both the patent and trademark functions. Besides the FY 2015 appropriation, Congress also approved the reprogramming notification to give the USPTO access to previously deposited fee collections in the PTRF account. In FY 2014, $148.2 million of patent and trademark fees had been deposited in the PTRF. The USPTO worked closely with Congress and submitted a reprogramming notification. Pursuant to congressional approval, $128.7 million of previously collected patent fees was transferred from the PTFRF to the Salaries and Expenses Fund on December 17, 2014. The PPAC applauds and strongly supports this first use of the PTFRF to assure that the USPTO has full access to the fees paid by its users. The PPAC urges Congress to continue to give the USPTO access to the PTFRF whenever needed in the future and thereby end the previous practice of diverting USPTO fees to other federal government needs.

The initial FY 2015 working estimate for patent fee collections was $2,946.5 million. As of the beginning of FY 2015, the Patent Operating Reserve within the Salary and Expense Fund stood at $365M. The FY 2015 estimates in the FY 2016 President's Budget anticipated drawing $121 million from the patents operating reserve, which would have left the patent portion of the reserve at $373 million. Projected spending on patent operations was $3.01 billion.

2. Fiscal Year 2015 Collections

Fee collections to date have been below projections due to lower than expected original filings, RCE filings, and maintenance fee payments. The USPTO has closely monitored fee collections throughout the fiscal year while making appropriate and realistic adjustments to its projections. As of September 30, 2015, the fiscal year patent fee collections of $2.74 billion were exceeded by spending of $2.85 billion. The lower than expected fee collections necessitated a higher than expected withdrawal from the operating reserve, leaving it at $402 million at the end of the fiscal year.

The PPAC believes that several factors are contributing to the decline in patent fee collections. Successful initiatives to increase the efficiency of patent prosecution are contributing to a reduction in RCE filings, which are essentially re-filings to give an applicant another opportunity to convince the examiner of patentability. The current 11 ½ year maintenance fee may be set at a level which discourages renewals, to the extent that aggregate collections at that stage have dropped even with the higher fee. This may be one fee for reevaluation in the USPTO fee review.

The public perception of ongoing changes in the U.S. patent system may be having an effect on new filings. The U.S. Supreme Court's recent decisions in *CLS Bank v. Alice, Mayo v.*

*Prometheus , and Association for Molecular Pathology v. Myriad Genetics***,** and their implementation by lower courts and the USPTO have the effect of narrowing the subject matter eligible for patent protection. Potential patent filers in affected technologies may be considering their likelihood of success under these cases as the Office continues its efforts to apply the decisions consistently and provide clear guidance. The new post-grant procedures under the AIA have attracted widespread attention. Furthermore, Congress continues to consider changes to the patent litigation system. Together these developments have created a perception that patents are becoming more difficult to obtain and enforce, perhaps leading some potential applicants to forgo applying for patents. The USPTO is very aware of these factors and is taking them into account in its financial planning.

3. Achievements And Related Funding

In FY 2015, the USPTO spent appropriately on its ongoing operations and also to fund long term initiatives that are important to its mission. FY 2015 saw significant progress in advancing major components of the USPTO's PE2E portfolio of new technology systems, including the full release of the new DAV system.. After an interruption in FY 2013 due to funding issues, steady execution appears to be bearing fruit. This highlights the importance of long term funding stability including appropriate use of the patent operating reserve funds.

The USPTO continues to successfully manage the pendency issues that had reached unacceptable levels in previous years. The progress in reducing and maintaining pendency is a strong indication of the efficient use of funds in examining patent applications. The progress in reducing the usage of RCEs is a noteworthy achievement in its own right. However, the USPTO is being appropriately cautious in allocating funds to achieve still further reductions. As the USPTO management recognizes, it is important to avoid scenarios where particular groups of examiners run short of work. As newly hired examiners gain experience they inevitably become more efficient, the aggregate effect of which is further pendency reduction without further hiring. The PPAC recommends that the USPTO continue examiner replacement and hiring in targeted areas with backlogs or growth in filings.

The USPTO also kicked off a very high profile initiative to improve patent quality. The importance of improved patent quality has been highlighted by the White House and numerous stakeholders. The effort to achieve quality will touch every aspect of the USPTO's operations and the PPAC expects it to rightly have a large influence on financial decision making.

To allocate available funds among numerous worthwhile initiatives, the USPTO has wisely created a Financial Advisory Board (FAB) to weigh proposed expenditures and align spending to critical priorities. The PPAC expects the FAB to play a critical role in making inevitable but difficult decisions about which initiatives are sufficiently critical to deserve long-term stable funding.

Recommendations:

A. Continued Stable Funding of the USPTO

With the transfer of funds from the PTFRF to the Salary and Expense account, the funding aspects of the AIA have begun to work as designed; however, further steps to stabilize funding are warranted. Since the USPTO is entirely funded by user fees, the PPAC urges the Administration to exempt the agency from any future sequestration, and urges Congress to consider removing the agency from the Congressional appropriation process.

The PPAC also urges Congress to make the USPTO's fee setting authority permanent. The Office is in the best position to assess the impact of different fee levels and structures and set optimal fees after soliciting stakeholder input.

B. Prudently Navigate an Uncertain Funding Environment

With ongoing changes in the patent system and accompanying uncertainty about filing rates, even the best modeling cannot be relied upon to predict future collections accurately. It is impossible to know today whether the slippage in filing rates indicates a future flat or even negative trend in patent filings or if the previous long term growth will resume soon. The watchword for financial planning must be prudence.

1. The PPAC recommends that the USPTO not assume a full resumption of historical filing growth rates when planning future expenditures if and when the filing numbers reflect that trend.

2. The PPAC recommends that the USPTO prioritize continued funding of the quality initiative and the PE2E initiative with a pronounced emphasis on the expenditures that provide the most impact relative to dollars spent.

3. Because a large percentage of the USPTO's budget outlays are non-discretionary costs such as salaries and related expenses, while funding for high-impact initiatives often comes from discretionary funds, we recommend that the Office continue its prudence in taking on new long-term commitments that result in non-discretionary expenses. This caution is critical in order to maintain flexibility to fund enhancements in areas such as patent quality and technology modernization.

4. The U.S. Department of Commerce is currently investigating the use of a Shared Services model for key support functions for the USPTO and the other agencies within the Department. While the stated goals of higher quality and responsiveness are laudable, the PPAC strongly recommends a measured and cautious approach to any such implementation. Many of the USPTO support services are tailored to unique USPTO needs and already function at levels above what is sometimes achieved within the federal government. It is possible that if a comprehensive

shared services infrastructure is developed for the U.S. Department of Commerce, many significant components will not meet the needs of the USPTO. For example, as a user-funded organization, the USPTO's financial management considerations are unique within the Department. The USPTO's recruitment function has developed specialized unique capabilities and scale to recruit individuals with scientific backgrounds and training to meet the Office's requirements. The Office's IT area develops and maintains systems and software that have no application beyond the needs of patent and trademark examination and procedure. Because of the streamlined and automated nature of the examination process and the criticality of maintaining the systems for employees and users, the USPTO faces demands and objectives not generally shared by the overall Department. The PPAC believes that if the USPTO were to adopt a shared services infrastructure that is not in alignment with its needs or objectives and thus consequently not useful, such would be a form of fee diversion. It would also compromise the core goals of improving quality and reducing pendency. The PPAC recommends that the USPTO be allowed to selectively opt into and fund only those shared services that are truly beneficial to the Office, its workforce and operations.

5. Given the possibility of future sequestration, government shutdowns, or fee shortfalls, the operating reserve should be managed cautiously. The operating reserve was decisive in allowing the USPTO to continue operations during the most recent government shutdown. The operating reserve is also important in allowing long-term initiatives like PE2E to continue without disruption. Although the drawdown in the reserve in FY 2015 was mostly anticipated and fully justified, maintaining a robust reserve should be a priority in long term planning. This can only be done if the Office is effective in setting budget priorities and controlling costs.

6. The biennial fee review is an opportunity to assure that the USPTO's future collections are sufficient to steadily fund critical long-term initiatives in areas such as patent quality and IT. The Office should also use all available data and resources to model the elasticity of filings and maintenance fees. The Office should also take into account the impact of higher fees on the filing community and historical trends. When and if the USPTO determines that higher fees or new fees are warranted, the PPAC stands ready to play its role in soliciting public comment.

III. INFORMATION TECHNOLOGY

A. OVERVIEW

Under the direction of the OCIO, the USPTO selects, integrates, implements, and maintains IT in support of improving patent quality, reducing pendency and backlog, advancing IP leadership in the United States and internationally, and building and maintaining a 21st century work environment. In this section of the report, the PPAC describes the IT initiatives undertaken by the USPTO and the continued progress made this year in supporting the Office's overall objectives and strategic goals. Our report particularly focuses on modernizing patent examination

technology and processes through a portfolio of projects known as PE2E, and on technologies that enable international cooperation and work sharing.

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, when budgets had been dramatically cut during sequestration. 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 office to prioritize as well as to determine the specific funding levels necessary given that the volume of new patent applications is lower than projected.

During the second quarter of FY 2015, the Office 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 a 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 the overwhelming majority of examiners trained by the end of the fiscal year. Meanwhile, the OCIO has tracked usage and user feedback and reports a high adoption rate as well as a surprisingly low number of defect reports and no performance issues. The PPAC commends the OCIO and the entire USPTO organization for the smoothness of the DAV rollout so far.

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 Office whose outdated custom design dates back to the 1980s. Although the PPAC is delighted with the progress so far, we recognize 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 Office in a state where it is paying a higher ongoing cost without any real return. The Office 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 Office had several key projects to support international cooperation and work sharing. The USPTO's commitment to CPC (Cooperative Patent Classification), 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 Office 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. These international initiatives continued to receive attention and priority, even in a few cases completing work that had not previously been scheduled for FY 2015.

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. Information security is particularly important given the high visibility of data breaches in other organizations and the sensitive nature of documents submitted to the Office. Constant vigilance and a certain amount of ongoing IT investment are required in all infrastructure areas. The PPAC is pleased that malfunctions and issues are infrequent enough that we can continue to report on technical progress.

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 avoids 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 examiners have a finite amount of time to examine each application, thus the better that time is spent, the more likely they will produce quality results.

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 from their inception to their downstream archiving. At its core, PE2E implements an advanced 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 Office'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) in Examination Tools & Infrastructure (ET&I) project (replaces eDan)	Case management tool: docket with multiple views; planner to prioritize work; document, claims, application management; IDS viewer, electronic notes	Released March 2015**;** Completed training
Examiner Search (replaces EAST/WEST)	Modern, scalable enterprise search for patent examiners	Pilot release December 2015; production release target December 2016
Official Correspondence (for office actions, replaces OACS)	Authoring & workflow solution; integrates with DAV by leveraging notes, references, & dispositions	Pilot release December 2015; production release target December 2016
Cooperative Patent Classification (CPC)	Harmonization & modernization of classification jointly managed between USPTO & EPO. Facilitates collaborative maintenance of classification system	Released January 2013; enhancements released 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, as well as pointing 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 will continue 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 Office. 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 Office's patent quality outreach has underscored what we already knew, that effective prior art search is a crucial part of examination. There is no way to improve search substantively using an antiquated platform. Last year, 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 Office 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.

While the IT funding situation has improved dramatically in the last two years and work is progressing with deliberate speed, the PPAC notes the ever urgent need for aggressive development in IT in order to complete these modernization projects at the same time that it commends the Office for its commitment to IT and the OCIO for progress during FY 2015.

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 revenue 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 agency must maintain the flexibility

in IT procurement that it currently has along with maintaining the high levels of service and security that the agency 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 public will maintain the same or better level of service and security. If participation in particular shared services offerings does benefit the Office 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 2015

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

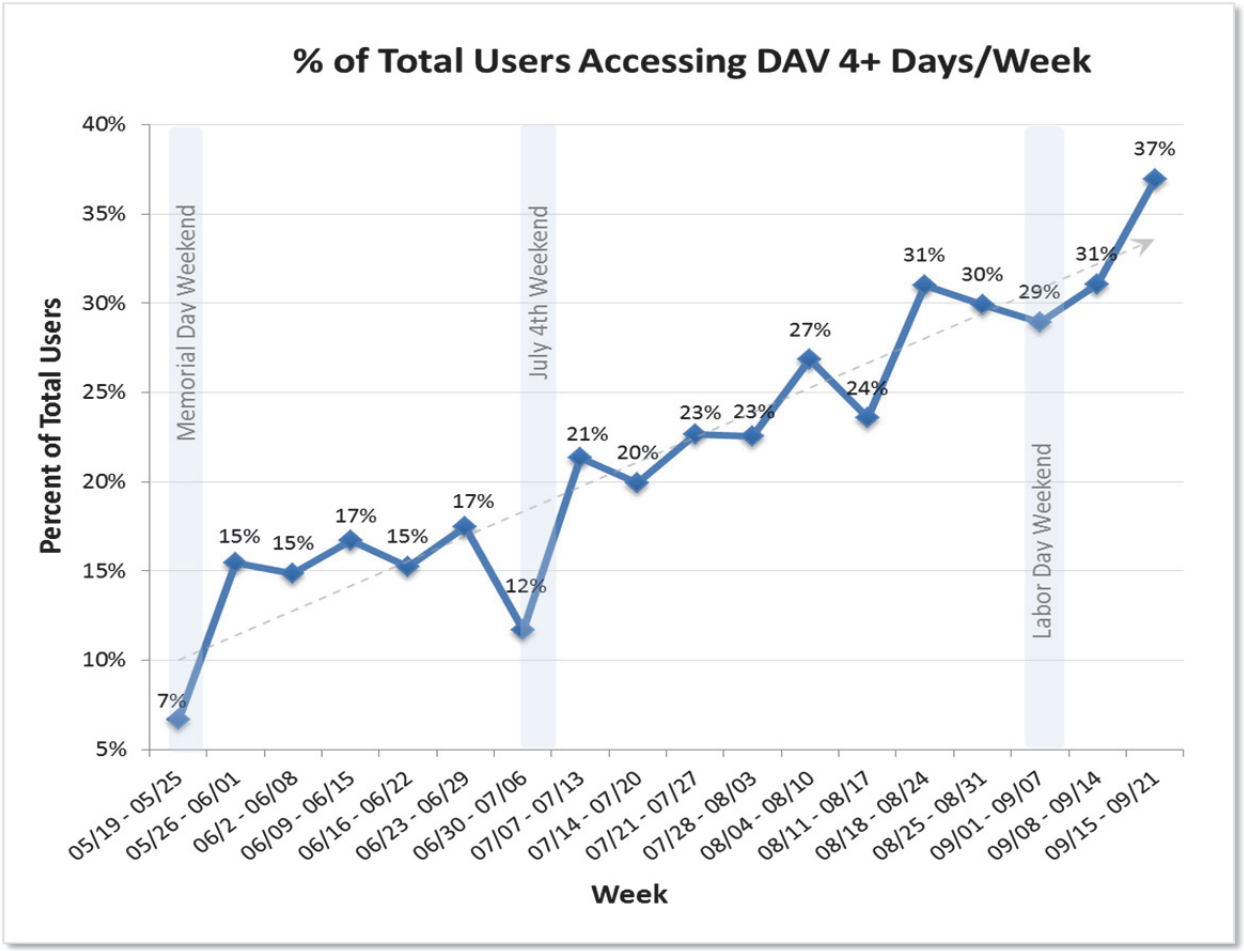
1. Docket and Application Viewer (DAV)

The Docket and Application Viewer (DAV), which replaces the eDAN system, is a modern, robust, scalable and versatile tool for examiners to review and track patent application dockets. Like other parts of the PE2E portfolio, DAV is text-based rather than image-based, meaning that all the text within an application can be searched; this also supports sharing parts of an application or action across different software tools and automating functions that had previously been done manually, such as drawing claim trees and tracking changes in claims as they are amended during the application process.

DAV was developed using the Agile methodology with user-centered design. Although this software development process is by no means new, this is the first major tool in the PE2E portfolio deployed by USPTO using this methodology, and it has been the result of a significant overhaul of the way OCIO conducts and manages its projects. Along with any such set of changes is the commensurate hiring and training of staff. Agile means that development work is done in short sprints, so that what was previously a drawn-out process can be done in bursts, allowing for more feedback during the process. User-centered design goes along with Agile, to ensure that users are involved throughout design, development and testing so that the system helps them do their jobs as well as advancing user buy-in as a system approaches rollout. Given the results with DAV so far, it appears that the methodology has worked for the Office, at least in this case.

Another feature of DAV that is common to other PE2E systems is a text- and standards-based core, which supports a unified patents content store containing all of the data used in examination except for patent search (which currently requires a separate database of the vast catalog of historical issued patents and related documents). Examination is a text- and data-intensive process, and the legacy systems were stovepipes that could not share information easily. Upgrading to a modern platform solves this problem so that future requested functionality can be delivered more quickly and easily.

As mentioned earlier, some of the features of the new docket and application viewer are the ability to process and map claims more easily, improved case management, and the ability to create and share notes electronically within the tool. While examiners continue to suggest features that they would like to see in the software, the selection of features to include has been part of the user-centered development process, and feedback as DAV has been deployed continues to be positive. DAV was released to the Patent Examining Corps in late March, and as of the preparation of this report virtually the entire examiner workforce has been trained in the new system. Below is a table of DAV usage data over time as tracked by OCIO. eDAN cannot be decommissioned until DAV adoption nears 100 percent, but we are steadily progressing toward that goal.



2. Global IT Systems

a. Cooperative Patent Classification

Cooperative Patent Classification (CPC) harmonizes patent classification between the European Patent Office and the USPTO. Because CPC differs from the systems 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 2015 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 Office 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.

c. Hague Agreement

The Hague Agreement governs the international protection of industrial designs. The United States ratified the Geneva Act of the Hague treaty in February, 2015, thereby mandating that design patents filed in the U.S. would be effectively deposited in other Hague-member nations and vice versa. In the second quarter of FY 2015, the USPTO launched a wide range of IT modifications to systems that had been under development in order to standardize and streamline design patent filing procedures with the other Hague member countries.

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 accepting our recommendation to increase funding for IT this year. The PPAC continues to believe that IT development and modernization efforts at the OCIO have produced valuable results in support of the USPTO's mission, and we expect those results to continue. The PPAC believes that PE2E ties in to the Office'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 Office must move forward aggressively with its efforts to deploy new systems, including examiner search, official correspondence, content management, and dissemination, and to retire legacy systems such as eDAN, OACS, PALM, EAST AND WEST as soon as possible. For at least the next two years, this means that the Office will 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 Office must hire new technical staff that are skilled in current technologies at the same time that it pays 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, we recommend that the Office try to protect the funding for these critical projects.

B. Maintain increased funding

The decline in new patent applications during FY 2015, which reduced fee revenues this year and thereby has caused the amounts available in the Office's operating reserves to decline considerably, also 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. A large portion of the funding for the critical IT initiatives described here is viewed as discretionary because it can be adjusted dynamically, and these funds also make up a large portion of the USPTO's discretionary budget. As such, the only way to protect the high priority discretionary initiatives is to maintain enough of a reserve to ensure they can be funded, and the only way to do that is to make sure that only the projects that are absolutely necessary, and only the non-discretionary commitments (such as hiring) that are absolutely necessary, are undertaken. We cannot advise the Office that everything is critical and at the same time advise the Office to protect against budget risk. Therefore, we have to emphasize 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. In order to insure that funding will be available until the transition is complete, the Office will need to be extremely careful about committing funds in other areas.

C. Continue support for the global IT 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 Office's vision of leading the world in IP protection and policy and as we look toward international harmonization and work sharing to advance patent quality. At the same time, the PPAC recognizes that utilization of some of the new capabilities has not been high and strongly encourages the Office to do further user community outreach and education on how best to use these systems.

D. Upgrade and expand links with stakeholders

The Office 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. Review security infrastructure

The PPAC urges the Office to look closely and frequently at the robustness of its IT infrastructure, particularly with respect to cybersecurity. The Office is the keeper of some of the most proprietary

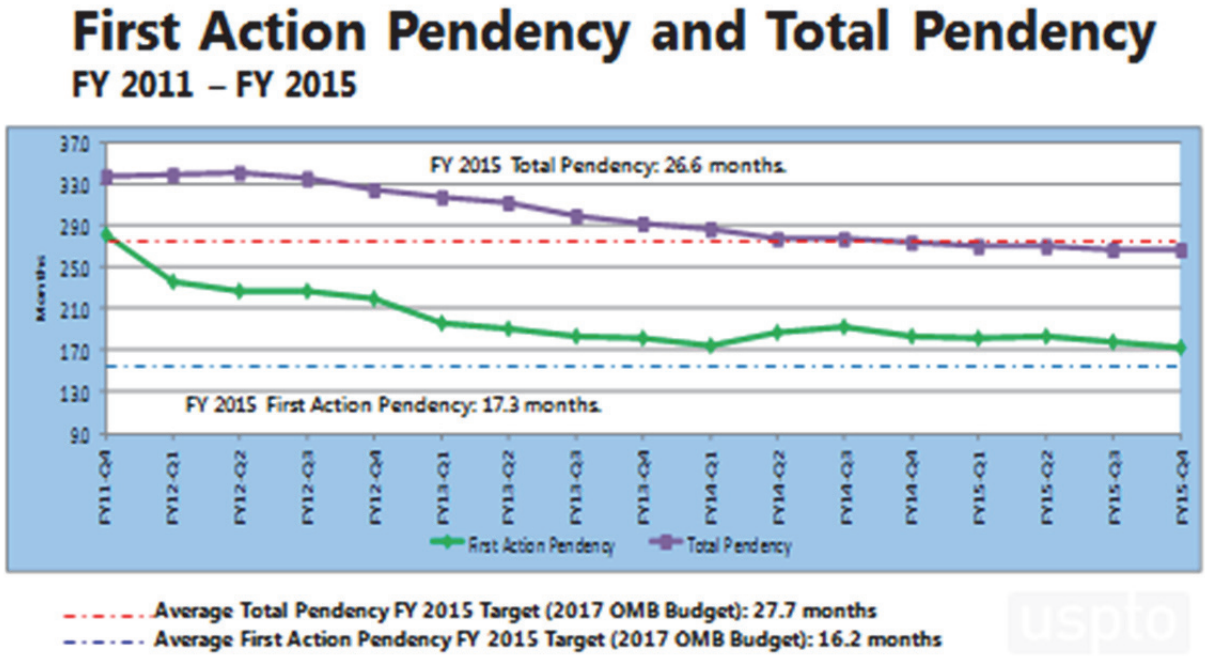
information of our nation – such as technological and biomedical innovations. Theft of this coveted information could severely weaken our nation's economy and security. With this reality in mind, the PPAC recommends ongoing reviews for the purpose of ensuring vigilant implementation, updates, monitoring, testing, analysis, and continued safeguards in order to protect the Office's IT infrastructure against known and unknown attacks.

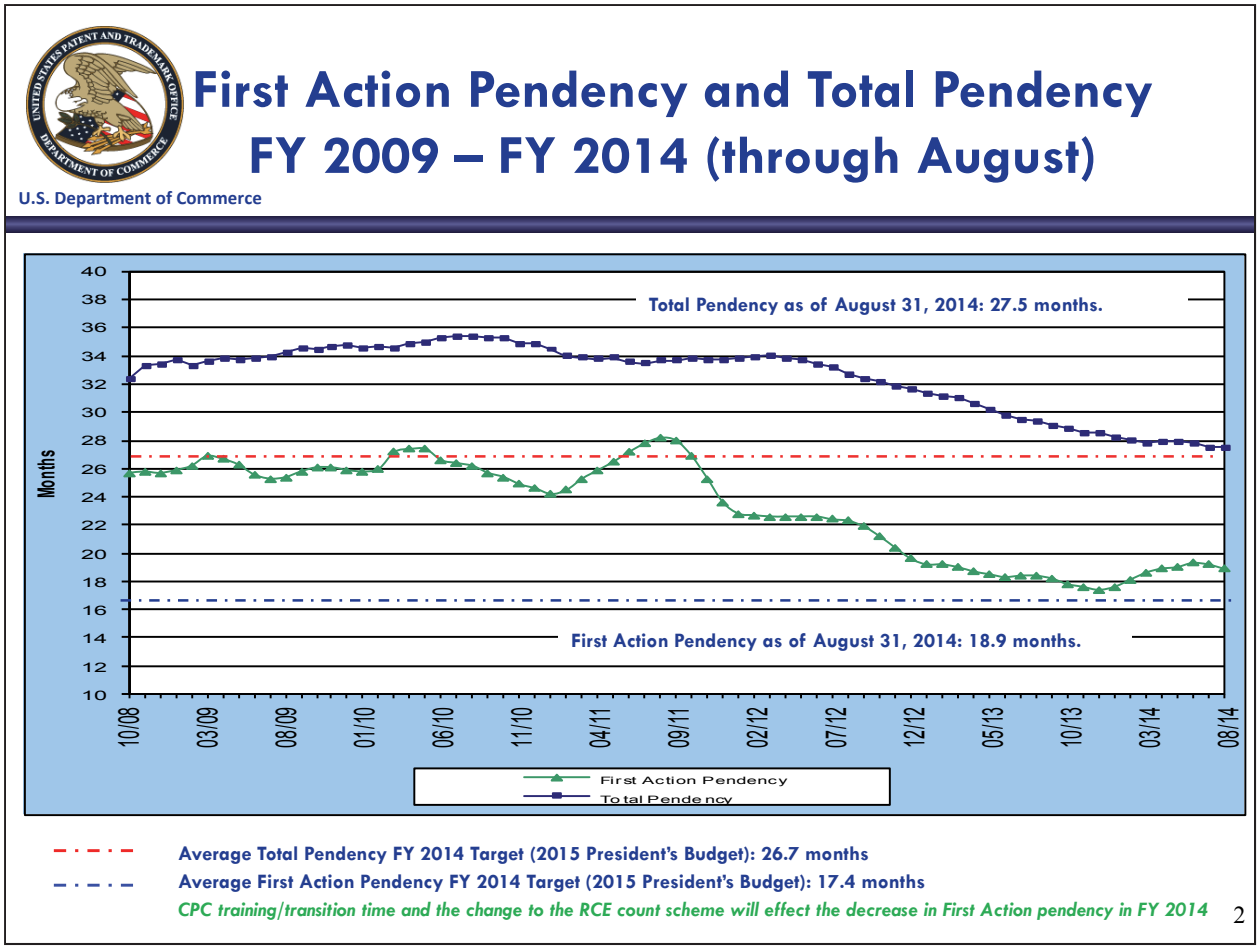
IV. PATENT PENDENCY

A. INTRODUCTION

Patent pendency continues to be a topic of great interest to both the PPAC and the user community. During FY 2015, average first action pendency decreased to 17.3 months and average total pendency decreased to 26.6 months. The chart below shows the history of both these measures through August 31,2015.

Both pendency measures have showed a sustained, significant decrease since FY 2010 with a recent bump up in first action pendency, likely resulting from a change to the RCE count scheme and time taken for additional training, such as training for the implementation of CPC for the Patent Examining Corps. The USPTO is to be commended for the decrease seen in pendency during the last four years.





B. DETERMINING OPTIMAL PENDENCY

Pendency levels are of significant importance to those who pursue patents 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.

Complicating the process of determining optimal patent pendency is the fact that patent seekers have a broad spectrum of desires when it comes to how long each of them wants to wait to obtain a patent. In some technologies and markets, businesses desire to have a patent grant as quickly as possible. In others there is not as much pressure in this regard and, in fact, some businesses may be happy to have some amount of delay in the process of having a patent granted.

The PPAC recognizes that balancing the interests of such a wide range of customer goals is challenging. It is worth noting here that the term "patent pendency" in the mind of stakeholders means the total amount of time measured from the day a patent application is filed to the day a patent is granted. The pendency data provided to the public by the USPTO is a quite different measure. The traditional average total pendency measures the time to the initial final disposition of an application, which could be an issue as a patentpatent or abandonment, and very often is not a granted patent. For example, the traditional total pendency statistics do not include the pendency

of RCEs. While the PPAC commends the USPTO on its efforts to make the pendency statistics and the link between pendency and staffing much more transparent to the PPAC during the past fiscal year, there is an ongoing need to align the pendency statistics published by the USPTO with the user community's understanding of what these pendency statistics actually mean.

The current pendency goals of 10 months average first action pendency and 20 months average total pendency were established in the USPTO's 2010-2015 Strategic Plan. These goals have served the public well in that we have seen significant reductions of both kinds of pendency.

The PPAC has endorsed the goals of 10 months Average first action pendency and 20 months average total pendency. However, averages translate to differing results from one technology area to another with some higher and some lower than the target, depending on the staffing and application levels. This means that many applications will not achieve the stated pendencies even though the USPTO on average will meet the targets, leading to uncertainty and frustration from some applicants. Consequently, the PPAC believes that in addition to the targets of 10 and 20 months, the USPTO should continue to strive to reduce the differential between technology areas with respect to pendency.

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 office; (3) act on an application within four months of a decision by the Board of Patent Appeals and Interferences 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. 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. Granting PTA should be the exception, not a routine event. An overall focus on reducing the amount of PTA is suggested.

There is also a potential concern arising from a reduction in first action pendency to 10 months relating to increasing uncertainty in the patenting process. This concern includes the potential for

the existence of "hidden" prior art if office actions are issued before patent applications are published. The PPAC believes that this concern is valid one and for this reason, target pendency should not be reduced below the current new first action pendency goal of 10 months.

C. UNEXAMINED PATENT APPLICATION INVENTORY

Members of the PPAC continue to support the lessening of the unexamined patent application inventory. In 2011, this inventory stood at ~ 721000 applications. At the end of FY 2015, this number decreased to approximately 550,000 applications. The 2019 target is 385,500 unexamined applications. Based upon historical trends, there is no reason that this target should not be met. 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 launched multiple initiatives to address the growing backlog of RCE applications, which efforts should all help improve patent pendency, including the following:

- After Final Consideration Pilot 2.0 (AFCP 2.0)
- Track One (Prioritized Examination)
- Patent Prosecution Highway

The PPAC commends the USPTO for supporting these initiatives. There are businesses, investors, and inventors (stakeholders) that make business decisions (to include hiring and capital equipment expenditures) based in part on the ability to protect IP. In FY 2015, time between the filing of a patent application and the issuance of a patent took as little as six (6) months under Track One. The USPTO has statutory authority to grant up to 10,000 applications Track One status. In the last four years, Track One utilization has continued to grow to the point that this upper limit has almost been reached, further signifying the success of this program. The PPAC applauds the USPTO on this program's development and the successful implementation.

The PPAC urges the USPTO to continue to investigate new avenues for promoting these programs to the stakeholder community and looks forward to supporting this effort going forward.

E. BETTER COMMUNICATIONS

Public PAIR (Patent Application Information Retrieval) provides invaluable data for the inventor or assignee to track progress when an application is examined. As in much of life, stakeholders are happier when they have realistic expectations about the process. To this end, the PPAC recommends that Public PAIR show the projected date that an application will be examined. There are currently applications for which the status is shown as Docketed New Case – Ready for Examination which have been in this state for over 24 months. During this period, the inventor is

absolutely without any indication as to when the application will leave the indeterminate queue; for some applications that have not been assigned to a particular examiner, the system shows no one to contact about the expected date of examination.

Recommendations:

The PPAC urges the USPTO to publish pendency data that actually reflects the entirety of time required from the date of filing to the time a patent grants. Current traditional total pendency does not take into account the oftentimes very long period required for action on RCEs. The USPTO should also report the traditional total pendency including RCEs in their numbers, rather than just on the website's Data Visualization Center Patents Patents Dashboard. The PPAC recommends the establishment of a goal for the completion of RCEs of four months as a maximum rather than an average, to provide reduced PTA, faster service for the increased fees now charged for RCEs, and more certainty on timing of examination.

The PPAC recommends an additional focus on examination of applications in an order which aligns with the PTA timeframes established by Congress and focusing on reducing PTA overall. This is good public policy and provides more concrete expectations for the timing of examination of applications.

The PPAC recommends that Public PAIR convey to the applicant a projected time for when a first office action will take place.

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

V. REQUESTS FOR CONTINUED EXAMINATION

A. INTRODUCTION

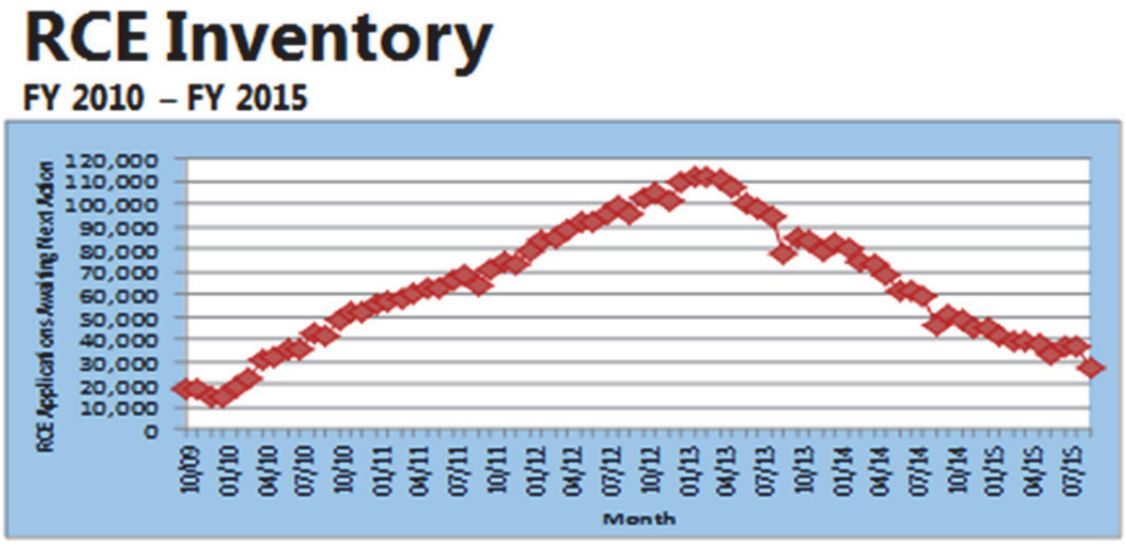
Requests for Continued Examination (RCEs) have become a necessary part of examination for many patent applications because it has become increasingly difficult to reach agreement on allowable subject matter with current compact prosecution processes and a single opportunity to modify claim language following rejections based on the prior art. In many cases, in order to further pursue the invention, the filing of an RCE has now become more or less essential. This represents a cost to applicants, but the bigger negative consequence of an RCE is the delay experienced in the middle of a continued examination. Thus, RCEs continue to represent a concern for applicants in being both a vehicle and impediment to the goal of receiving a patent for their inventions.

Over the past two fiscal years, the RCE team, led by the Deputy Commissioner for Patents has made significant strides in reducing the backlog of RCEs awaiting examination. Initiatives, such

as Quick Path IDS (QPIDS) and reordering the identification of RCEs for action on an examiner's docket, have resulted in a reduction of RCEs awaiting an action following filing.

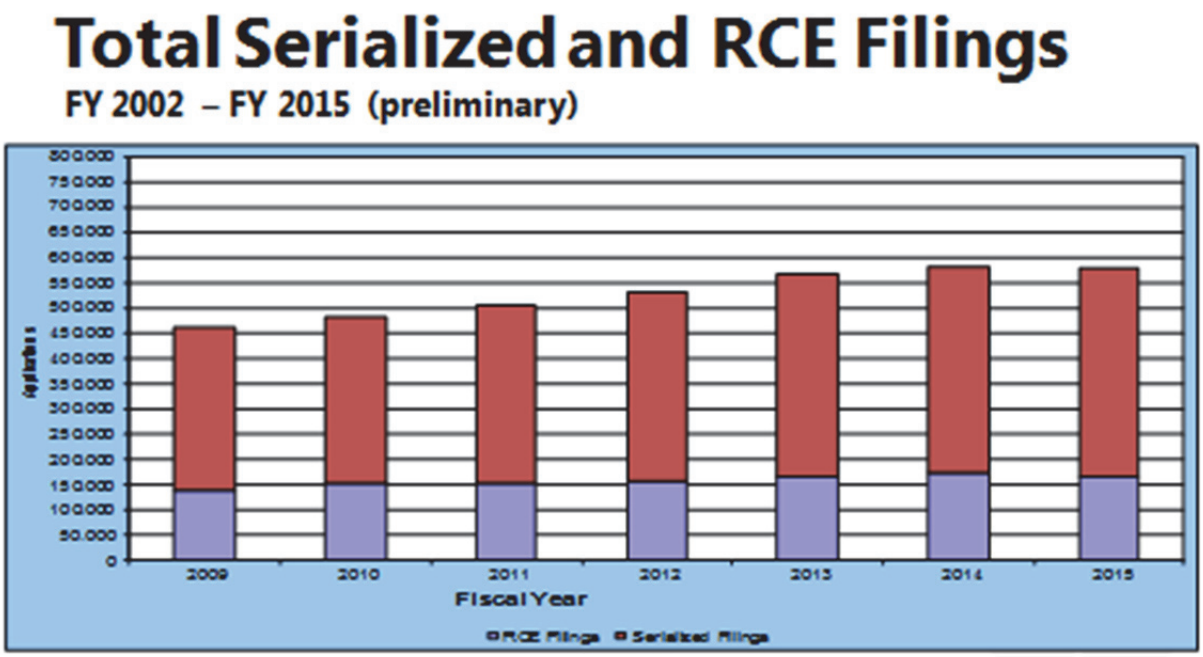
Following the move of RCEs from the examiner's amended docket to the special continuing docket, the backlog of RCEs ballooned from about 17,000 in October of 2009 to over 110,000 in March of 2013; however, focused attention on RCEs had reduced the backlog to 78,272 at the end of September 2013. Further implementation of initiatives provided continued progress toward reducing the backlog of RCEs from 46,441 as of October 1, 2014 to 26,901 at the end of FY 2015. Additionally, the USPTO focused efforts to move the oldest RCEs resulted in 32.88percent being over four months from filing compared to 52 percent of RCEs being over four months from filing on October 1, 2014, and 73.4 percent of RCEs on October 1, 2013. This is a commendable achievement in reducing the total number of RCEs awaiting action and handling them in a more timely fashion.

In the graph below, one can see the progress achieved by the USPTO in reducing the backlog of RCEs.



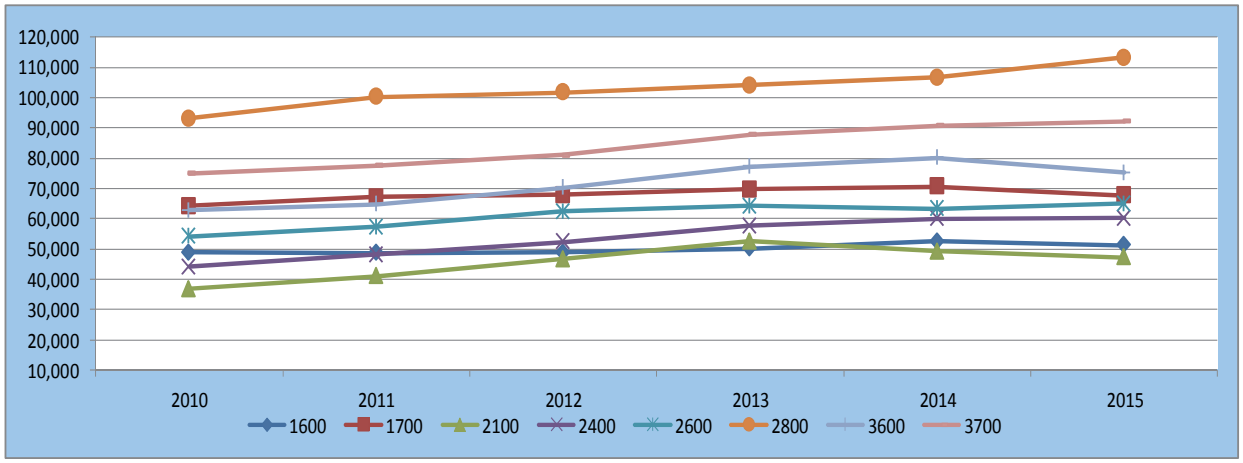
During FY 2015, the USPTO experienced a decline in filings of Utility, Plant and Reissue (UPR) patent applications of about 0.7 percent overall compared to FY 2014 in which the USPTO experienced a filing growth rate of 2.8 percent. The serialized filings in FY 2015 were up slightly compared to FY 2014 while the RCE filings were down about 5% percent.

See the chart below for the recent filing trends for serialized filings and RCE filings.

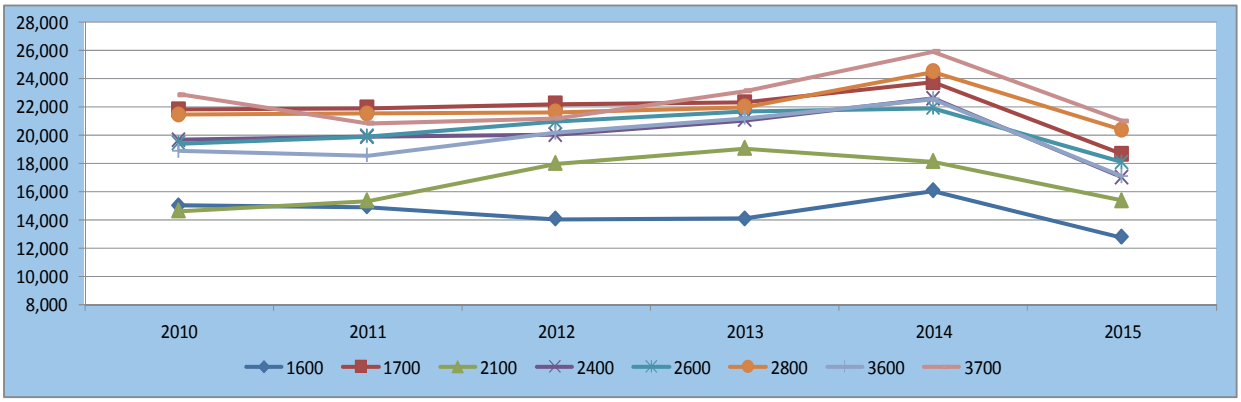


There are probably many reasons for the decline in filings at the USPTO, but the programs instituted by the USPTO have contributed to a reduced need to submit an RCE. A focus on interviews and working with applicants to identify allowable subject matter, the QPIDs program allowing the consideration of newly discovered prior art during the allowance process and the rearrangement of RCEs on examiners' dockets have been positive steps that seem to be playing a role in the reduction in RCE filings.

The following chart shows the projected total filings for each Technology Center (TC).



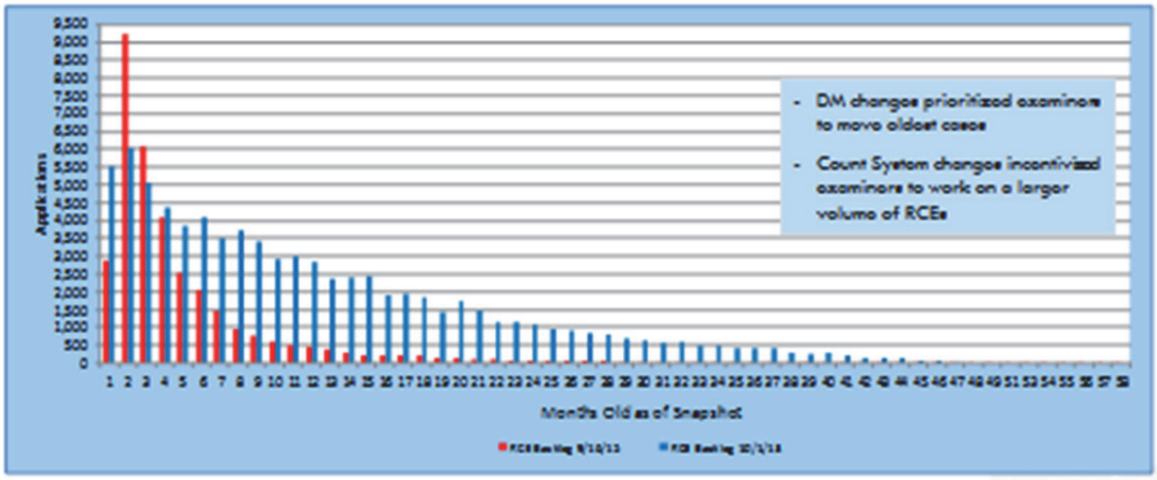
See the chart below for the projected RCE filings by Technology Center.



It can be seen that every TC had experienced a decline in the filings of RCEs and while some TCs have declining total filings, others are flat and TC 2800 is still experienced a growth in total filings.

See the two charts below which show a comparison of the age distribution of the backlog of RCEs at the end of FY 2015 compared to the ends of FY 2013 and FY 2014.

Distribution of RCE Backlog by Age as of September 16, 2015 Vs. October 1, 2013

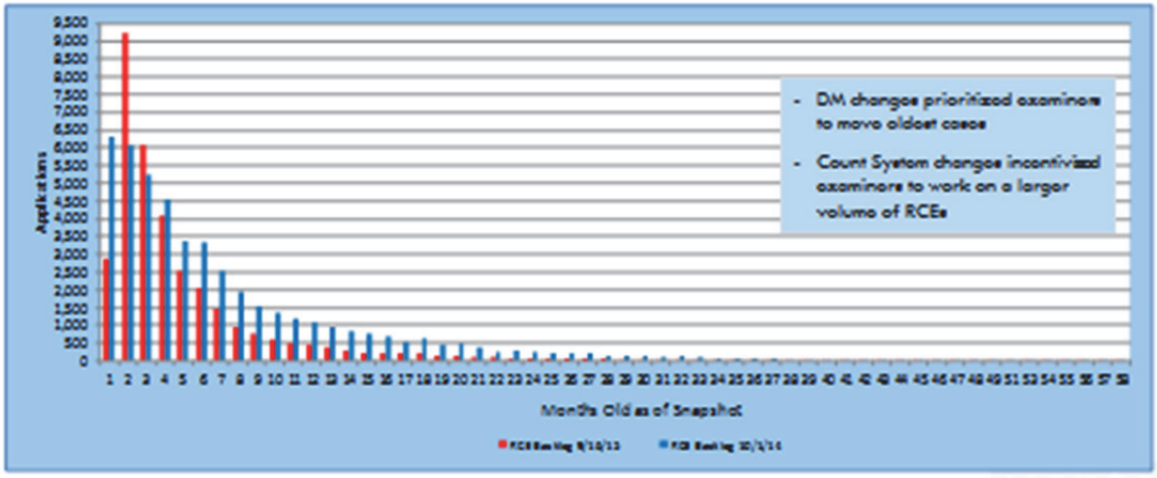


11,988 RCEs (34.9% of backlog) are over four months old as of September 16, 2015

59,702 RCEs (73.4% of backlog) were over four months old as of October 1, 2013

1

Distribution of RCE Backlog by Age as of September 16, 2015 Vs. October 1, 2014



11,988 RCEs (34.9% of backlog) are over four months old as of September 16, 2015

24,718 RCEs (52.6% of backlog) are over four months old as of October 1, 2014

2

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 of the oldest RCEs as well. At the end of FY 2015, there were 9,024 RCEs (32.8 percent of the backlog) over four months from the RCE request date compared to 24,718 (52.6 percent of the backlog) at the end of FY 2014 and 59,702 (73.4 percent of the backlog) as of the end of FY 2013. The PPAC congratulates the USPTO on this very impressive reduction in the age of RCEs awaiting a next action. This level of change demonstrates a commitment by both the Office and the examiner union, Patent Office Professional Association (POPA), in being responsive to the concerns of patent applicants regarding the pendency of RCEs. Also as of September 2015, the average pendency for RCEs is 3.3 months, which represents an improvement over FY 2014. As can be seen in the above charts, the tail of RCEs has been dramatically shortened, with the distribution of RCEs moving to earlier ages. 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 a longer pendency than four months. 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. The Office 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. It is captured only in RCE pendency and traditional total pendency including RCEs statistics reported on the USPTO Patent Dashboard. To provide real continued examination in RCEs, the applications must be picked up for examination quickly and an established goal for completion of an action is essential. RCEs are amended applications and should be treated consistently as such. They should be returned to the amended docket. If that cannot be arranged, in the short term a goal of four months absolute for completion of RCEs would, at least, align with the congressionally-mandated PTA timeframe for completion of amended applications. The average pendency for RCEs from filing to the next office action is 3.3 months and represents an improvement over the past several years. However, that average still means that some RCEs are completed more than four months from filing the request for an RCE and consequently accrue PTA. Efforts to eliminate PTA at all stages of production should be made.

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 there being no target goal for their completion, and this is particularly problematic because they are not captured in the

current pendency goals or reported results. As amended applications, the RCEs should be handled in the same way as other amended applications and done on the same timeline. They should be returned to the amended docket or at least have a goal set for their completion, preferably four months to be in alignment with the congressionally mandated timeframes and to avoid giving PTA stemming from 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 pre-appeal brief conference and/or the appeal conference. It is believed that having the opportunity to make arguments in person in real time to respond to positions taken by the Office would reduce the need for RCEs and appeals to the PTAB. Also, it seems that even more understanding by the Office 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. A pilot with a fee could be developed for such a program to test the outcomes.

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 AFCP 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.

VI. PATENT TRIAL AND APPEAL BOARD

A. INTRODUCTION

The AIA established the Patent Trial and Appeal Board (PTAB or Board) on September 16, 2012. The Acting Chief Administrative Patent Judge of the PTAB is Nathan K. Kelley, who replaced former Chief Judge Administrative Patent Judge James Donald Smith on August 1, 2015. The

PPAC commends the former Chief Judge for his leadership of the PTAB during his tenure at the USPTO, especially because he successfully oversaw the implementation of the new AIA procedures at the PTAB. The Board's responsibilities include: reviewing adverse decisions from examiners upon applications for patents pursuant to section 134(a); reviewing reexamination appeals pursuant to section 134(b); conducting legacy interference proceedings pursuant to pre-AIA section 135; conducting derivation proceedings pursuant to section 135; and conducting covered business method (CBM) patent reviews, inter partes review (IPRs), and post-grant reviews (PGRs) pursuant to section 18 of the AIA and chapters 31 and 32 of Title 35, United States Code.

B. BOARD STAFF

As of the end of FY 2015, the Board includes 242 judges, with judges located at each of the regional offices. More specifically, the Dallas office has 12 judges, the Silicon Valley office has 21 judges, the Denver office has 14 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 growing workload faced by the PTAB. The Board continues to review candidates and plans on hiring additional judges in FY 2016. The PTAB website includes helpful links to an administrative patent judge recruiting brochure and to allow applicants to apply on line.

C. EX PARTE APPEALS

The backlog of ex parte appeals pending at the Board stands at 21,293 appeals as of September 30, 2015. The backlog averaged about 23,654 appeals for the year. The trend was on a downward trajectory for the year, with the peak reaching 26,014 appeals in October 2014 and with the focus of the Board, was decreased to a backlog of 21,293 appeals at the end of September 2015.

The Board implemented an Expedited Patent Appeal Pilot (EPAP) program on June 19, 2015, whereby a pending appeal is able to be accorded special status when another pending appeal is withdrawn by an appellant. As of September 2015, the Board has received 21 petitions. The PPAC commends the Board for implementing an expedited appeal pilot program to reduce the volume of ex parte appeals. However, the PPAC does not believe that the EPAP is the most effective approach to reducing the backlog. Based on some feedback, if an appeal was considered worthwhile to pursue, appellants do not want to give up one appeal in favor of another appeal because all appeals are deemed important.

In a Federal Register notice dated September 15, 2015, the PTAB announced a second pilot program that allows small or micro entity appellants with only a single ex parte appeal pending before the Board to expedite review of that appeal in return for agreeing to streamline the appeal. Specifically, the appeal must not involve any claim subject to a rejection under 35 U.S.C. § 112, and the appellant must agree to the disposition of all claims subject to each ground of rejection as a single group and waive any request for an oral hearing. The second pilot, referred to as a Streamlined, Expedited Patent Appeal Pilot for Small Entities, allows small or micro entity

appellants who streamline their appeals to have greater control over the priority with which their appeals are decided. The streamlining of appeals under this pilot will also assist the Board to more efficiently reduce the overall inventory of appeals pending before the Board. The Office has waived the petition fee for this pilot program. It is too early to assess the effectiveness of this pilot. However, the PPAC commends the Board for implementing a second pilot program to address applicants concerns with the significant ex parte backlog at the Board and the significant time for the Board to review an ex parte appeal. The Board will need to continue to "think outside the box" when it comes to considering new ways to decrease this backlog.

The statistics for ex parte appeals show a decline in the backlog of appeals. In addition, according to current statistics on the PTAB website for FY 2015, the average pendency of an ex parte appeal is 29.7 months from filing the notice of appeal to final written decision. This pendency is simply too long. The PPAC is concerned that the growing number of requests under the AIA reduces the ability of the PTAB to complete the consideration of the ex parte appeals because the AIA requests carry a statutory deadline. It is unfortunate that patent applicants' appeal decisions are placed second to the growing AIA caseload. The PPAC commends the Board on its efforts because the appeals backlog has not grown and has been reduced. However, new mechanisms should be explored for more creative ways to handle the combined work being filed at the PTAB. For example, the PTAB could work with the Patent Examining Corps to attempt to get the disputes resolved in the Patent Examining Corps, reducing the need to file an appeal. Data mining the information regarding the outcome of patent appeals and the decisions made during the appeal conferences in the Patent Examining Corps might highlight some areas for improvement and/or training.

The Board continues to implement a per curiam process, whereby certain appeals can be decided based on arguments by the examiners or appellants in the written record. These per curiam decisions are shorter and generally disposed faster than other appellate decisions. In FY 2012, the PTAB issued 142 per curiam decisions; in FY 2013, the PTAB issued 136 per curiam decisions; in FY 2014, the PTAB issued 122 per curiam decisions; and in FY 2015, the PTAB issued 50 per curiam decisions. The PPAC recommends continued use of per curiam decisions, but emphasizes that the written record must sufficiently explain the facts and law in the case.

The Board has affirmed or affirmed-in-part 69.6 percent, reversed 28.9 percent, and remanded or dismissed about 1.5 percent of the examiner's decisions. These statistics are consistent with the affirmance, reversal, and remand/dismissal rates of previous years. In addition, the PPAC is encouraged by the low numbers of remands and dismissals, which indicate that the Patent Examining Corps provides complete examiner's answers to the PTAB.

D. AIA PROGRESS

As of September 30, 2015, the Board had received 3,984 total petitions since the inception of the AIA: 3,578 IPR proceedings, 382 CBM proceedings, 13 PGR proceedings, and 11 derivation proceedings. The majority of the petitions were in the electrical/computer software area. In

particular, the petition filings by area of technology were: 61 percent electrical/computer software; 25 percent mechanical; 6 percent chemical; 8 percent biotechnology/pharmaceutical; and <1 percent design. With respect to IPRs, CBMs, and PGRs, patent owners have submitted 2,701 preliminary responses and waived their rights to submit a preliminary response in 521 cases. In addition, 512 petitions have been settled in FY 2015. 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 574 final written decisions in IPR proceedings, 77 in CBM proceedings, and 0 final written decisions in PGR proceedings.

The PTAB continued to be busy in FY 2015, receiving a peak of 1,902 IPR/CBM/PGR petitions in FY 2015. A comparison of the number of PTAB petitions to district court filings involving patent litigations in 2014 highlights this point. The PTAB received 1,902 petitions from September 30, 2014 to September 30, 2015; in all of FY 2015, 2,127 complaints were filed in the Eastern District of Texas, 559 in the District of Delaware, 247 in the Central District of California, and 155 in the northern District of California. The number of PTAB filings in FY 2015 thus puts the PTAB ahead of all but one of the federal district courts in terms of patent disputes that they are handling.

E. PTAB ROUNDTABLES, BOARDSIDE CHATS, AND FEDERAL REGISTER NOTICES

The PPAC commends the PTAB for its outreach efforts in FY 2015. In particular, the PTAB hosted six roundtables in the Midwest region in November 2014 to share information about the AIA trials including statistics, lessons learned, and techniques for successful motions practice. The Board received feedback about the trials and featured a panel discussion to elicit public input. At each roundtable, administrative patent judges participated and were available for questions and conversation.

The six locations and dates that the PTAB Roundtables were held include:

Detroit, Michigan, November 5;

Chicago, Illinois, November 7;

Pittsburgh, Pennsylvania, November 13;

Cleveland, Ohio, November 14;

Minneapolis, Minnesota, November 17; and

Milwaukee, Wisconsin, November 19.

In addition to the PTAB roundtables, the Board also initiated in 2015 Boardside chats, which is a lunchtime webinar series hosted by PTAB judges to update stakeholders on current Board

activities and statistics as well as to receive feedback about the PTAB process. The chats are free, open to the public, and include time for attendee questions and answers. The PTAB Judges' presentations and videos are saved for later viewing on the PTAB website. The dates and topics for each Boardside chat are provided below:

February 3, 2015 - PTAB Statistics and Key Decisions

April 7, 2015 - Do's and Don'ts for Ex Parte Appeals

July 14, 2015 - Discovery in AIA Trials

August 4, 2015 - Ask the Judges Questions

October 6, 2015 - Best Practices before the PTAB

The Boardside chats have been favorably received by stakeholders. Because they represent a valuable two-way conduit for the constructive flow of information to and from the PTAB, the PPAC recommends continued use of these chats.

The USPTO received 37 comments from IP bar associations, corporations, and individuals in response to the USPTO's Federal Register notice dated June 27, 2014, Request for Comments on Trial Proceedings Under the America Invents Act Before the Patent Trial and Appeal Board. 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 response.

The USPTO took a two-step approach in responding to the 37 comments 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 were described in a Federal Register notice dated May 19, 2015, entitled Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board. The quick fixes include providing an additional ten pages for a patent owner's motion to amend, allowing a claims appendix in a motion to amend, 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, 2015 Federal Register notice was to provide more substantive proposed rule changes. In a Federal Register notice dated August 20, 2015, also entitled Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board, the PTAB proposed these more substantive changes including:

- Proposes to allow patent owners to include, with their opposition to a petition to institute a proceeding, new testimonial evidence such as an expert declaration;

- Proposes a new requirement on practitioners before the PTAB, akin to the Rule 11 requirements in federal courts, to give the USPTO a more robust means with which to police misconduct;

- Proposes to clarify that the PTAB will use the claim construction standard used by district courts (often known as the *Phillips* standard) for patents that will expire during proceedings whose claims therefore cannot be amended, while confirming the use of broadest reasonable interpretation (BRI) for all other cases;

- Proposes using a word count for major briefing so that parties are free to present arguments and evidence to the Office in a way that a party deems most effective, including presenting arguments in claims charts; and

- Maintains the PTAB's current motions-to-amend practice through the PTAB's body of decisions, including a recent decision in *MasterImage 3D, Inc. v. RealD Inc.,* Case IPR2015-00040 (PTAB July 15, 2015) (Paper 42) (representative), that clarified what prior art a patent owner must address to meet its burden of proof.

In addition, the proposed rulemaking also addresses comments made about requests for additional discovery, live testimony, and confidential information.

The Office, in cooperation with the American Intellectual Property Law Association (AIPLA), conducted further public road shows in August 2015 to discuss these proposed rules and improvements to PTAB proceedings. The road shows, entitled Enhancing Patent Quality and Conducting AIA Trials, were held on August 24th in Santa Clara, CA; on August 26th in Dallas, TX; and on August 28th at USPTO headquarters in Alexandria, VA. The Office is planning to issue final PTAB rules before the end of the year based on the input it receives on these proposals.

With respect to AIA statistics and how the PTAB is handling the inter partes reviews, post-grant reviews, and post-grant reviews for covered business method patents, the USPTO only has three years of data at this point. However, the statistics provide a helpful picture of the significant activity occurring before the PTAB to date – and, in particular, how and by whom these proceedings are being used:

- As of September 30, 2015, the PTAB has received a total of 3,984 petitions, of which 3,579 are IPRs, 381 are CBMs, 13 are PGRs, and 11 are DERs.

- Of all of the AIA petitions filed so far, 61 percent were filed in the electrical/computer technology centers (TCs), 25 percent in the mechanical/business methods TCs, 8 percent in the bio/pharma TC, and 6 percent in the chemical TC.

- Trials have been instituted so far on 1,666 of 3,578 IPR petitions, 207 of 382 CBM petitions, and 3 of 13 PGR petitions.

- Of the first IPRs to reach a conclusion, 9 percent of total claims available to be challenged (5,114 of 59,546), were determined by the PTAB to be unpatentable in a final written decision. Other claims were either not challenged, resolved by settlement, cancelled, or upheld as patentable. Of the first IPRs to reach a conclusion, 18 percent of claims actually challenged (5,114 of 29,137) were found to be unpatentable (data as of August 31, 2015).

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

Recommendations:

The PPAC applauds the PTAB for the work it has done since the passage of the AIA. As evidenced by the record 1,902 petitions filed in FY 2015, the PTAB proceedings have quickly become a critical aspect of the U.S. patent system. This is especially true in light of recent statistics indicating that more than 80 percent of the PTAB proceedings involve patents that are involved in parallel district court litigation. The PTAB is extremely busy, not only with new petitions being filed, but also with pending cases that need active involvement from the PTAB judges. The pending cases also include ex parte and inter partes reexamination appeals to the PTAB.

The PPAC especially applauds the outreach efforts the PTAB has made to attend roundtables around the country including in the Midwest region as listed above and more recently, in Santa Clara, California; Dallas, Texas; and Alexandria, Virginia in August 2015. Moreover, the PTAB Boardside chats and Director Lee's blogs related to ongoing PTAB developments have been particularly helpful and well received by stakeholders. The PPAC recommends that the PTAB continue these outreach efforts because stakeholders find the updates and updated PTAB statistics helpful when making decisions related to the PTAB process.

The PPAC recommends that the Office continue to evaluate the conduct of 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 believe that the PTAB proceedings unduly favor petitioners while others believe that the proceedings are fair. In fact, in FY 2015, there has been significant debate in Congress with respect to the fairness of the inter partes review proceedings. The PTAB roundtables, Boardside chats, quick fixes," and proposed rule changes have helped to address stakeholders' concerns, but the Office needs to remain vigilant in this regard.

A primary challenge facing the PTAB is hiring additional PTAB judges to handle the increased AIA trial workload while allowing judges to continue working on ex parte appeals. The USPTO has been able to handle this because the USPTO has the funds necessary to hire additional judges and expand workload capacity. As a result, although the AIA petitions have increased significantly, the PTAB has not exceeded the one-year time period from the institution of the PTAB decision to issuing the final written opinion in any AIA trials. In addition, the ex parte

appeals backlog continued to decrease in FY 2015. The PPAC commends the PTAB for these achievements but recommends that the PTAB remain vigilant in exploring other ways to handle the increased AIA workflow and to simultaneously also decrease the ex parte appeals backlog.

A major criticism by some stakeholders of the PTAB process has been the granting of only five patent owner's motions to amend. In the Federal Register notice dated June 27, 2015, the Office noted its decision to maintain the PTAB's current motions-to-amend practice based on its body of decisions, including the recent decision in the *MasterImage 3D* case as cited above, which clarified what prior art a patent owner must address to meet its burden of proof. Although some stakeholders were hoping for a more aggressive change to the PTAB claim amendment process, the PPAC commends the PTAB for emphasizing what prior art a patent owner must address to meet its burden of proof, such prior art not including the "entire universe" as initially perceived by stakeholders after the *Idle Free* PTAB decision. Due to the desire of some to allow claim amendments in the PTAB process, the PPAC encourages the PTAB to continue to emphasize to stakeholders that claim amendments will be granted during the PTAB process when the correct procedure is followed.

With respect to AIA statistics, the PPAC recommends that the Office continually update stakeholders with the latest and most accurate AIA statistics because these statistics are a valuable tool to stakeholders 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. Based on recent statistics from the Office as provided above, the Office noted that of the first IPRs to reach a conclusion, 9 percent of total claims available to be challenged (5,114 of 59,546), were determined by the PTAB to be unpatentable in a final written decision. Other claims were either not challenged, resolved by settlement, cancelled, or upheld as patentable. The Office also noted that of the first IPRs to reach a conclusion, 18 percent of claims actually challenged (5,114 of 29,137) were found to be unpatentable. The 9 percent figure (i.e., percentage of available claims found unpatentable in IPRs) and 18 percent figure (i.e., percentage of challenged claims found unpatentable) present a more hopeful picture to patent owners than the 80 percent figure that is often their focus (i.e., claims subject to a final decision that are found unpatentable). The PPAC applauds the Office for making available all of the raw data on the results of IPRs so that stakeholders can interpret them in deciding how to proceed with pending actions.

The USPTO has successfully used pilot programs during the past few years to determine if some procedural changes are beneficial to the patent process. The PPAC recommends that the Office remain focused on reducing the backlog, and consider other pilot programs and initiatives to address these ongoing issues. As briefly mentioned above, the Office implemented the EPAP on June 19, 2015, whereby a pending appeal is able to be accorded special status when another pending appeal is withdrawn by an applicant. The PPAC recommends that the Office discontinue the EPAP and consider other pilot programs that will be more favorably received by stakeholders. The Board's implementation of the Streamlined, Expedited Patent Appeal Pilot for Small Entities on September 15, 2015, includes promising features that will allow small or micro entity

appellants to streamline their ex parte appeals. However, this pilot is limited to small and micro entities so it is unclear at this early stage if it will have a significant impact on decreasing the ex parte appeal backlog.

The Board will need to continue to "think outside the box" when it comes to considering new ways to decrease this backlog. One potential pilot program may include features similar to the very popular Track I program whereby applicants would pay an additional fee for receiving expedited ex parte review. The fees could be similar to the Track I program. In addition, the total number of requests for such a pilot program can be capped each fiscal year as was done in the Track I program and the number of such requests can be limited by each applicant so no one applicant can unduly benefit from the pilot program.

VII. LEGISLATION

A. INTRODUCTION

The House and Senate Judiciary Committees both approved bills in June 2015 to address abusive patent litigation practices and increase transparency in our patent system. The provisions in the two bills differ in several respects, but both seek to address potentially abusive tactics used in patent infringement litigation and in pre-litigation activity, and to require greater disclosure of patent ownership information. Floor action in both the House and Senate may occur in the latter part of 2015.

On June 11, 2015, the House Judiciary Committee favorably reported H.R. 9, the Innovation Act, on a 24-8 vote. On June 4, 2015, the Senate Judiciary Committee favorably reported S. 1137, the Protecting American Talent and Entrepreneurship (PATENT) Act of 2015, on a 16-4 vote.

The issues addressed in both the House and Senate bills are essentially the same; both include the following key provisions:

- Significant litigation reform measures that incentivize parties to bring reasonable cases and provide earlier, improved notice of why a case is being brought, including:
    - More information in the complaint explaining why defendants allegedly infringe the patent;
    - Clarifying the standard for when attorney's fees are awarded to the winning party;
    - Automatic discovery stays if motions are filed early in the case; and
    - Stay of litigation for customers using off-the-shelf products provided that the manufacturers of such products are handling the suits themselves and take full responsibility for any damages;
- Requirements for certain increased detail and specificity in particular patent infringement demand letters.

- Patent ownership reporting requirements to promote transparency.

The Senate bill, unlike the House bill, also includes extensive changes to the USPTO's post-issuance review proceedings conducted by the PTAB.

The House bill, unlike the Senate bill, includes the following key provisions:

- Reforming venue rules to provide for stricter rules for where a defendant can be sued for infringement; and
- Limited, but targeted, changes to the USPTO's post-grant review proceedings to address certain abuses such as demanding payment for not filing a PTAB challenge or pursuing a challenge based solely on financial motives.

B. CONGRESSIONAL HEARINGS

On April 14, 2015, Director Michelle Lee testified before the House Judiciary Committee at a legislative hearing on H.R. 9, the Innovation Act. Director Lee provided the Administration's views on provisions of the pending legislation and stated that while legislation to curtail abusive patent litigation is necessary and appropriate, any reform must preserve a patentee's ability to reliably and efficiently enforce its patent rights. She further stated that legislation must achieve a balance, preventing abuse while ensuring that any patent owner, large or small, will be able to enforce a patent that is valid and infringed.

Prior to her confirmation as Director, Ms. Lee testified at two nomination hearings before the Senate Judiciary Committee in December 2014 and January 2015. Her nomination was approved by the U.S. Senate, on a unanimous vote, on March 9, 2015.

C. PENDING LEGISLATION

- **H.R. 9**, Innovation Act (Rep. Goodlatte, R-VA-6) – comprehensive bill approved by Judiciary Committee on 24-8 vote on June 11, 2015.
- **S. 1137**, Protecting American Talent and Entrepreneurship (PATENT) Act of 2015 (or "PATENT Act") (Sen. Grassley, R-IA) – introduced April 29, 2015 – comprehensive bill approved by Judiciary Committee on 16-4 vote on June 4, 2015.
- **S. 632**, Support Technology and Research for our Nation's Growth 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 Act of 2015 (Rep. Burgess, R-TX-26) - approved by Energy and Commerce Committee on 30-22 vote on April 29, 2015 – addresses abusive patent "demand" letters.

- **H.R. 1896**, Demand Letter Transparency Act of 2015 (Rep. Polis, D-CO-2) – introduced April 20, 2015 – requires details in demand letters with USPTO administration.

The PPAC has been actively advising the Office on the proposed legislative and administrative changes aimed at patent quality issues and potentially abusive patent assertion activities 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 make sure that any proposed legislative or administrative changes are appropriately crafted and narrowly targeted without unduly harming our overall patent system, the smooth 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. Further, the USPTO should work within the Administration and with Congress to ensure that it continues to have access to all future fee collections regardless of any government-wide sequestration or other limitation.

VIII. INTERNATIONAL COOPERATION AND WORK SHARING

A. THE OFFICE OF INTERNATIONAL PATENT COOPERATION (OIPC)

In April 2014, the USPTO announced the creation of the Office of International Patent Cooperation (OIPC). The establishment of the OIPC reflected the USPTO's strong commitment, in concert with the stakeholder community, to make current and future improvements to the complex and costly international patent filing system. During the past year, OIPC has worked to create a cohesive and strategic approach regarding international initiatives and activities throughout the USPTO, while also seeking extensive feedback and input from the user/stakeholder community via speaking engagements, webinars, surveys and focus sessions. Beginning in the fall of FY 2015 and continuing in FY 2016, OIPC will be hosting multiple meetings in cities around the country to introduce the new international/global initiatives to the user community while at the same time providing information and guidance to the user community on such initiatives. The USPTO's creation and implementation of the OIPC illustrate yet another means for improving quality, efficiency, and predictability with regard to patent prosecution.

B. SUBSTANTIVE AND PROCEDURAL PATENT LAW HARMONIZATION

1. Substantive Patent Law Harmonization

Progress continues in the study of substantive patent law harmonization topics by the Tegernsee Group (the Group). Formed in July 2011 during a meeting held in Tegernsee, Germany, the Group is comprised of leaders and representatives from the patent offices of Denmark, France, Germany, Japan, the United Kingdom, and the United States, as well as from the European Patent Office (EPO). The Group agreed to undertake a fact finding study of four topics: 1) grace period; 2) 18 month publication; 3) the prior art effect of secret prior art; and 4) prior user rights, so as to identify

areas of difference and convergence between the various patent offices. In June 2014, the Group published the "Consolidated Report on the Tegernsee User Consultation on Substantive Patent Law Harmonization" (June 2014 Report), which merged the results of the European surveys (i.e., Denmark, France, Germany, the United Kingdom, and the EPO) and summarized and analyzed the results of the user consultations in the United States, Japan and Europe on the topics set forth above. The adoption of the June 2014 Report marks the end of an intensive work cycle of fact-finding and user consultations with the Group currently on hiatus pending further developments.

Although the Group was suspended in mid-2014, the USPTO was keen on taking advantage of the momentum created by the Group and its fact finding. Accordingly, the USPTO hosted a roundtable on the topic of International Harmonization of Substantive Patent Law in November 2014. During the roundtable, the USPTO sought views from the user/stakeholder community regarding the following patent examination-related issues: (i) definition and scope of prior art; (ii) grace period; and (iii) standards for the assessment of novelty and methodology for applying non-obviousness/inventive step.

In 2015, progress continues in additional discussions of substantive patent law harmonization by a subgroup of Group B+ Offices[1]. The subgroup includes representatives from the EPO and national patent offices in Canada, Denmark, Germany, Hungary, Japan, Korea, Spain, and the United States.

In April 2015, the subgroup met in London, to discuss differences in national legal provisions and principles as well as objectives for an internationally harmonized patent system. The document created during that meeting included principles on items such as grace period, prior user rights, conflicting applications, publication of applications and prior art as well as higher level objectives for a global patent system. The document was presented for public comment during this past summer and will be finalized and endorsed at the Group B+ Plenary Meeting in October 2015.

2. 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. At the June 2014 IP5 Heads of Office Meeting, representatives from the IP5 Patent Offices agreed that, because resources were limited, they would focus first on the topic of unity of invention but noted that they also could begin work on the other two topics of harmonization to some degree.

[1] The Group B+ Offices consist of the following members: the European Union's 28 member states, the United States, Canada, Australia, Japan, South Korea, the European Patent Office (EPO) and the European Commission (EC).

Unity of Invention

U.S. law provides that a patent application can describe 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 relationship 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. Thus far, the USPTO's objective has been to focus solely on the first of these matters.

Prior Art

The prior art discussions are centered around a suggestion from industry that the EPO, JPO, KIPO, SIPO, and USPTO (known collectively as the "IP5 Patent Offices") develop a system to enable each IP5 Patent Office to view prior art that the other IP5 Patent Offices have cited during examination. The IP5 Patent Offices would then require applicants to disclose such prior art during the examination of related applications. During these discussions, industry representatives have further suggested that, rather than requiring applicants to furnish such prior art themselves, the IP5 Patent Offices should instead establish an automated system that would allow the IP5 Patent Offices to view and have access to such prior art. Representatives of the IP5 Patent Offices are in continuing discussions regarding what legal issues and technology changes would be required in order to implement and adopt such a system.

Written Description/Sufficiency of Disclosure

The JPO proposed a preliminary work plan on Written Description/Sufficiency of Disclosure, which entailed updating tables that described various IP5 Patent Offices' practices with respect to the written description requirement. At this juncture, the other IP5 Patent Offices including the USPTO have not agreed with JPO's proposal. On May 21, 2015, the JPO shared its latest proposal, which specifically asks the other IP5 Patent Offices to analyze written description issues as a part of a case study on a number of applications which were filed in all five IP5 Patent Offices. The USPTO is currently in the process of analyzing this proposal.

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

1. IP5 Patent Offices

Recognizing the continuing evolution and growth of initiatives, a forum of the five largest patent offices (IP5 Patent Offices) agreed to 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 will be done by the program managers who represent the executive leadership of the IP5 Patent Offices. This seemingly simple change will ensure that resources dedicated to the program are commensurate with the value they deliver.

The IP5 Patent Offices continue to meet regularly at the Heads and Deputy Heads level 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 Global Dossier and Priority Document Exchange. Work Group 3 (WG3) deals with work sharing and quality, including the Patent Prosecution Highway (PPH). The Statistics Work Group deals with the annual compilation of patent statistics for the IP5 Patent Offices.

In addition to the Working Groups, the Global Dossier Task Force (GDTF) was created in June 2012 and is comprised of representatives of the IP5 Patent Offices, IP5 Industry, and WIPO. It is an initiative to keep future developments in the Global Dossier project closely focused on the needs of the user community.

In May 2015 in Suzhou, China, the Heads of the IP5 Patent Offices met for the 8th IP5 Heads meeting and discussed next steps of IP5 co-operation, and reaffirmed the mission of providing better services for users and the public. The Heads of the IP5 Patent Offices reached the following joint recognition:

The IP5 Offices will strive to further optimize their services to users and the public, so as to enhance the role of intellectual property in stimulating innovation and promoting socio-economic development.

The IP5 Patent Offices also agreed that they intend to work together to accomplish the following: (i) strengthen work sharing among IP5 Patent Offices; (ii) collaborate to improve the quality in the patent examination procedure; (iii) strengthen IP5 cooperation in the PCT; and (iv) enhance experience sharing among the IP5 Patent Offices. Another significant topic 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

The Global Dossier initiative is a set of business services that will give users/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 dossier system. However, the Global Dossier is not 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/stakeholders of the patent systems of the IP5 Patent Offices.

USPTO will achieve a major milestone this year by launching the first release of Global Dossier in November 2015. Global Dossier is a state-of-the-art tool enabling external stakeholders to access application and patent information from the IP5 Patent Offices through a single website. USPTO examiners received access to Global Dossier as part of the PE2E rollout beginning this past spring. Particularly, Global Dossier will be available for external stakeholders who will then have the ability to access the full file history information on a patent application family from all participating IP5 Patent Offices. The information available via Global Dossier includes searching and examination results. Such information allows examiners to build on the results from the partnering IP5 Patent Offices to help strengthen the patent record as well as assist in improving overall examination quality. This information also benefits external stakeholders and the user community as a whole by providing the ability to track and manage related applications across the five IP5 Patent Offices. Global Dossier will arguably also make it easier and less costly for users to perform functions associated with due diligence, technology transfer, litigation and appeal processes.

Through IP5 Patent Offices' cooperation, the USPTO provides its data to be accessed by the other IP5 Patent Offices and their external stakeholders though each IP5 Patent Office's own Global Dossier portal. In FY 2015, the USPTO received over 1.8 million requests for data from examiners in the other IP5 Patent Offices. Global Dossier usage statistics by USPTO examiners should be available by the fall of 2015.

Currently, the EPO, KIPO, and SIPO provide their own separate Global Dossier portals to the user community and general public. JPO will be introducing its own Global Dossier portal in 2016. The table below provides a brief overview of the status and timelines of the Global Dossier initiatives among each of the IP5 Patent Offices.

Classification	EPO	USPTO	JPO	SIPO	KIPO
Providing Office	June 2014	Summer 2015	1st half of 2015	June 2014	1st half of 2015
Accessing Office	June 2014	Fall 2015	2016	2015	2nd half of 2015

A Providing Office allows the dossier information to be made available to the other patent offices and to the general public. An Accessing Office retrieves the dossier information from the Providing Office and allows its users to access it. The USPTO became a Providing Office on June 26, 2015, and will become an Accessing Office in November 2015.

So that dossier information can be provided to the general public and USPTO examiners on a regular and daily basis seven days a week, the USPTO is working with and encouraging JIPO, KIPO, and SIPO to increase the days and hours of availability to their own dossier information.

As a first step to understanding how to enable cross-filing among the Patent Offices, the USPTO has begun working on a proof of concept for submitting documents to multiple offices through a single action via the Global Dossier, rather than submitting them to each IP5 Patent Office individually. This functionality will allow the sharing of documents and information between the IP5 Patent Offices, including, for example, supporting documents for other initiatives, e.g., Patent Prosecution Highway (PPH), Collaborative Search Pilot Program (CSP), prior art exchanges, etc. This proof of concept is viewed as a first step toward cross-filing among offices. The USPTO has been working closely with stakeholders and the user community on this proof of concept to better understand the functionality and systems that would deliver the greatest benefit to its users.

3. Collaborative Search Pilot Program (CSP)

During the past year, the USPTO made significant advances in studying the benefits of work sharing through the launch of CSP with two independent collaborative search pilot Memorandums of Cooperation (MOCs) having been signed – one with JPO and the other with KIPO. The purpose of these pilot programs is to provide the stakeholders with prior art from two offices early in the examination process to assist applicants in determining its next steps in the patent prosecution process. It is believed that these programs will help to achieve more compact prosecution as well as improve patent quality. Both pilot programs will run for two years with the option for the respective offices to extend the programs.

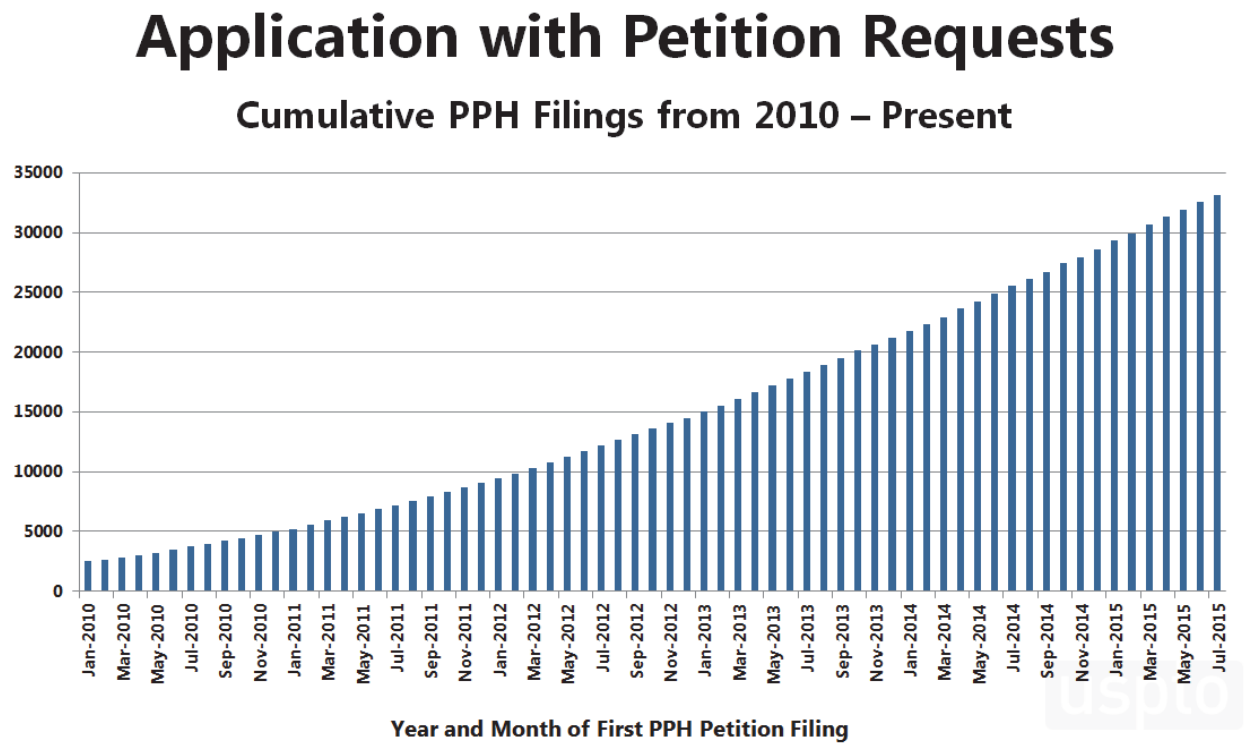
The USPTO's work sharing pilot program procedures are based upon the USPTO's first action interview (FAI) program, which separates the searching process from substantive examination. Particularly, the FAI program is designed to give applicants the examiner's search results, followed by an optional interview prior to full examination of the claims. In theory, the FAI program gives the applicant a better understanding of the examiner's position regarding the prior art to be applied to the claims earlier in the prosecution thereby leading to more efficient prosecution. The most significant modification to the FAI program for use in the work sharing pilot programs is the need to take an application out of turn when coordinating efforts with the JPO and KIPO on an application's counterpart application.

The differences between the JPO pilot program and the KIPO pilot program are that in the JPO pilot program, the information exchange happens prior to the examiner fully forming the pre-interview communication (PIC) so that the PIC contains both offices' input, whereas in the

KIPO pilot program, the USPTO's PIC is conducted independent of the KIPO's work and both work items are provided to the applicant for its consideration. 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 MOCs for each of these programs were signed in May 2015. The JPO pilot program began on August 1, 2015 and the KIPO pilot program began on September 1, 2015.

4. Patent Prosecution Highway (PPH)

As of July 2015, the number of PPH applications with petitions reached 33,000 with the USPTO receiving over 600 requests per month at approximately the same rate as the previous year. The chart below shows new PPH requests by month since January 2010 and demonstrates the program's continued and ongoing growth and acceptance by the user community.



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 was successfully launched in January 2014 and includes the following offices: Australia (IPAU), Canada (CIPO), Denmark (DKPTO), Finland (NBPR), Hungary (HPO), Iceland (IPO), Israel (ILPO), Japan (JPO), Korea (KIPO), Nordic (NPI), Norway

(NIPO), Portugal (INPI), Russia (ROSPATENT), Spain (IPAU), Sweden (PRV) and the USPTO. Since January 2014, four additional offices have joined the Global PPH pilot program, Austria (APO), Estonia (EPA), Germany (DPMA), and Singapore (IPOS).

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

A milestone in FY 2015 for the program occurred when President Barak Obama and Brazilian President Dilma Rouseff discussed a joint statement on potential future collaborations between the United States and Brazil, which included reference to potential work sharing between the patent offices of each country. A "Joint Statement on Patent Work Sharing" was signed by U.S. Secretary of Commerce Penny Pritzker and her Brazilian counterpart, Minister Armando Monteiro of the Brazilian Ministry of Development, Industry & Foreign Trade (MDIC) on June 30, 2015. Notably, President Obama and President Rouseff issued a public announcement that highlighted all the major areas of cooperation between the two countries and specifically referenced the Joint Statement and the potential for work sharing between the two patent offices.

This recognition of patent work sharing is an important milestone for the USPTO because it emphasizes the importance of intellectual property in bilateral discussions with partner nations, while highlighting the central role the Office of Policy and International Affairs (OPIA) serves in providing expert intellectual property advice to the various branches of the U.S. government as well as the patent offices of foreign governments.

5. Cooperative Patent Classification (CPC)

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 2015 and FY 2016, the USPTO has planned significant development around CPC automation tools that involve means for examiners to collaborate between offices, tools to maintain schemes and publish revisions, and general overall improvements of classification tools for examiners.

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 are 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.

6. Patent Cooperation Treaty (PCT) – 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 Patent Offices recently agreed to strengthen communication and coordination in development of the PCT. The IP5 Patent 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 individual 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. 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.

7. Overall USPTO PCT Statistics

Table 3 below shows USPTO data for PCT procedures through July 2015.

Table 3: PCT Timeliness

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

Based on the effects that sequestration had on USPTO operations, the international search report (ISR) mailing times for FY 2014 showed a decline from the previous year based on the reduction in funding to this third party contracted work. Although the USPTO anticipated the impact to timeliness would follow a pattern similar to that of the reduction in FY 2011, there was clearly a greater impact on timeliness due to the sequestration. However, as the effects of sequestration have subsided and the full funding of third party contracted work has resumed, those timeliness figures have shown a marked improvement, and it is anticipated that the timeliness of ISR mailings will continue to improve through FY 2015 and into FY 2016.

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

The Hague Agreement went into effect for the United States 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 United States. As of August 2015, approximately 64 applications have been filed by U.S. applicants with the USPTO as an office of indirect filing and approximately 83 applications in which the United States 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 2014, there were 2,924 international applications filed worldwide, with a combined total of 14,441 designs.

Recommendations:

The PPAC has seen a focused increase in activity with regard to international initiatives and programs within the USPTO during the past year. However, previous budget cuts are still showing their effect on the Office. For example, the extensive budget cuts in prior years to the USPTO's IT infrastructure greatly impact the timeliness of development, implementation and maintenance of these many international initiatives, programs and processes. The PPAC recommends stable IT funding along with regular and consistent upgrades to the IT infrastructure so as not to negatively impact the USPTO's global leadership position.

The PPAC applauds and supports the strides made by the USPTO in its international cooperation and work sharing initiatives among multiple patent offices and encourages the continued development and expansion of these efforts not only with the IP5 Patent Offices but also with many other patent offices around the world. PPH and Global Dossier are excellent examples of such strides and the continuing need and importance for an effective and user friendly patent application platform across multiple patent offices. In particular, the PPAC strongly supports the USPTO in its efforts to encourage other IP5 Patent Offices to make their own global dossier platforms accessible via the internet twenty four hours a day/ seven days a week to the user community and examiners. In addition, the PPAC recommends that the USPTO repeatedly review

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

To support such initiatives, the PPAC encourages further outreach through a variety of forums to extend discussions among multiple patent offices as well as to continue to provide training and dialogue regarding best practices among the patent offices. The PPAC strongly supports education, training and updates regarding the USPTO's international initiatives and programs via roundtables, webcasts and e-mail notices to the user community on a regular and repeated basis throughout the calendar year and commends the USPTO for its efforts during the past year. The PPAC suggests that a general calendar regarding all international initiatives as well as other USPTO outreach activities should be available and searchable on the USPTO website. The PPAC further encourages the USPTO to do more outreach and include more entities having a variety of perspectives regarding the patent system to provide input regarding international initiatives, thereby fostering earlier acceptance of new procedures and processes within the USPTO as well as in the global patent arena.

The PPAC commends the USPTO on its efforts regarding its international initiatives and programs during the past year and again stands ready to offer its encouragement, support, guidance and assistance for FY 2016.

IX. HUMAN CAPITAL

A. INTRODUCTION

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 Office, 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 2015. Much has happened related to current and projected examiner hiring, especially in view of recent and projected fee collections. In addition, a significant amount of work has gone into initiatives to increase examiner productivity and quality, including extensive training programs. The following is a highlight of key developments in 2015.

B. EXAMINER HIRING AND RETENTION

The USPTO hired an additional 340 examiners in FY 2015. The Office saw a slight increase in the attrition rate from FY 2014 to FY 2015, from 3.39 percent in FY 2014 to 5.58 percent in FY 2015. The increase is attributable to several factors, including an overall reduced unemployment rate in the U.S., a flat federal salary structure, and an increase in the number of employees eligible for retirement from the baby boom generation. It is important that the USPTO continues to focus on a number of initiatives to increase retention and employee satisfaction, especially since improving external conditions will put pressure on the attrition rate. Accordingly, the PPAC recommends

that the Office continue to focus on initiatives to further reduce attrition and keep experienced, productive examiners.

The USPTO continues to look for examiners with previous patent experience. The Office anticipated that such experienced patent professionals would require less training and thus would have the ability to start examining patent applications sooner.

Of the 340 new examiners hired in FY 2015, none were experienced patent professionals. 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)
2015	340	340	496	8,261	-350
2014	1000	934	360	8,611	683
2013	1000	538	413	7,928	97
2012	1500	1,496	294	7,831	1,146
2011	1200	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 is now a permanent regional office open in Denver, Colorado, and newly opened offices in Silicon Valley, California, and Dallas, Texas. In FY 2015, 77 examiners were hired in the regional offices, with 59 hired in Denver and 18 in Detroit. An additional 125 examiners and judges are expected to be hired for these offices in FY 2016:

Satellite Office	Examiners	Judges	2016 Expected Hires
Detroit	100	10	10
Denver	79	15	15
Silicon Valley	0	23	50
Dallas	0	13	50

C. EFFECTS OF UNCERTAINTY VERSUS STABILITY IN BUDGETS ON HIRING

The hiring goals for the USPTO need to be consistent with fee collections. In FY 2016, the Office currently intends to hire 125 utility, plant, and reissue examiners, including one class of about 25 experienced hires, and an additional 30 design examiners. With the decline in fee collections for FY 2015 and the commensurate decline in the projected fee collections for FY 2016, 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 2016 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 Office 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. Develop Hiring of Experienced Patent Professionals

During FY 2010, the USPTO initiated a new hiring model to encourage individuals with previous patent experience to apply for a position as a patent examiner. This model was intended to place more emphasis on recruiting candidates with significant patent experience while previous hiring focused more on technical background/experience. The hope is that experienced patent professionals would require less training and thus would have the ability to start examining patent applications sooner.

Since 2010, the USPTO has consistently been able to hire experienced patent professionals. However, in FY 2015, the Office was not able to add experienced professionals on top of the 63 it had already hired in the past two years. This remains a focus of hiring for FY 2016. Since this program began, the USPTO has added 385 new examiners with previous patent experience. The PPAC encourages the Office to continue with this program.

2. 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.

3. Nationwide Workforce

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

There are currently 4,389 examiners that participate in the PHP. This group is comprised of two segments: employees whose worksite is within 50 miles from the Alexandria campus and those with a worksite greater than 50 miles from the Alexandria campus. As of July 2015, 6,627 or 78

percent of eligible examiners and 51.7 percent of all examiners work remotely in the hoteling program.

With respect to the PHP, NAPA issued its 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 following the USPTO's actions on, and significant Congressional interest in response to, whistleblower allegations received by the Department of Commerce Office of OIG in 2012 about 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. The NAPA report concluded:

> It would appear to be unlikely that T&A abuse is widespread or unique to teleworkers, and it does not appear to reflect the actions of the workforce as a whole. Therefore, the Panel recommends 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. The Teleworking and Hoteling programs have benefitted the Agency by saving costs in real estate, allowing the Agency to perform work during office closures and has contributed to the recruitment and retention of employees. The USPTO's 20-year roll out of teleworking has been deliberative and the Agency has routinely sought input and feedback from all employees, unions and their many stakeholders to continually improve the workforce structure. (page 4 of report).

The report further indicated that while the USPTO has made significant progress, NAPA believes the Office USPTO can do more to strengthen its telework programs and made a number of recommendations in that regard.

The OIG issued an investigative report on August 18, 2015, on time and attendance abuse by one particular patent examiner. The OIG concluded that the examiner in question submitted false claims when he certified and affirmed hours of work he did not perform, and made several recommendations to the USPTO with respect to the examiner, as well as a couple general recommendations around controls for time and attendance.

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. It also strongly recommends that systems be improved to properly manage these programs to measure productivity and monitor potential abuse.

Further, the PPAC continues to support TEAPP, which provides more flexibility regarding teleworking employees travel requirements. TEAPP began in January 2012, and participation was limited to 25 percent 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 percent 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 July 2015, the table above shows the number of participants in TEAPP. The USPTO currently has 2,015 total participants.

4. IT Systems

A very tangible example of initiatives to increase examiner capacity is the new IT tools available to examiners. As indicated above, during the second quarter of FY 2015, the USPTO made available to the entire patent 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 a software tool, such as searching and claim tracking, can be consistently streamlined across tools and applications.

5. 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. For example, after the March 2015 release of the DAV system, the Office trained patent examiners and technical support staff on the new IT tool.

Further, the USPTO has issued the 2014 Interim Guidance on Patent Subject Matter Eligibility (Interim Eligibility Guidance) for USPTO personnel to use when determining subject matter eligibility under 35 U.S.C. § 101 in view of recent decisions by the U.S. Supreme Court, including *Alice Corp., Myriad*, and *Mayo*. The USPTO also produced an update pertaining to patent subject

matter eligibility titled "July 2015 Update: Subject Matter Eligibility" in response to the public comment on the 2014 Interim Patent Eligibility Guidance for which it is now seeking public comment.

The USPTO has engaged in extensive training in these substantive areas, including:

1. 35 U.S.C. § 101 Training:

    - 2014 Interim Guidance on Patent Subject Matter Eligibility training
    - Analyzing Nature-Based Products
    - Abstract Idea Workshop training

2. Claim Interpretation:

    - Examining Functional Claim Limitations: Focus on Computer/Software-related Claims
    - Broadest Reasonable Interpretation (BRI) and the Plain Meaning of Claim Terms

3. 35 U.S.C. § 112 (a):

    - Examining Claims for Compliance with 35 USC 112(a): Overview and Part I - Written Description = Focus on Electrical/Mechanical and Computer/Software-related Claims
    - Examining Claims for Compliance with 35 USC 112(a): Part II - Enablement = Focus on Electrical/Mechanical and Computer/Software-related Claims

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

- New Examiner Training Program, a.k.a. Patent Training Academy (Entry Level)
- Technical Support Staff (TSS) Training Programs,
- Examiner Refresher Training Program
- Advanced Examiner Patent Practice Training Program
- Site Experience Education (SEE) Trip Company Visits
- New Supervisory Primary Examiner Training

Patent Examiner training is also taking place on Global Dossier, which was covered within the PE2E instructor-led sessions and in printed materials. A QRG (quick reference guide) on PE2E/Global Dossier was also made available to all Patent Examiners.

In addition, 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 will have relevant, historic and current technical knowledge, including industry practices/standards in technological areas of interest.

Recommendations:

With the decline in fee collections for FY 2015 and the commensurate decline in the projected fee collections for FY 2016, 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 2016 so as not to be in a position of over-hiring for expected future needs.

The PPAC recommends continuing to target experienced patent professionals for the available new examiner positions. It is recognized that the pool of experienced patent professionals may be small, but still very worthwhile to pursue.

The PPAC further recommends that the USPTO continue to advance distributed workforce initiatives to attract a larger pool of well-qualified candidates and further enhance retention of experienced examiners for an entire career. In this regard, the Office should continue to support, promote, and expand the PHP. The PPAC recommends that the USPTO continue to improve its processes to properly manage its nationwide workforce, to measure productivity, and to monitor potential abuse.

The USPTO is to be commended for the training programs provided to the Patent Examining Corps. The PPAC encourages the Office to proactively seek additional external technical training through PETTP and SEE to ensure examiners are aware of the most recent technical state of the art.

The PPAC understands that the USPTO is currently evaluating 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 Office. 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.

X. USPTO OUTREACH INITIATIVES

A. INTRODUCTION

The Office of Innovation Development (OID) is one of the outwardly facing component of the USPTO that oversee the USPTO's efforts to support American innovation, entrepreneurship, and job creation. Often working closely with other U.S. Government officials and agencies, the OID designs and implements outreach assistance programs to a wide range of stakeholders including independent inventors, women, pro se applicants, entrepreneurs, small business concerns, colleges and universities affiliates, museums, minorities, and other underserved communities. These outreach activities are in addition to those conducted by other offices of the USPTO on issues related to supporting American innovation, job creation, substantive examination, patent trials, and available initiatives and specific programs.

The OID also assists the USPTO's educational outreach programs that promote IP protection and the valuable role it plays as a key driver of the U.S. economy. These programs are designed to educate the public about IP in general as well as the specifics of the patent application process, including the intricacies of patent prosecution and post-grant patent issues. The post patent grant education includes the importance of patents, and other forms of IP, in starting, building, and growing a business.

The OID employs a variety of tools and techniques to quantify the reach of its programming and direct assistance with stakeholders. Some examples of these techniques and tools are maintaining logs of stakeholder's direct calls and emails to the OID staff, the volume of participants to in-person and Web casted programming and use of Google® analytics to measure hits to the OID Web pages and Web information provided.

The strategic themes that underlie all OID activities are:

1. Measuring program success. This is accomplished through universally applied evaluations and metrics, and sharing of best practices and lessons learned;
2. Developing robust partnerships. OID interacts with other branches of the U.S. government, international and non-governmental entities;
3. Unifying communication efforts. This is driven by a world-class website, with common branding and marketing, and by centralizing a comprehensive and searchable event database;
4. Achieving operational transparency. This is achieved through an overarching mission, strategy and management plan, with accountability for milestones and budget; and
5. Efficiently using resources. Efficiencies are gained by pooling resources, co-developing materials and sharing best practices.

B. INVENTORS' CONFERENCES AND WOMEN'S ENTREPRENEURSHIP SYMPOSIUMS

The OID sponsors regional and national events to educate small business concerns and independent inventors on the patent and trademark processes and on IP business strategies (recent events listed at www.uspto.gov/inventors/events). For these events, the USPTO provides IP expertise to the participants, including supervisory patent examiners to conduct breakout sessions and one-on-one assistance. Symposiums dedicated to fostering women entrepreneurs are also offered.

In FY 2015, OID's annual Women's Entrepreneurship Symposium was hosted in collaboration with the Innovation and Outreach Coordinator for the New York region. The event provided education and information to small business owners on IP, business growth and development.

C. USPTO REGIONAL OFFICE OUTREACH

The regional offices interact with the stakeholder communities and develop programming specific to their regions. The regional offices work regularly with the OID, Patents, Trademark, PTAB, TTAB, Human Resources, OPIA, OCCO, OPLA and others within the office and throughout the Administration regional offices on outreach efforts. One such activity is the Saturday Seminars, a partnership between the regional offices and OID, serving as a direct link for inventor's questions and education, were offered at the Elijah J. McCoy Detroit Regional Office and at the Rocky Mountain Regional Office.

The Saturday Seminars for FY 2015 were held in Detroit on November 15, 2014 and May 16, 2015 and in Denver on January 31, 2015. The Detroit Saturday Seminars offered a full day of programming each day on IP and business development. The Saturday Seminar held in Denver was also a full day event with the OID staff on-the-ground working in combination with Denver USPTO personnel and invited local speakers. Planning for outreach support to the Silicon Valley and Dallas Regional Offices is underway and currently occurring on an ad hoc, or as needed, basis.

D. SUPPORTING INVENTOR ORGANIZATIONS

The USPTO also participates in outreach initiatives with inventor organizations throughout the United States. These are typically non-profit inventor organizations that assist inventors and innovators with the patent process. Many of these may eventually go on to start a business based on their inventions.

Some examples of outreach initiatives led by OID are as follows. OID in collaboration with the Pro Bono Coordinator and the Office of Enrollment and Discipline held a webinar on May 21, 2015 on the Pro Bono, Pro Se Assistance and Law School Clinical Programs. OID developed these three programs to highlight the free assistance provided by the USPTO to inventors and small business owners.

In FY 2015, the OID supported inventor, entrepreneur, and maker organizations and audiences by providing speakers and resources for organizational events, as appropriate. These included attendance at the International Home and Housewares Show in Chicago, Illinois, the Inventors' Corner programming at the National Hardware Show in Las Vegas in May 2015, the White House Maker Faire, the regional Maker Faire in Silver Spring, Maryland, the Bay Area Maker Faire in San Mateo, California and the World's Maker Faire in New York, New York.

While the above outreach examples relate to OID, it should be recognized that the regional offices and others at the USPTO also work extensively to support these inventor organizations.

E. MINORITY/UNDERSERVED COMMUNITIES

In an effort to expand its assistance to minority and underserved communities, the USPTO is currently working to build and strengthen partnerships with organizations, such as the Minority Business Development Agency (MBDA), an agency within the U.S. Department of Commerce, the Society of Hispanic Professional Engineers, the National Society of Black Engineers (NSBE), national professional organizations, such as The Association of Public Land Grant Universities (APLU), The United Negro College Fund (UNCF), The Urban League, Operation HOPE, and other national and local nonprofit institutions. In FY 2015, the OID staff participated at national and local events hosted by a majority of those organizations identified above. Participation with these organizations was often conducted in conjunction with the USPTO Office of Education and Outreach (OEO) or the USPTO Office of Equal Employee and Diversity (OEED).

Working with MBDA, OID hosted nine webinars in 2015. OID provided small and growing businesses with education on IP and the practices and procedures of the USPTO. Additionally, with the assistance of the U.S. Copyright Office, the USPTO provided practical advice on the handling of copyright matters.

OID is working with the Greater Washington Urban League and with the National Urban League to provide training and education on IP to its members at 11 entrepreneurship centers across the country, with approximately 1,000 members at each center.

OID is working with Operation HOPE, a nonprofit organization, to provide education and training on IP for the public at 250 entrepreneurship centers across the country. Operation HOPE's goal is 1,000 entrepreneurship centers. OID is currently working to establish a Memorandum of Understanding with Operation HOPE.

OID in collaboration with MBDA hosted a student conference at Coppin State University entitled, "The Future of Business, Innovation and Entrepreneurship". One hundred and twenty college students attended the event that included an internship and mentoring fair and a panel discussion on what is needed for entrepreneurs to be successful in starting, building and growing a business using aspects of intellectual property. The event highlighted the importance that IP plays in creating and growing a business.

OID worked with UNCF/APLU and USPTO's Office of Human Resources to increase the understanding of IP at the nation's historically black colleges and universities, including information related to resources that are available from the USPTO to assist inventors and entrepreneurs as well as information to increase student knowledge of internship and employment opportunities at the USPTO.

F. PRO BONO PROGRAM AND BAR ASSOCIATION ENGAGEMENT

In a February 2014 Executive Action, President Obama tasked the USPTO with dedicating educational and financial resources to assist inventors who lack legal representation and to expand the existing pro bono programs. The USPTO appointed the first-ever Pro Bono Coordinator in July 2014, a position within the Office of the Under Secretary. The Pro Bono Team evaluates existing programs at a State by State level, and defines and implements activities to increase Pro-Bono services in underserved areas. In addition, the Pro Bono Team publicizes new programs and other vital information to inventors, volunteer attorneys, and practitioner groups.

The White House announced on August 4, 2015, that all 50 states now have a patent pro bono program. This was an important achievement by the Pro Bono Team which met its goal of reaching this milestone by the end of FY 2015. There are eighteen patent pro bono "hubs" that exist around the country that provide patent attorney services to inventors. Between April and June 2015, volunteer attorneys rendered services of approximately $500,000 to inventors through the program. OID continues to work with the Pro Bono Program to increase attorney awareness and to highlight the benefits of the pro bono program to the general public.

G. TRAINING MATERIALS AND WEB-BASED SUPPORT

The USPTO has several websites available to assist independent inventors and pro se applicants such as: Pro Bono Program for inventors seeking free or greatly reduced services from patent professionals; Pro Se Assistance Program for those inventors that are filing on their own behalf; Inventor and Entrepreneurs Resources page which provides plain language information about the patent and trademark processes and resources available through the USPTO; and AIA Videos, which provides a series of videos located on the USPTO's AIA micro-site to provide straightforward education to independent inventors and entrepreneurs explaining important changes resulting from the AIA. The USPTO is continuing to develop these web pages to make them dynamic as rules change and to develop additional training material content. The USPTO also provides a dedicated email address for inventors and small businesses to submit questions at IndependentInventor@uspto.gov and distributes an emailed monthly newsletter, The Inventors Eye (www.uspto.gov/inventors/independent).

Under the authority and direction provided in the American Inventors Protection Act of 1999, the USPTO will provide a public forum for the publication of complaints concerning invention promoters/promotion firms. The Office has developed a brochure to provide guidance to the inventor community on steps to take in hiring invention assistance providers.

The USPTO created a web page to address the problem of non-USPTO solicitations to inventors and entrepreneurs. Non-USPTO Solicitations are letters or e-mails sent to patent holders from entities that, on casual inspection, appear to be a government agency. Contained within the communication is a demand for money with an implied promise of service that is never delivered. In addition to a web page (http://www.uspto.gov/patents-getting-started/using-legal-services/scam-prevention/non-uspto-solicitations), the Office created handouts and other materials to alert patent holders and small business owners to this problem. OID facilitates discussions and lectures regarding this subject to inventorsbusiness groups at all opportunities.

University Outreach is a very flexible program that can operate with presentations being conducted in-person as well as remotely in some circumstances. OID is in the process of creating a University Outreach web page to highlight this program and provide a means for schools interested in the program to contact the USPTO. OID is informing our current University Outreach contacts that the Office have the ability to do remote presentations as an option.

H. IP ASSESSMENT TOOL/SMALL BUSINESS EDUCATION

In collaboration with the National Institute of Standards and Technology/Manufacturing Extension Partnership, the USPTO has created a tool for use by small businesses that will allow them to self-assess their IP assets. The tool is a Web-based questionnaire that asks small business owners pertinent questions about products and/or services offered, created, or sold by their businesses providing a semi-custom report according to the specific responses to the questions answered. The IP Assessment Tool is available at http://www.uspto.gov/inventors/assessment/. The current version of the tool is in the process of being updated.

Additionally, the OID staff continues to strengthen ties with the Small Business Administration. The OID has attended and presented at the National Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Conference. In addition, OID supported the SBIR Road Tour, which covered 21 states, to foster and encourage inventors and innovators in regions of the country that are under-represented in the SBIR program. An emphasis was made to include minority/women-owned businesses and small businesses to encourage them to apply for SBIR grants. At each stop, conferences and workshops were held. The USPTO participated in all of the tours along with representatives from each of the 11 SBIR/STTR-participating agencies.

The OID continues its work with the National Science Foundation (NSF), SBIR/STTR grantees in conjunction with Trademarks, and the Global Intellectual Property Academy. At the NSF grantee conferences, the OID presents basic information on patents and provides one-on-one consultation to grantees. In addition to working with the SBIR/STTR program administered by the NSF, the OID has begun a broader approach to all SBIR/STTR programs.

The OID staff is also currently participating in the National Institutes of Health Centers for Accelerated Innovation (NCAI) Program. The OID staff participates in regular meetings in order to: 1) share each of the NCAI program's objectives and operational plans; 2) provide resources to

the Centers; and 3) discuss the strategic needs for national coordination and knowledge dissemination, program evaluation and NCAI sustainability.

I. UNIVERSITY OUTREACH/TECHNOLOGY TRANSFER

The USPTO has long played a role in IP educational outreach to universities; initial efforts were directed to where the USPTO had a well-established recruiting effort with nearby universities. In conducting university outreach, lectures targeted engineering students, business and entrepreneurship students, student organizations, and the university's technology transfer office. In the spring of 2015, the program sent speakers to 84 colleges and universities in 24 states, the District of Columbia, and Puerto Rico and spoke to over 4,000 students in the areas of science, engineering, business and entrepreneurship about IP. A team of more than 20 supervisors, including some who work from home and in the Midwest and Rocky Mountain Regional Offices, are involved in this outreach program.

J. MUSEUM OUTREACH

The USPTO works with museums seeking information, assistance, education, and exhibits. In FY 2015, the USPTO, through a team spearheaded by OID staff, continued its long term collaboration with the Smithsonian Institution. During this time, the USPTO and the Smithsonian Institution, building upon the success of FY 2014, collaborated to host: a first Innovation Festival at the National Air and Space Museum in November 2014; a millennials Handi-Hour program at the Smithsonian American Art Museum in March 2015; an Innovation Family Festival at the Smithsonian American Art Museum in May 2015; and a second Innovation Festival at the National Museum of American History in September 2015. The USPTO also contributed significantly to the creation and installation of an eighteen month exhibit, Measured Perfection: Hiram Powers' Greek Slave, visible at the Smithsonian American Art Museum from July 2015 through February 2017. Perhaps most significantly during this same period, the USPTO also assisted the Smithsonian Institution to reopen the first floor of the West Wing of the National Museum of American History in July 2015. In this effort, the USPTO facilitated the collection of patented artifacts and trademarked goods for inclusion in artifacts cases located in the West Wing's Inventing in America exhibit. The USPTO also provided support and guidance for obtaining and installing the entire workshop of inventor Ralph Baer in the Wing, now directed to celebrating and encouraging innovation in America. It is also of note, that during FY 2015, the robust collaboration between the USPTO and the Smithsonian Institution continued to be reflected in web content posted to www.smithsonianmag.com/innovation. Going forward, the OID will work in conjunction with the Smithsonian Institution to continue the development of future programs projects, and exhibits for a wide variety of Smithsonian venues, as well as the Smithsonian Institution's cable channel and innovation website.

K. PRO SE PILOT PROGRAM

The USPTO implemented a pro se pilot program in FY 2015, which is designed to operate as two distinct but complimentary "shops": the pro se assistance shop and the pro se examination shop. These shops respectively assist pro se applicants prior to filing and during examination.

The program offers education, outreach, and resources to applicants filing patent applications without the help of an attorney (known in legal terms as pro se applicants). This program is staffed by OID staff and examiners in the Pilot Pro Se Art Unit located in TC 3600. The Pro Se Assistance Program pilot was launched as a result of a White House initiative to "bring about greater transparency to the patent system and level the playing field for innovators." The program Web page contains a slate of resources including: an informational video, a checklist of the basic components of a nonprovisional utility patent application, and links to other information and resources on the USPTO. The program provides walk-in assistance at USPTO headquarters in Alexandria, as well as telephone and email assistance from dedicated personnel who can help applicants wishing to file on the USPTO's Electronic Filing System (EFS), access to fully equipped public search facilities in a public search room, and training materials.

Recommendations:

The PPAC commends the USPTO on its expansion of outreach efforts to reach an ever-growing number of the public and stakeholder community. The PPAC recommends that the USPTO continue to grow its programs in this area to disseminate information concerning innovation and the USPTO's role and avenues for assistance and information.

APPENDIX: PPAC MEMBER BIOS

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 42 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 leads the Intellectual Property Group in the New York office of Arent Fox LLP. Her practice focuses on counseling and litigation for computer and Internet matters, including e-commerce; licensing and co-branding; advertising; domain name disputes; portfolio management; patent applications and enforcement; and bankruptcy. She has experience with hardware and software industries; electrical and electromechanical systems; the information and financial sectors; consumer products; medical devices; and various computer-related technologies. Ms. Jenkins is the past chairperson of the American Bar Association (ABA) Section of Intellectual Property Law, and a former president of the New York Intellectual Property Law Association. She currently serves on the ABA Standing Committee on Technology and Information Systems. 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 currently associate general counsel and director of intellectual property for Accenture, where he is responsible for the global management of Accenture's intellectual property matters, including: patent procurement; portfolio management; trademark prosecution; licensing; client negotiations and contract shaping; dispute resolutions and litigation; and related intellectual property issues. 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 Jones Day law firm in New York. He has significant experience in all aspects of domestic and international patent prosecution, including post-grant reissue, ex parte, and inter partes 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 chairperson of the Patent Law Committee 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 first term as a PPAC member.

PAUL JACOBS

Dr. Jacobs is the founder and president of Jake Technologies, Inc., a technology service company focused on strategic technology development, product evaluation, and advising corporate counsel and law firms on issues related to intellectual property. Prior to founding Jake Technologies, Inc., Dr. Jacobs held leadership positions as chief technology officer, Primus Technology Solutions; president and chief operating officer, and chief technology officer, AnswerLogic, Inc.; managing vice president, electronic commerce, director of product marketing, and director of media information technologies, SRA International, Inc.; president and chief executive officer, IsoQuest, Inc.; and as a computer scientist at General Electric. Dr. Jacobs received his bachelor's and master's degrees in applied mathematics at Harvard University; and his doctorate from the University of California, Berkeley. He currently teaches Information Architecture at the University of Maryland in College Park. Dr. Jacobs is serving his first term as a member of the PPAC.

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, including police departments, District Attorney's offices, morgues, prisons and crime labs. He is experienced in electrical death and injury analysis, carbon monoxide death analysis, and mechanical fire causation. His work has been published in numerous industry journals. He was the first engineer to serve on the State of Texas Electrical Board. He is a peer reviewer for the Fire & Arson Investigator Journal, and 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, he was appointed to the NIST panel on forensic sciences (NIST –OSAC). He has testified in excess of 450 instances as an expert witness. Mr. Goodson holds a bachelor of science in electrical engineering from Texas A&M, and attended UT Southwestern where he studied forensics. He is a licensed engineer in 15 states and holds seven patents, with 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 recently 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 Chef 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 is vice president, legal operations of Finjan Holdings, Inc., and holds a dual business and legal role with the company. She is responsible for building Finjan's intellectual property assets, heading its legal operations, overseeing its enforcement program, as well as managing its public policies, including patent reform. Prior to joining Finjan, Ms. Mar-Spinola served as interim general counsel for Phoenix Technologies, Inc., and iolo technologies, LLC, where she advised and counseled both companies on global litigation matters, preservation and enhancement of the respective IP portfolios, and regulatory and compliance matters. Ms. Mar-Spinola received her masters of business administration for in-house counsel from the Boston University School of Management, her bachelors of science degree in chemistry from San Jose State University, and her law degree from Santa Clara University School of Law. Ms. Mar-Spinola is serving as an interim member of the PPAC.

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