

Patent Public
Advisory
Committee

2017
Annual Report

UNITED STATES
PATENT AND TRADEMARK OFFICE

uspto



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

Voting Committee Members:

Marylee Jenkins, Chairperson
Arent Fox LLP

P. Michael Walker, Vice
Chairperson
Retired, DuPont

Peter Thurlow
Polsinelli PC

Mark Goodson
Goodson Engineering

Dan Lang
Cisco Systems

Julie Mar-Spinola
Finjan Holdings, Inc.

Jennifer Camacho
Torque Therapeutics

Bernard Knight, Jr.
McDermott Will & Emery

Jeffrey Sears
Columbia University

Non-voting Representatives:

Pamela Schwartz
President
Patent Office Professional
Association (POPA)

Vernon Ako Towler
Vice President
National Treasury Employees
Union (NTEU, Chapter 243)

Catherine Faint
Vice President
National Treasury Employees
Union (NTEU, Chapter 245)

November 6, 2017

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

Dear Mr. President:

As Chairperson of the Patent Public Advisory Committee (PPAC) of the United States Patent and Trademark Office (USPTO), it is my honor and privilege to present to you the PPAC's Annual Report for FY 2017. This Annual Report sets forth our review and recommendations of the USPTO's patent policies, goals, performance and budget for FY 2017.

Highlights of our Annual Report include the PPAC:

(a) recommending that the USPTO maintain independent control over the management and operation of its human resources, information technology and procurement functions and not expend USPTO user fees for start-up costs associated with the U.S. Department of Commerce's Enterprise Services organization;

(b) recommending that: (i) the USPTO work within the Administration and with Congress to ensure that it continues to retain its fee setting authority beyond the September 2018 expiration date and that it retains its access to all future fee collections, regardless of any government-wide sequestration or other limitation(s); (ii) the fee increase developed as part of the 2015 fee setting review and presented in the Notice of Proposed Rule Making of October 3, 2016 be put in place as soon as practicable; and (iii) the USPTO's patent operating reserve be maintained at a level equivalent to approximately three months of expenditures;

(c) commending the USPTO for increasing its operational efficiency by reducing first office action pendency from an average of 28 months in FY 2011 Q4 to an average of 16 months in FY 2017 Q4 and reducing the overall total application pendency from an average of 34 months in FY 2011 Q4 to an average of 24 months in FY 2017 Q3;

(d) commending the USPTO for the progress it has made in key quality initiatives, including the Quality Metrics Program, Clarity and Correctness Data Capture Program and the Clarity of the Record Pilot as well as in its on-going efforts to enhance patent quality;

(e) supporting the USPTO's ongoing financial needs regarding its information technology infrastructure and recommending that the USPTO continue to modernize its information technology systems by replacing legacy systems and rolling out new technology, especially with regard to implementing the USPTO's international patent initiatives, such as Global Dossier, which is shaping the future of our patent system;

(f) recommending that legislative action be taken to extend The Telework Enhancement Act of 2010 (TEAPP) and that the Patent Hoteling Program and other telework programs, which permit examiners to work from remote locations, be supported, promoted and expanded so that a diverse and dynamic workforce is maintained, while at the same time preventing disruption to USPTO operations;

(g) emphasizing continued union-management collaboration regarding USPTO management changes so that improvements can be quickly implemented without needing protracted formal bargaining and recommending an ongoing monitoring of the recent implementation of the Office of the Inspector General's time and attendance recommendations directed to the USPTO's workforce;

(h) supporting the raising of the current mid-level rank of USPTO IP Attachés by one level, which would give USPTO IP Attachés greater access to senior host government officials, Ambassadors at their respective embassies and senior industry representatives, while also allowing them to accomplish more effectively their mission;

(i) recognizing the challenges that the USPTO's Patent Trial and Appeal Board (PTAB) faces as it navigates through ever-changing patent decisions coming from the courts and uncertainties resulting from administrative changes and recommending that the PTAB remain vigilant in ensuring fair and transparent processes and proceedings in order to render well-grounded decisions; and

(j) creating a new PPAC subcommittee focusing on 35 U.S.C. § 101 patentability requirements and working with the USPTO to ensure that they understand the importance of this issue from the stakeholders' and user communities' perspectives.

The PPAC also wishes to thank the former Under Secretary of Commerce for Intellectual Property and Director of the USPTO, Michelle K. Lee, and Interim Director, Performing the

Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the USPTO, Joseph Matal, for their leadership as well as the many employees of the USPTO for their cooperation, assistance and commitment to the PPAC during the past year. We further commend your nomination of Andrei Iancu as Under Secretary of Commerce for Intellectual Property and Director of the USPTO and look forward to his confirmation as well as the appointment of a Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the USPTO. These leadership positions are critical to continuing and maintaining the global role that the USPTO plays in the protection of intellectual property rights, which in turn supports and grows the U.S. economy.

It is therefore vital, if not imperative, to have an efficient and effective USPTO. As PPAC Chairperson, I remain vigilant to ensure that we, as a committee, are dedicated and committed to keeping the USPTO on track and high-performing for our diverse stakeholder and user community, while at the same time being mindful of the future of our patent system.

We greatly appreciate your time in reviewing our Annual Report and look forward to discussing with you any questions that you or your staff might have regarding this Report and the PPAC's activities during the past year or for FY 2018.

Very truly yours,



Marylee Jenkins
Chairperson
Patent Public Advisory Committee
U.S. Patent and Trademark Office

Enclosure: Patent Public Advisory Committee Fiscal Year 2017 Annual Report

cc: The Honorable Charles Grassley, Chairman, Senate Judiciary Committee
The Honorable Bob Goodlatte, Chairman, House Judiciary Committee
The Honorable Dianne Feinstein, Ranking Member, Senate Judiciary Committee
The Honorable John Conyers, Jr., Ranking Member, House Judiciary Committee
The Honorable Darrell Issa, Chairman, Subcommittee on Courts, Intellectual Property, and the Internet
The Honorable Jerry Nadler, Ranking Member, Subcommittee on Courts, Intellectual Property, and the Internet
The Honorable Wilbur Ross, U.S. Secretary of Commerce
Joseph Matal, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office
Andrew Hirshfeld, Commissioner for Patents

TABLE OF CONTENTS

EXECUTIVE SUMMARY AND RECOMMENDATIONS	1
I. INTRODUCTION.....	1
II. ENTERPRISE SERVICES.....	1
III. PATENT TRIAL AND APPEAL BOARD	2
IV. PATENT QUALITY	3
V. PATENT PENDENCY/RCE	5
VI. SECTION 101	6
VII. INTERNATIONAL COOPERATION, WORK SHARING, POLICY DEVELOPMENT AND OUTREACH	7
VIII. INFORMATION TECHNOLOGY.....	9
IX. FINANCE	10
X. PATENT MANAGEMENT AND ORGANIZATION STRUCTURE.....	12
XI. LEGISLATION.....	13
TOPICAL AREAS	15
I. ENTERPRISE SERVICES.....	15
II. PATENT TRIAL AND APPEAL BOARD	17
A. INTRODUCTION	17
B. ENGAGEMENT	18
C. PTAB Statistics	19
1. <i>Ex Parte</i> Appeals.....	19
2. AIA Proceedings.....	19
D. PTAB Precedential and Informative Opinions	21
E. Panel Expansions	23
F. MULTIPLE IPR PETITIONS.....	23
G. AMENDMENT PRACTICE	24
H. FEES FOR IPR TRIALS.....	24
III. PATENT QUALITY	26
A. INTRODUCTION	26
B. PROGRESS ON KEY QUALITY MEASUREMENT INITIATIVES	26
1. New Metrics Reported in FY 2017 under Quality Metrics Program	26
2. Progress in Clarity and Correctness Data Capture Program.....	27
3. Valuable Insights Derived from Clarity of the Record Pilot.....	28

C.	UPDATES ON ON-GOING QUALITY WORK PRODUCT INITIATIVES.....	28
1.	Topic Submissions for Case Studies Program.....	28
2.	Post Grant Outcomes Program	29
3.	Examination Time Analysis.....	30
D.	OUTREACH AND CUSTOMER SERVICE INITIATIVES	30
E.	FY 2017 QUALITY DATA.....	30
1.	35 U.S.C. § 101.....	31
2.	35 U.S.C. §§ 102 and 103	32
3.	35 U.S.C. § 112.....	32
4.	Additional Statutory Compliance Insights.....	33
5.	External Quality Survey	33
IV.	PATENT PENDENCY/RCE	36
A.	INTRODUCTION	36
B.	REVIEW OF USPTO OPERATIONS	36
1.	Filing Volumes and Backlogs.....	36
2.	Pendency Metrics.....	39
3.	Patent Term Adjustment.....	41
4.	Pendency Initiatives	44
V.	SECTION 101	48
A.	INTRODUCTION	48
B.	BACKGROUND	48
VI.	INTERNATIONAL COOPERATION, WORK SHARING, POLICY DEVELOPMENT AND OUTREACH	51
A.	Technical and Procedural Harmonization: International Cooperation and Work Sharing Programs.....	51
B.	Policy Development and Outreach.....	55
VII.	INFORMATION TECHNOLOGY.....	58
A.	OVERVIEW	58
1.	Electrical System.....	58
2.	Security Measures.....	58
3.	Hardware.....	59
4.	Data Input and Processing	59
5.	PE2E: Examination Products.....	59
6.	PE2E: Patent Center	60
7.	PE2E: Global Dossier.....	60

8.	PE2E: CPC Management Tools	60
9.	PE2E: CPC IP Office Collaboration Tools.....	60
10.	PE2E: Content Management Systems	60
VIII.	FINANCE	62
A.	INTRODUCTION	62
B.	BUDGET STATUS.....	62
C.	FY 2017 IN REVIEW AND HISTORICAL TRENDS.....	62
IX.	PATENT MANAGEMENT AND ORGANIZATION STRUCTURE.....	67
A.	Patent Examiner Retention	67
B.	Patent Examiner Time and Attendance Controls.....	67
C.	Management-Union Relationships	68
X.	LEGISLATION.....	70
A.	INTRODUCTION	70
B.	CONGRESSIONAL HEARINGS	70
C.	PENDING LEGISLATION	71
	APPENDIX I: LETTER REGARDING THE DEPARTMENT OF COMMERCE'S ENTERPRISE SERVICES INITIATIVE.....	73
	APPENDIX II: PPAC MEMBER BIOGRAPHIES	76
	MARYLEE JENKINS, CHAIRPERSON	76
	P. MICHAEL WALKER, VICE CHAIRPERSON	76
	PETER THURLOW	77
	MARK GOODSON	77
	DAN LANG.....	78
	JULIE MAR-SPINOLA.....	78
	JENNIFER CAMACHO.....	79
	JEFFREY SEARS	79
	BERNARD J. KNIGHT, JR.	80

I. INTRODUCTION

The Patent Public Advisory Committee (PPAC) thanks the United States Patent and Trademark Office (USPTO), and in particular, former Under Secretary of Commerce and Director of the USPTO Michelle Lee, and Joseph Matal, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, 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 President has nominated a new Under Secretary of Commerce for Intellectual Property and Director of the USPTO, and the PPAC strongly supports a swift and prompt confirmation process for a new Director and a swift and prompt appointment of a Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the USPTO. These leadership positions are critical to continuing the leading role the USPTO plays in the protection of intellectual property rights that form the foundation of our economy. The PPAC thanks all of the employees of the USPTO for their assistance over the 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. ENTERPRISE SERVICES

The U.S. Department of Commerce (DOC) is looking for the USPTO to participate in and support the Enterprise Services organization under which the USPTO would be required to transfer certain human resources, information technology and procurement functions and associated funding from the USPTO to this Enterprise Services organization located within the DOC. Other DOC bureaus would also contribute to the Enterprise Services organization and DOC believes including the USPTO would improve Enterprise Services economies of scale. The Enterprise Services organization depends upon patent and trademark user fees being diverted to the DOC to pay for the start-up costs of the Enterprise Services organization.

The PPAC learned of this initiative when former Under Secretary Michelle Lee announced the Enterprise Services initiative during the August 20, 2015 PPAC meeting. This initiative would move several administrative functions from the USPTO to the DOC. The USPTO operations have special requirements set forth in the American Inventors Protection Act for the agency to have independent responsibility for its management and operations. In a letter dated August 24, 2017, the PPAC unanimously urged Secretary Ross to exempt the USPTO from mandatory participation in this initiative, including any payment for start-up costs.

RECOMMENDATIONS:

The PPAC recommends that the USPTO maintain independent control over its management and operation of human resources, information technology, and procurement functions; not be required to expend user fees for start-up costs; and only be required to participate in the Enterprise Services organization to the extent that it seeks to purchase commercial items that Enterprise Services can offer at a lower cost and on a timelier basis than the USPTO could acquire such goods directly.

III. PATENT TRIAL AND APPEAL BOARD

On September 16, 2017, the Patent Trial and Appeal Board (PTAB or Board) celebrated its fifth anniversary. The PPAC commends the PTAB's commitment to preserving quality patents and appreciates the challenges the PTAB faces as it navigates through ever-changing patent decisions coming from the courts and uncertainties resulting from other turbulent administrative changes. This year and in this Report, the PPAC focused more on post-grant review proceedings and amendment practices, specifically, and the PTAB's operations, generally.

With respect to post-grant review proceedings, the PPAC encourages the PTAB to issue more precedential opinions that provide clarity on issues of current interest, such as the expansion of panels and the fair implementation of post-grant proceedings such as the handling of multiple *inter partes* review (IPR) petitions.

Relatedly, the PTAB's initial data on the filing of multiple (a/k/a serial or follow-on) IPR petitions suggests that 67% of the cases involve one petition for one patent and approximately 20% involve two petitions per one patent. Further analyses is required and is being conducted but the process is slowed by the inability of the current IT system to automate the analyses. The PPAC urges the USPTO to secure as soon as possible tools that can perform this important analysis for the stakeholders and the user community.

Fee increases for IPRs and their impact on small and micro entities, who are currently not entitled to discounts for PTAB post-grant trial fees, are a concern for the PPAC. Small and micro entities may not be able to readily take advantage of the USPTO post-grant proceedings, in part, because of the cost. In order to make the USPTO post-grant proceedings more accessible to these entities, the PPAC recommends that the USPTO pursue legislation that will reduce the PTAB trial fees for small and micro entities.

Regarding the PTAB's operations, the PPAC and the Board will combine efforts for hosting a series of dynamic engagement programs at the USPTO regional offices in FY 2018, focused on sharing best practices among the various courts as well as receiving solutions for certain identified areas of concern from stakeholders, including patent owners and patent challengers. The PTAB also endeavors to share best practices with its international counterparts. The PPAC encourages the PTAB to work with its international counterparts in an effort to develop or modify its own rules, policies, and procedures.

As provided in detail below, the PTAB continues to meet its goals to reduce its inventory of *ex parte* appeals. In addition, the PPAC applauds the PTAB's revised metrics and charts that are easier to read and analyze.

RECOMMENDATIONS:

It is clear that the PTAB plays an important role in the preservation of quality U.S. patents, which in turn has a significant impact on our nation's economy. The PPAC commends the Board for the progress it has made under the AIA in the short period of five years since its inception. The PTAB's engagement programs play an important part in helping the stakeholders, practitioners and the user community understand relatively new and ever-evolving patent laws post-AIA.

Issuing more precedential opinions is a welcomed policy that is highly supported by the PPAC and the user community. Also, the PPAC encourages and supports the PTAB's implementation of a process to review and update its decision archives as well as making such information more accessible to practitioners and the user community.

According to the PTAB's statistics, there have been more than 7,500 petitions since the PTAB proceedings went into effect in 2012. The PPAC recommends that the PTAB remain vigilant in ensuring fair processes and proceedings before it, rendering well-grounded decisions and proceeding with its outreach efforts to educate the Courts and the stakeholder and user communities on important practices and developments in the PTAB area.

IV. PATENT QUALITY

During FY 2017, the USPTO made significant progress in key quality initiatives, including the Quality Metrics Program, Clarity and Correctness Data Capture Program (CCDC), and the Clarity of the Record Pilot. The new quality metrics, first proposed in March 2016, were in full use in FY 2017, making it the first full fiscal year of quality measurements under the new quality metrics. Replacing the prior Quality Composite Score, the new quality metrics provide the USPTO with a searchable, multidimensional data set for use in quality tracking, trend identification, and predictive modeling. The new quality metrics include predictors of quality in work product, processes, and perception. Work product is assessed based on its compliance with statutory requirements. The quality measurements reported by the USPTO for FY 2017 showed,

that on a statute-by-statute basis, the USPTO work product was within or above the target ranges for compliance rate for each statute.

The USPTO also made progress in the implementation of the Master Review Form (MRF), developed under the CCDC. The MRF provides a standard set of criteria to be used by reviews from the Technology Centers (TCs) and the Office of Patent Quality Assurances (OPQA) to consistently document and assess quality review data in a single place. The USPTO continues to refine the MRF and plans to include criteria directed at clarity of the record in an updated version in FY 2018.

In addition, the USPTO completed its analysis of the Clarity of the Record Pilot, which ended in FY 2017. Several best practices were identified in the context of interview summaries, reasons for allowance, and claim interpretation. The USPTO expects to launch a follow-on pilot in FY 2018 to identify how various examination practices impact clarity of the record.

On other initiatives, the USPTO reported on the outcome of several case studies following the Topic Submissions for Case Studies Program. A case study concerning the compliance of examiners with guidance provided for subject matter eligibility (SME) rejections under 35 USC § 101 revealed that, for rejections actually made, in 32% of the cases the rejection was improper and/or the rejection was not properly explained.

The PPAC commends the USPTO for the progress it has made in the quality initiative as well as its on-going efforts to enhance patent quality, as discussed below. For more information on the USPTO patent quality programs and initiatives, visit <https://www.uspto.gov/patent/patent-quality>.

RECOMMENDATIONS:

The PPAC recommends that the USPTO make systematic surveys of the data by defined subsets, for example, statute-by-statute for rejections improperly made. In addition, with respect to SME rejections under 35 USC § 101, the PPAC urges the USPTO to examine the relevant data to determine whether a quality issue exists with respect to SME rejections actually made. If an issue exists, the USPTO should identify the root cause and mechanisms to address the issue. Further, the USPTO should ensure that the quality metrics are able to identify quality issues that may affect a discrete but significant subset of rejections that would otherwise be obscured by the majority data.

The USPTO has made great progress in implementing the new quality metrics for work product review and reporting purposes. Yet, the latest quality data provided on the USPTO Patent Dashboard dates back to 2015. Without current information readily available, the public perception of the quality of the work product of the USPTO is based largely on anecdotal information and consensus opinion. Further, the public is more likely to undervalue USPTO work product when making business decisions, evaluating investment opportunities, defining

commercialization strategies, outlining R&D programs, performing corporate valuations, and managing intellectual property assets. The PPAC urges the USPTO to provide public access to a meaningful set of current quality measurement data.

V. PATENT PENDENCY/RCE

The USPTO has received a steadily increasing volume of new utility, plant, and reissue (UPR) filings in each fiscal year of the current decade. New UPR filings were approximately 325,000 in FY 2010 and steadily increased to approximately 420,000 in FY 2017.

In spite of this increasing volume, the USPTO has steadily reduced pendency, the time to examine an application, over the same time period. In its 2010-2015 Strategic Plan, the USPTO set two pendency goals for itself: reaching an average of 10 months for first action pendency and an average of 20 months for traditional total pendency. The USPTO has made consistent progress towards its 10/20 goals: the USPTO has reduced first action pendency from an average of 28 months in FY 2011 Q4 to an average of 16 months in FY 2017 Q4 and traditional total pendency from an average of 34 months in FY 2011 Q4 to an average of 24 months in FY 2017 Q3.

While the USPTO has steadily reduced pendency over the current decade, much still remains to be done: the USPTO unfortunately awards patent term adjustment (PTA) to more than 1 out of every 2 issued patents. For example, the USPTO awarded PTA to approximately 17,000 patents out of a total of approximately 32,000 patents issued in September 2017. Under the terms of the American Inventors Protection Act (AIPA), each application is guaranteed a prompt examination by the USPTO that meets several requirements, including 14-month first action pendency and 36-month total pendency. These are absolute per-application pendency requirements, not average pendency goals like 10/20. The USPTO is required to award PTA to any patent whose examination does not meet these requirements, subject to deductions for applicant delays and other limitations. PTA is added to the end of the statutory 20-year term of an issued patent, thereby postponing its expiration date. The amount of PTA varies from patent to patent, from as little as a day to as much as thousands of days. The USPTO awarded an average of approximately 175 days of PTA to each affected patent that was issued in September 2017.

RECOMMENDATIONS:

The PPAC recommends that the USPTO formally adopt the AIPA requirements as its pendency goals. The PPAC believes that formal adoption of the AIPA requirements as the pendency goals will significantly improve the perception of the USPTO by the applicant community and the public as an efficient government agency.

The PPAC recognizes that applicants base their perception of the efficiency of the USPTO on the timeliness of the examination of their own applications, not applications on the whole. Average pendency goals like 10/20 are helpful in reducing pendency, but they are not a substitute for the certainty provided to the applicant community by the absolute per-application AIPA requirements.

The PPAC also recognizes that delays in examination can be highly detrimental to applicants who need promptly issued patents to secure financial support for commercialization of their technologies. These applicants include solo inventors, start-ups, small businesses, and/or universities. While prioritized examination initiatives are available, they are not a substitute for reducing pendency across the USPTO: only a small fraction of the applications filed every year are able to take advantage of these initiatives.

The PPAC further recognizes that PTA is a significant detriment to the public. By postponing the expiration dates of patents, PTA prevents patented technologies from falling into the public domain at the conclusion of their statutory 20 year terms. PTA thus requires the public to pay royalty rents on patented technologies – and prevents future innovators from using patented technologies for research and experimentation – for extended periods. These periods can run for thousands of days, effectively extending the patent monopoly for years beyond the statutory term.

VI. SECTION 101

The Section 101 patent eligibility requirements continue to be of keen interest to the USPTO and to the patent community. In FY 2017, for the first time, the PPAC formed a Section 101 Subcommittee to more closely focus on the Section 101 patentability requirements and to work with the USPTO to ensure they understood the importance of this issue from the patent community's perspective, to assist the USPTO in facilitating outreach to the patent community on this important topic, and to encourage the USPTO to ensure the new Administration and Congressional staff were aware of the patent community's Section 101 concerns.

In November and December 2016, the USPTO convened two roundtables focused on Section 101 patent eligible subject matter developments.

The first roundtable, Roundtable 1, took place at the USPTO's Alexandria, Virginia facility on November 14, 2016. This roundtable focused on soliciting stakeholder views on ways of improving the USPTO's subject-matter eligibility guidance for patent examiners and how that guidance was being applied by examiners. There were 20 industry representatives and 15 intellectual property practitioners at the first roundtable; for those speakers who provided presentations, their presentations are available on the USPTO's website at <https://www.uspto.gov/patent/patent-subject-matter-eligibility-roundtable-1> The USPTO is in the process of updating Section 2106 directed to "Patent Subject Matter Eligibility" in the next revision of the USPTO's Manual of Patent Examining Procedure (MPEP). Updates were made in view of public comments received to date, while also consolidating previously issued training materials and guidance to examiners and new Federal Circuit decisions not mentioned in prior guidance.

The second roundtable, Roundtable 2, took place at Stanford University on December 5, 2016, to solicit input on the impact of the U.S. Supreme Court's recent Section 101 jurisprudence, including legal, policy, or economic analyses. Following the second roundtable, 26 written

comments were submitted to the USPTO. The USPTO issued a report in July 2017 that provided a summary of the second roundtable including a comprehensive review of patent eligibility law, a record of public views on the impact of the U.S. Supreme Court's patent eligibility jurisprudence and recommendations from the public for a path forward. The July 2017 report can be found on the USPTO's website at https://www.uspto.gov/sites/default/files/documents/101-Report_FINAL.pdf.

RECOMMENDATIONS:

The PPAC makes the following recommendations to the USPTO to improve the Section 101 landscape. The PPAC requests that the USPTO continue to update the stakeholder community and examiner corps on recent Section 101 U.S. Supreme Court and Federal Circuit jurisprudence and where appropriate, continue to issue memoranda that describes the relevant court decision. Moreover, the PPAC asks the USPTO to finalize the MPEP updates in Section 2106 directed to "Patent Eligible Subject Matter," so the stakeholder community has one central repository on the USPTO's website to receive the latest updates. The PPAC also urges the USPTO to continue stakeholder outreach programs and workshops on Section 101 developments due to the critical nature of this area.

The PPAC believes that the Section 101 USPTO training materials are helpful. Therefore, the PPAC requests that the USPTO review Section 101 training materials to ensure the consistent training and application of the Section 101 guidance to all art units. On this specific point, the PPAC recommends that every art unit has, or has access to, a Section 101 specialist to ensure the consistent application of the Section 101 guidance provided by the USPTO. Lastly, the PPAC requests that the USPTO keep the new administration and congressional staff apprised of Section 101 developments.

VII. INTERNATIONAL COOPERATION, WORK SHARING, POLICY DEVELOPMENT AND OUTREACH

The PPAC supports the extensive efforts made by the USPTO this year in its international cooperation, work sharing, and outreach initiatives with multiple patent offices and encourages the continued development and expansion of these efforts. A specific example of such efforts includes the continued expansion and use of Global Dossier. Launched in November 2015, Global Dossier is a set of business services that gives users and stakeholders a web-based interface at <https://globaldossier.uspto.gov/> to view related patent applications filed in IP5 Offices free of charge. USPTO examiners are able to use Global Dossier services to review the search results of related patent applications in other patent offices, which arguably creates a more complete patent record and increases patent examination quality and efficiency. The USPTO's Global Dossier services are currently accessible 24 hours a day/seven days a week. Other IP5 Offices, specifically Japan Patent Office (JPO) and the State Intellectual Property Office of the P.R.C. (SIPO), however, still do not provide such 24/7 access of their patent data for public users or USPTO examiners.

Another example of the USPTO's international efforts includes the implementation of application case studies to determine what effects an automated system importing prior art, such as from an applicant's counterpart foreign applications, would have on prosecution and the patent examiner's work as well as how such importation would affect and meet the applicant's duty of disclosure obligations under 37 CFR 1.56. The ongoing goal here is to determine through research and outreach whether developing and implementing such a tool would increase patent quality and examination efficiency thereby helping to reduce overall prosecution costs.

Additional USPTO international efforts include the implementation of an expanded version of the Collaborative Search Pilot Programs with the JPO and Korean Intellectual Property Office (KIPO), the ongoing expansion of the Patent Prosecution Highway (PPH) to include additional offices in the program, the increase of patent offices globally using Cooperative Patent Classification (CPC) and the launch of a pilot project on collaborative search and examination under the Patent Cooperation Treaty (PCT). These efforts, focusing on global data exchange provide greater work sharing capabilities across multiple patent offices now and in the future which in return helps to advance patent quality globally. At the same time, such data usage provides ever increasing demands on the responsiveness and stability of the USPTO information technology structure and system in maintaining its 24/7 access for its examiners.

The USPTO continues to provide extensive policy advice and technical expertise on domestic and international intellectual property matters to multiple federal agencies in the new administration, including the Office of the United States Trade Representative (USTR), the Office of the U.S. Intellectual Property Enforcement Coordinator, and other bureaus of the DOC. Particularly, the USPTO advised the USTR in the negotiation of trade agreements, on Trade Policy Reviews and the proposed accessions of over 20 countries to the World Trade Organization (WTO), and assisted in the preparation of the USTR's Special 301 Report, an annual review of U.S. trading partners who have not provided appropriate intellectual property protection and enforcement or market access for U.S. rights holders.

In addition, through its IP Attaché Program, the USPTO continues to expand its ability to improve intellectual property systems internationally for the benefit of U.S. stakeholders by serving at U.S. embassies, consulates, and missions worldwide to seek improvements in laws and regulations, educate host government officials on intellectual property matters and to build grass-roots support for U.S. policy positions. During FY 2017, the DOC's Office of the Inspector General (OIG) closed out an audit of the USPTO IP Attaché Program and recommended the establishment of "baselines and targets for each of the quantifiable performance measures to assess the effectiveness and efficiency of the Attaché Program." As a follow-up to this audit, the IP Attaché Program expanded its use of baselines and targets for its quantifiable performance measures. U.S. Industry has also been working with members of Congress to find a way to change the designation of the diplomatic rank of individual attachés serving abroad so that these individuals may have proper recognition during meetings with other officials in foreign offices.

RECOMMENDATIONS:

The PPAC commends the USPTO in its international cooperation, collaboration, work-sharing initiatives, and outreach with multiple patent offices as well as stakeholders and users around the world during the past year. The continued development and expansion of Global Dossier services for the public and examiners are examples of how such efforts are beneficial for both the individual patent offices as well as the stakeholder and user community. However, such efforts require varied and diverse input on how such data should be exchanged and shared across patent offices. Implementation of such input and proper utilization and security of the data for and by an increasing global community of users requires a secure, stable and reliable Information Technology (IT) infrastructure. The PPAC strongly supports the ongoing financial needs of the USPTO regarding its IT infrastructure and recommends that it continue to be supported, maintained and managed by the USPTO, especially for these important international initiatives, that will shape the future of our patent system.

VIII. INFORMATION TECHNOLOGY

The IT group within the USPTO is dedicated to serving each of the end user constituencies – inventors, practitioners, academia, the examining corps, the PTAB, foreign IP offices, and the general public. The work product of the IT group must serve these end users in a way that is both efficient and reliable. Moreover, the functioning of the IT systems must be carried out in such fashion that the examining corps is bolstered in their quest to allow only patents that meet the necessary legal requirements.

The present IT system is truly a work in progress. Heretofore, various software modules were used to carry out different functions, but the modules did not necessarily communicate well with one another. In addition, the end user would be confronted with differently formatted screens. Some data submissions were in the form of scanned documents, and some were in the form of keyboard or text entry. And finally, the modules were often written in such a way that they could not be moved from one computer to another. In essence, the Office was in some ways captive to a computing system, rather than the computing system serving well the needs of the various users.

Over the last year, great strides have been made in improving both the infrastructure and the user interface of the IT systems. Changes to the infrastructure include improved electrical system reliability for the various pieces of processing hardware, constant upgrades to data security to conform with the latest National Institute of Standards & Technology (NIST) directives, replacement of legacy processing hardware, and implementing text input for the applicant, as opposed to the use of scanned text.

The user interface is similarly being improved. The various software modules that in the past ran somewhat independently are being replaced by a system called PE2E, or Patents End to End. The PE2E modules are designed so that the user sees consistency in the manner in which data is

input and retrieved. System instabilities that have resulted as various independent databases were searched will cease to exist. System throughput and data accuracy will be increased as text entry replaces Optical Character Recognition (OCR) as an input means. And finally, the software modules are coded such that they will run on a variety of processors, and are not tied to any one piece of hardware.

The IT work that is carried out is not done in a vacuum, or without consideration of the needs of the user community. It is particularly noted that the various modules are tested by members of the examining corps, so as to insure that they function in a way that is beneficial to the examiners. It is through the iterative improvements that are brought on by such user feedback that the Office will see the IT system as a means for both better examination of applications and as a tool that can further drive the Office towards improved patent quality.

RECOMMENDATIONS:

The IT work carried out within the USPTO is vital to the core mission of the USPTO. In addition, the operations of the IT group directly affect the commerce structure within this nation and the world. To these ends, the PPAC recommends the following:

Modernization, in terms of both software and hardware that can be easily upgraded and maintained, is key to the USPTO's leadership position in the IP arena. It is recommended that the IT group continue to modernize its functions, to include both the replacement of legacy systems and the continued rollout and support of the PE2E suite of software.

The user community, to include both inventors and manufacturers, require and demand that the proprietary information entrusted to the USPTO will indeed stay out of the public domain. To this end, it is advisable that the USPTO continue its relationship with NIST, such that the integrity of intellectual property is maintained by use of NIST approved security measures.

The possibility of catastrophic weather or global attacks that would damage the USPTO's IT system are a continued possibility. For that reason, the PPAC recommends that the hardware within the USPTO be continually hardened so as to withstand interruption of service as may be caused by such events.

IX. FINANCE

In FY 2017 expenditures tracked closely to expectations, but fee collections were slightly below estimates. Rather than building toward desired levels, the operating reserve declined. The proposed fee increase resulting from the fee review that begun in 2015 has yet to be implemented. As provided at least biannually, a new fee review has begun this year within the USPTO although it has not yet been determined if the current review will lead to a proposal to set or adjust fees, which would trigger the participation of the PPAC in collecting public comment. The current fee review will be the last within the current fee setting authority

provided by the AIA unless Congress extends the USPTO's fee setting authority beyond September 2018.

In FY 2017, the USPTO's budget was set by multiple Continuing Resolutions and the Consolidated Appropriations Act that was passed into law in May 2017. The appropriation was a modest decline in the USPTO's spending authority compared to FY 2016. For FY 2018, the Administration has proposed an overall USPTO budget of \$3.586B with \$3.274B allocated for patents. As of this writing the FY 2018 budget has not been enacted into law although the House Appropriations Committee has issued a Committee Report recommending a total USPTO budget of \$3.500B. The USPTO has begun its interactions with the Office of Management and Budget for the FY 2019 budget.

Also in FY 2017, the U.S. Department of Commerce Enterprise Services initiative to construct a shared services organization to provide Human Resources, IT, and procurement services to DOC agencies raised significant concerns in Congress, the PPAC, and the broader stakeholder community. The intention of the initiative is to drive improved operations across the DOC. However, the initiative seems to ignore the uniqueness of the USPTO's support requirements and the degree to which these requirements are already met within the USPTO. Requiring the USPTO to fund the Enterprise Services organization beyond its actual value to the USPTO effectively diverts user fees which must by statute be used for the USPTO's mission of championing intellectual property.

RECOMMENDATIONS:

Supporting the USPTO's core goals of high-quality patent examination and acceptable pendency will continue to require careful fiscal management and adequate and reliable funding. Accordingly, the PPAC recommends the following:

The USPTO's fee setting authority should be extended beyond the September 2018 sunset. The USPTO has exercised its fee setting authority responsibly. The USPTO is in the best position to assess its financial needs and collect stakeholder input. Given that the fee increase recommended by the USPTO in the 2015 fee review is not yet in place, it would be understandable if the 2017 fee review did not result in a fee increase. If the USPTO loses its fee setting authority according to the current schedule, further needed fee adjustments may be subject to competition with other legislative priorities and be delayed to the extent that critical needs are impacted.

The fee increase developed as part of the 2015 fee setting review and presented in the Notice of Proposed Rule Making (NPRM) of October 3, 2016 must be put into place as soon as practicable. The fee increase was developed with the full participation of the PPAC and with public input. The USPTO needs the additional funds to support its ongoing operations, long-term initiatives, and replenishment of the operating reserve. The current delay, although understandable given the change of Administration, is costing the USPTO approximately \$10.8M of estimated revenue per month. Further delay would adversely impact the financial

condition of the USPTO, calling into question the continued viability of important initiatives and leading to further reductions in the already insufficient operating reserve.

The USPTO should build its patent operating reserve over time to reach a level equivalent to approximately 3 months of expenditures. The operating reserve is an important safeguard to protect ongoing USPTO operations and critical long-term investments from variability in funding. If there is a temporary lapse in Congressional authorization, the operating reserve can help the USPTO continue its operations. Furthermore, if fee collections fall short of expectations, a robust operating reserve protects the stable funding needed for longer term initiatives such as IT improvement.

The Enterprise Services organization and any proposed participation by the USPTO should be critically reexamined. The USPTO should not pay for services that it does not need or services which cost more or costs the same or less with lower quality than alternatives already available within the agency or elsewhere. The USPTO should not invest in establishing a shared services organization that it does not expect to provide value in the future. The DOC should comply with statutory restraints against diversion of USPTO user fees to purposes irrelevant to its mission.

X. PATENT MANAGEMENT AND ORGANIZATION STRUCTURE

The Commissioner for Patents and the Chief Administrative Officer have done an outstanding job putting in place programs that retain a quality patent examiner workforce. The number of examiners leaving the USPTO for other jobs is at historic lows. The attrition rate through July 2017 is 3.26%.

In August, 2016, the OIG issued a report OIG-14-0990-I titled “Analysis of Patent Examiners’ Time and Attendance.” The OIG undertook a review of time and attendance data related to the USPTO workforce. The OIG made 6 recommendations many of which impose new controls on employees.

The PPAC recognizes that the USPTO has implemented many, if not most, of the OIG's recommendations, and that the USPTO has limited options not to implement all of the OIG’s recommendations. In 2013 and 2014, the USPTO was the #1 and #2 best place to work in the Federal Government. The PPAC believes that it is important for the USPTO to retain a dedicated patent examiner workforce that is motivated to conduct a quality examination.

The PPAC commends the Commissioner for Patents and the Chief Administrative Officer on the collaborative approach to the management-union relationship. The PPAC notes that the USPTO has been moving toward a more electronic workflow environment and this has reduced the need for some clerical staff in the future. The USPTO has taken steps to obtain early retirement authority and has looked for other positions for employees that will no longer be needed in their current positions.

RECOMMENDATIONS:

The PPAC commends the collaboration with the unions and focus on finding other positions for the clerical workforce that will not be needed in the future. We emphasize the need for

continued union-management collaboration on management changes so that needed improvements can be quickly implemented without the need for protracted formal bargaining. The PPAC will continue to monitor the implementation of the OIG's time and attendance recommendations and their effect on the Patents workforce.

XI. LEGISLATION

Congressional efforts to address abusive patent litigation practices with broad-based legislation, which stalled in the 114th Congress (2015-2016), were not revived in the first session of the 115th Congress (2017-2018). However, patent issues were addressed, to a more limited extent, in two hearings conducted by the House Judiciary Subcommittee on Courts, Intellectual Property, and the Internet and are the subject of a bill pending in the Senate Judiciary Committee.

The first hearing addressed the issue of venue for patent infringement cases and the impact of the U.S. Supreme Court's decision in *TC Heartland v. Kraft Food Group*. The second hearing focused on the necessity for, and conduct of, the USPTO's post-grant review proceedings. Adjustments to venue law and post-grant review proceedings, along with clarification of what constitutes patent-eligible subject matter, are subjects of possible future legislative proposals.

In addition, on December 7, 2016, the USPTO's Deputy Director testified before the Government Operations Subcommittee of the House Oversight and Government Reform Committee at a hearing captioned "Time and Attendance Abuse at the U.S. Patent and Trademark Office." The Deputy Director described the array of programs, tools, training and procedures undertaken by the USPTO to ensure that employees and supervisors have a clear understanding of their responsibilities to accurately report time and attendance information. Since this hearing, the PPAC understands that USPTO/Office of Governmental Affairs staff has updated the committee on USPTO's new time and attendance policy and responded to questions for the record related to this policy as well.

Senator Coons, along with cosponsors Senators Cotton, Durbin, and Hirono introduced S. 1390, the "Support Technology and Research for Our Nation's Growth and Economic Resilience (STRONGER) Patents Act of 2017" on June 21, 2017. The STRONGER bill is an updated and expanded version of a comparable bill (the "STRONG" Patents Act) that was introduced in the 114th Congress by Senator Coons, which was intended to serve as an alternative to the broad-based patent reform bill (S. 1137) reported by the Senate Judiciary Committee in 2015.

The USPTO's IP Attaché Program is an important element of the USPTO international outreach efforts. There is a concern that USPTO IP Attachés do not have adequate access to their foreign government counterparts. A proposal to elevate their rank has been under discussion for several years and is supported by former Ambassadors, Congress and industry.

RECOMMENDATIONS:

The PPAC recommends that the USPTO continue to engage decision makers and other stakeholders to help ensure that any proposed legislative or administrative changes are appropriately crafted and narrowly targeted without adversely affecting the overall patent system. To that end, the USPTO should consider the effect of such changes in terms of balance and fairness to all stakeholders, the efficient operation of the examination process, the quality of patents issued, and the overall costs and burdens to patent owners and other participants in the patent system. The PPAC also recommends that the USPTO stay abreast of potential suggested legislative changes regarding patent SME (35 U.S.C. § 101).

The USPTO fee setting authority expires in 2018, and the PPAC strongly urges that the USPTO work within the Administration and with Congress to ensure that it continues to retain its fee setting authority beyond the 2018 expiration date, as well as access to all future fee collections, regardless of any government-wide sequestration or other limitation(s).

In addition, as previously noted, The Telework Enhancement Act of 2010 (TEAPP) ends or expires on December 8, 2017. The PPAC strongly recommends that legislative action be taken to extend this program and to continue to support, promote, and expand the Patent Hoteling Program and other telework programs, which permit examiners to work from remote locations. TEAPP has been very successful in attracting and retaining talent, and the loss of this additional tool will not only be disruptive to ongoing USPTO operations, but will have significant negative consequences for the USPTO and its user community.

The PPAC supports raising the current mid-level rank of USPTO IP Attachés by one level (from First Secretary to that of Counselor) which would give USPTO IP Attachés greater access to senior host government officials, to the Ambassadors at their respective embassies, and to senior industry representatives, which will allow them to more effectively accomplish their mission.

I. ENTERPRISE SERVICES

The U.S. Department of Commerce (DOC) is looking for the USPTO to participate in and support the Enterprise Services organization under which the USPTO would be required to transfer certain human resources, information technology and procurement functions and associated funding from the USPTO to this Enterprise Services organization located within the DOC. Other DOC bureaus would also contribute to the Enterprise Services organization, and the DOC believes that including the USPTO would improve Enterprise Services economies of scale. The Enterprise Services initiative depends upon patent and trademark user fees being diverted to the DOC to pay for the start-up of the Enterprise Services organization.

The PPAC learned of this initiative when former Under Secretary Michelle Lee announced the Enterprise Services initiative during the August 20, 2015 PPAC meeting. In a letter dated August 24, 2017, the PPAC unanimously urged Secretary Ross to exempt the USPTO from mandatory participation in this initiative, including any payment for start-up costs. A copy of the letter is attached as Appendix I.

The PPAC believes that the patent and trademark systems and thereby American innovation and commerce will be harmed if the USPTO is required to participate in Enterprise Services. The USPTO has unique obligations and requirements with respect to granting, maintaining and protecting valuable patent rights. These obligations and requirements call for robust information technology, a sophisticated and scientific workforce, and streamlined procurement strategies that are unique under the USPTO's statutory authorities. We note that the major intellectual property bar associations and membership organizations have expressed similar concerns in separate letters to the prior Secretary.

The PPAC believes that the Enterprise Services organization will divert user fees and abrogate the USPTO Director's independent control of management and administrative functions. The startup fees for establishing the Enterprise Services organization are being assessed against user fees, even though the USPTO may have no need for such services. This results in a diversion of patent fees and is contrary to the Leahy-Smith America Invents Act ("AIA"), which requires that all fees collected by the USPTO be used for the expenses of the USPTO. See Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-29 §22(3)(A). The USPTO Director is vested by statute with "independent control of ... personnel decisions and processes, procurements, and other administrative and management functions. . . ." 35 U.S.C. §1. All USPTO executives must report to the USPTO Director under the American Inventors Protection Act. The Enterprise Services organization violates the spirit--if not the literal interpretation of--these statutes. The PPAC also questions whether the USPTO may legally participate in the Enterprise Services organization.

RECOMMENDATIONS:

The PPAC recommends that the USPTO maintain independent control over the management and operation of human resources, Information Technology (IT), and procurement functions; not be required to expend user fees for so-called start-up costs; and only be required to participate in the Enterprise Services program to the extent that it seeks to purchase commercial items that Enterprise Services can offer at a lower cost and on a more timely basis than the USPTO could acquire such goods directly.

II. PATENT TRIAL AND APPEAL BOARD

A. INTRODUCTION

The Patent Trial and Appeal Board (PTAB or Board) turned five years old on September 16, 2017. Although the Board's responsibilities include reviewing pre-grant disputes, such as appeals of adverse decisions during prosecution of applications for patents pursuant to 35 U.S.C. § 134(a), they also include appeals of adverse decisions in post-grant proceedings, i.e., *ex parte* and *inter partes* reexaminations, and *inter partes* review (IPR) under the AIA. Indeed, since 2012, the Board has become a crucial voice in defining the scope of granted patent rights in the U.S., along with the U.S. District Courts, the U.S. Court of Appeals for the Federal Circuit (Federal Circuit), and the U.S. Supreme Court (collectively "the Courts"). Given the considerable attention regarding the Board's post-grant proceedings, the PPAC has focused on post-grant review matters this year and in this Report in greater detail.

Recent precedential decisions from both the Federal Circuit and the U.S. Supreme Court give guidance to the PTAB. Likewise, the PTAB has made a few more decisions precedential in FY 2017, that provide the Courts, among others, valuable insights into the Board's proceedings. As discussed below, the Board's plans for its FY 2018 outreach program is focused on hearing from and responding - to the extent appropriate - to those matters of concern or interest to the various Courts, as well as the stakeholders, including patent owners and patent challengers. The PPAC encourages the PTAB to continue this process of sharing best practices and issuing more precedential opinions that provide clarity on issues of current interest, such as the expansion of panels, fair implementation of post-grant proceedings, and international outreach to the leading patent offices on, for example, amendment practice.

The PPAC recognizes and supports the PTAB's efforts to stay responsive in continuing to modify its practices and procedures to conform to new court decisions as well as considering potential changes to address patent stakeholders' concerns relating to those practices and procedures. On the issues of amendments and IPR proceedings, the PTAB continues to study its amendment process, particularly, in view of the Federal Circuit's *en banc* decision in *Aqua Prods., Inc. v. Matal*, No. 2015-1177 (Fed. Cir. Oct. 4, 2017). Additionally, the PTAB is reviewing multiple (a/k/a serial or follow-on) petitions for IPRs, including ways in which to prevent or minimize perceived harassing behavior through the filing of multiple petitions per patent. (See Sub-section D below, *General Plastic Indus. Co., Ltd., v. Canon Kabushiki Kaisha*, Case IPR2016-01357, slip op. at 9-10, 16 (PTAB Sept. 6, 2017) (Paper 19) (rehearing decision, expanded panel) (designated informative Sept. 18, 2017)).

It is clear that the PTAB is working in a challenging and changing environment, including proposed legislation to modify IPR proceedings and the U.S. Supreme Court's review and anticipated ruling on the constitutionality of IPR proceedings, including whether the PTAB can extinguish a patent owner's patent rights without the right to a jury. The PPAC thanks the PTAB for its ongoing commitment and dedication amidst these external forces and applauds and

supports the PTAB’s continuing commitment to finding a balance between following ever-evolving patent laws and preserving the USPTO’s grant of patent rights to its stakeholders while at the same time ensuring for quality patents.

The PPAC acknowledges and congratulates the PTAB on its broad and diverse outreach and engagement events (“Programs”) in FY 2017. As discussed below, the PPAC and Board are developing a series of working and educational judicial conferences that will focus on sharing best practices, address potential modifications to internal processes and procedures, and have critical discussions on the state of U.S. patent law, inclusive of such topics as claim construction, amendment practice and multiple IPR petitions, among others. The PPAC encourages the PTAB to continue this process of sharing best practices and issuing more precedential opinions that provide clarity on issues of current interest, such as the expansion of panels, consistent implementation of post-grant proceedings and international engagement with foreign patent offices on, for example, post-grant proceedings.

The USPTO’s previously announced PTAB “Procedural Reform Initiative” has been suspended pending the appointment of a new Director. The Board, however, continues to welcome and encourage public feedback regarding all of its proceedings and procedures through its “suggestion box” available at <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/suggestion-box>.

B. ENGAGEMENT

During FY 2017, the PTAB hosted several Programs directed externally to stakeholders as well as internally for judges, patent attorneys, PTAB paralegals and patent examiners. In addition to external and internal engagement, PTAB hosted representatives from the JPO. During these meetings, attendees shared the respective office’s processes, procedures, statistics, and other relevant data. JPO representatives also observed appeals and IPR hearings held at the PTAB. A reciprocal event hosted at the JPO is contemplated as well as possibly an event at the EPO.

In view of its 5th anniversary, the PPAC and the Board recognize an opportunity to expand their combined engagement efforts in FY 2018, including the development of programs with more dynamic formats conducive to educating the stakeholders on the Board’s operations and the practical limitations on implementation of certain suggestions made by the stakeholders. In addition, for FY 2018, the PPAC and the PTAB are developing a new series of working and educational judicial conferences, to be hosted at the USPTO regional offices, wherein judges from various courts, stakeholders, and members of the PTAB and the PPAC, will hold in-depth and candid discussions about complex issues such as claim construction, motion practice, amendment practice, and multiple IPR petitions. While still in its formative stages, the intent is to facilitate the cross-sharing of insights and best practices among judges and, separately, a candid discussion with stakeholders about the practical realities of adjudicating complex patent matters.

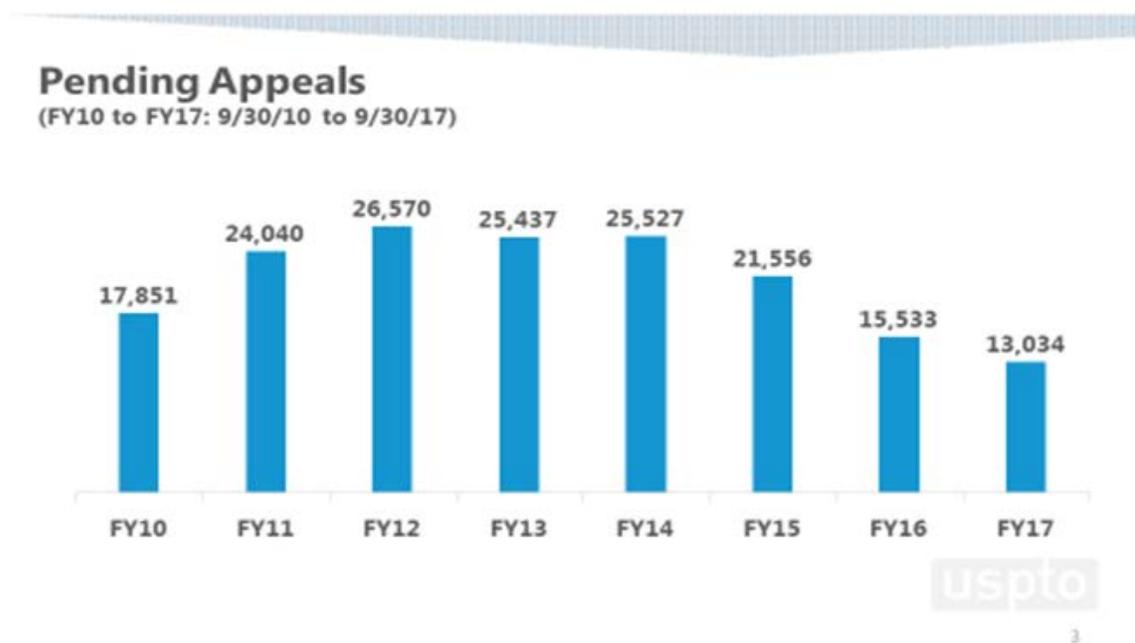
C. PTAB STATISTICS

The PPAC thanks the PTAB for its improved and simplified presentations of PTAB statistics. The new format is clearer and easier for the public and the user community to understand and interpret. More PTAB data and statistics are provided on the USPTO PTAB webpage at <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/statistics>.

1. *Ex Parte* Appeals

As shown below, the inventory of *ex parte* appeals pending at the Board stands at 13,034 appeals as of September 30, 2017, down from 15,533 of the preceding year. Except in FY 2014, the inventory trend has exhibited an appreciable reduction from a peak in FY 2012 of 26,570 appeals. The PPAC congratulates the PTAB on its continued success in reducing this inventory, including its optimization of the use of PTAB judges to ensure adequate resources are dedicated to decreasing the inventory across all art units.

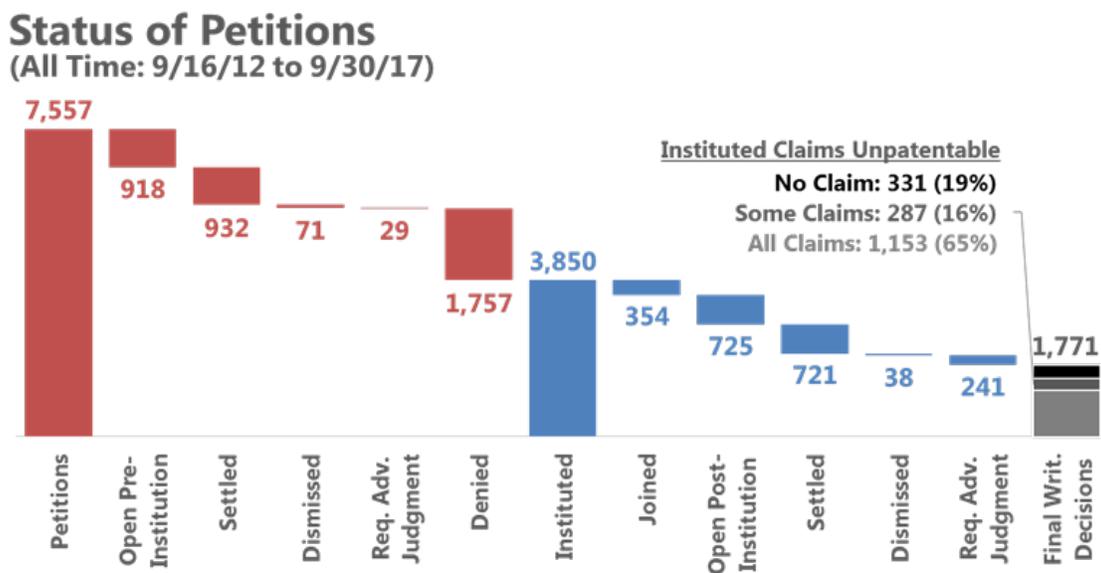
With respect to outcomes, the Board reports that consistent with the rates of previous years, it reversed 29.5%, remanded or dismissed about 1.7%, and affirmed or affirmed-in-part 68.7% of examiners' decisions.



2. AIA Proceedings

As set forth in the chart below (“Status of Petitions”), the Board had received a total of 7,557 petitions for IPR proceedings as of September 30, 2017. Of the 7557 petitions filed, 932 cases were settled prior to the Board making a decision on institution, 71 were dismissed and 29 were subject to a request for adverse judgment. The Board has issued a total of 5,607 decisions on

institution, denying 1,757 petitions, and granting institution on 3,850 petitions. Of the 3,850 trials instituted, 354 of those proceedings were joined to other cases, which removes the joined proceedings from the counts of subsequent statuses. There are 725 open trials awaiting a final written decision. After a trial was instituted but before a final written decision, 721 proceedings settled, 38 were dismissed, and 241 were subject to a request for adverse judgment. While pre-institution requests for adverse judgment accounted for less than 1% of outcomes up to and including institution, post-institution requests for adverse judgment made up 9% of final outcomes after institution. During this same period, the Board has issued 1,771 final written decisions. Of these, 19% (331 claims at issue) found no instituted claim unpatentable, 16% (287 claims at issue) found some but not all instituted claims unpatentable, and 65% (1,153 claims at issue) found all instituted claims unpatentable.

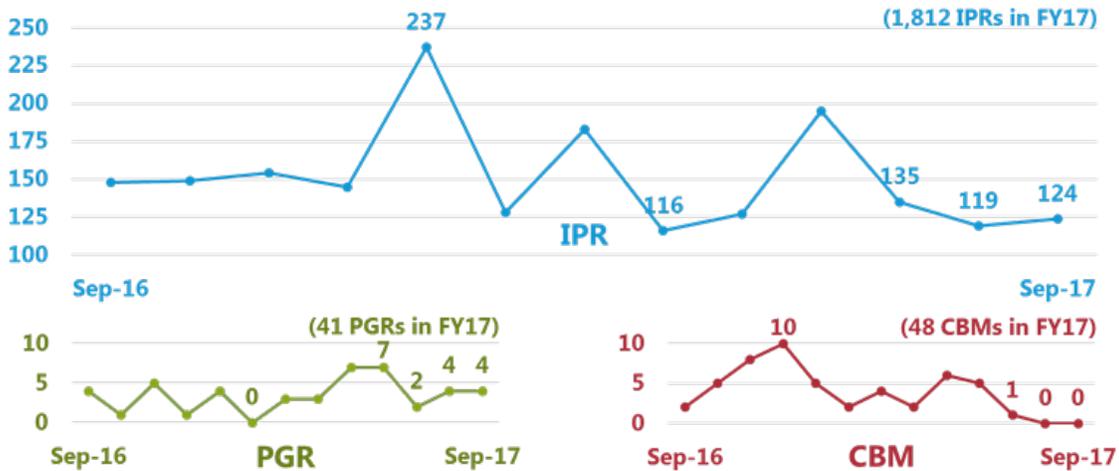


These figures reflect the latest status of each petition. The outcomes of decisions on institution responsive to requests for rehearing are incorporated. Once joined to a base case, a petition remains in the Joined category regardless of subsequent outcomes.

A total of 1901 petitions were filed in FY 2017, which breaks down to 1,812 IPRs, 41 Post Grant Reviews (PGRs), and 48 Covered Business Methods (CBMs). IPRs constitute the vast majority of petitions filed every month. January of 2017 had the highest number of petitions filed in a single month to date with 237 IPRs filed.

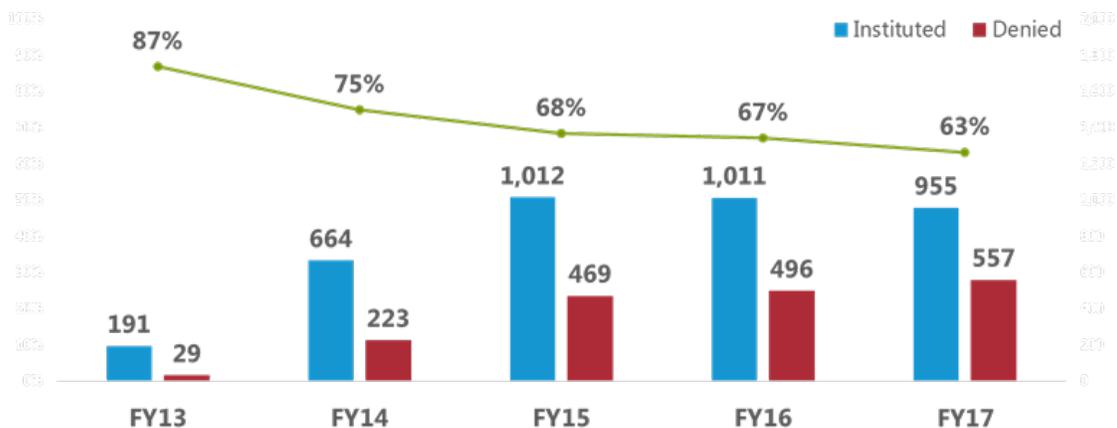
Petitions Filed by Month

(September 2017 and Previous 12 Months: 9/1/16 to 9/30/17)



Institution Rates

(FY13 to FY17: 10/1/12 to 9/30/17)



Institution rate for each fiscal year is calculated by dividing petitions instituted by decisions on institution (i.e., petitions instituted plus petitions denied). The outcomes of decisions on institution responsive to requests for rehearing are excluded.

The number of decisions on institution has remained steady from FY 2015 through FY 2017 as has the institution rate over the same period. Every year since the inception of AIA, the institution rate has declined from the initial peak of 87% in FY 2013 to 63% in FY 2017.

D. PTAB PRECEDENTIAL AND INFORMATIVE OPINIONS

As forecasted in FY 2016, the PTAB issued more precedential opinions in FY 2017. In August

2017, the PTAB posted an AIA case titled, *Athena Automation Ltd. v. Husky Injection Molding Systems Ltd.*, IPR2013-00290, Paper 18 (PTAB October 25, 2013) (designated precedential August 2, 2017), which dealt with assignor estoppel, an issue which came before the Federal Circuit, but which was not reviewed because it was associated with a PTAB decision not to institute. In *Athena*, the PTAB ruled that 35 U.S.C. § 311(a) controls, which provides that a person other than the patent owner may challenge a patent via petition.

In FY 2017, the PTAB posted two other precedential opinions relating to *ex parte* appeals. The first, *In re McAward*, Appeal 2015-006416 (Section I.B. designated precedential Aug. 25, 2017), addressed the Office's approach to indefiniteness during prosecution. Specifically, the decision affirmed the Examiner's indefiniteness rejection and applied the indefiniteness standard set forth in *In re Packard* (CAFC 2014) and the MPEP, rather than the standard set forth in the U.S. Supreme Court's *Nautilus* opinion. The second, *In re Schulhauser*, Appeal 2013-007847 (PTAB April 28, 2016) (designated precedential Oct. 4, 2016), involved an issue of claim construction, and held that under the broadest reasonable interpretation, steps of a claimed method that occur only if a condition precedent is met, may not need to be performed to practice the claimed method, and thus may need not be shown in the prior art to set forth a *prima facie* case of obviousness. The decision provides a narrower interpretation of the system claims written using means-plus-function claim language. Because the claim construction adopted by the Board differed from the claim construction applied by the Examiner, the Board designated its affirmance as containing a new ground of rejection under 37 C.F.R. § 41.50(b). The applicant amended the method claims in response to the new ground of rejection.

Additionally, the PTAB addressed multiple AIA trial petitions in the "informative" AIA decision, *General Plastic Indus. Co., Ltd., v. Canon Kabushiki Kaisha*, Case IPR2016-01357, slip op. at 9-10, 16 (PTAB Sept. 6, 2017) (Paper 19) (rehearing decision, expanded panel) (designated informative Sept. 18, 2017). The original panel decision denied institution of *inter partes* review of follow-on petitions pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a) after applying the seven factors set forth in *NVIDIA Corp. v. Samsung Electronics Co., Ltd.*, Case IPR2016-00134 (PTAB May 4, 2016) (Paper 9). On motion for rehearing, the Board expanded the panel to include Chief Judge David Ruschke and Deputy Chief Judge Scott Boalick. The expanded panel confirmed the original panel's decision denying institution and explained that applying the *NVIDIA* factors was a proper exercise of the Board's discretion under 35 U.S.C. § 314(a) ("Threshold: The [Director](#) may not authorize an *inter partes* review to be instituted unless the [Director](#) determines that the information presented in the petition filed under section 311 and any response filed under section 313 show that there is a reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition.") The expanded panel further explained that the factors "serve to act as a baseline of objectivity for [the Board's] future evaluation of follow-on petitions." (Section II.B.4.i of the decision lists and explains the seven factors in a concise manner.)

Furthermore, in response to practitioners' feedback, the PTAB is in the process of revamping its

website so that precedential opinions are more easily accessible. Along with posting more precedential opinions, the PTAB is implementing a process by which its archives will be reviewed and updated in accordance with current caselaw or rules, including purging outdated opinions, up-designating earlier decisions from informational to precedential or vice versa. As part of this endeavor, the PTAB continues to encourage the public to submit decision candidates for precedential designation. The PPAC believes that the above efforts are valuable to the Courts, practitioners, and stakeholders alike and, accordingly, highly support the PTAB's efforts.

E. PANEL EXPANSIONS

The PTAB has a standard operating procedure ("SOP") to expand the size of a panel deciding a case. See SOP 1, available at <https://www.uspto.gov/patents-application-process/appealing-patent-decisions/procedures/standard-operating-procedures-0>. Specifically, the PTAB may expand a panel when the case presents an issue of exceptional importance, expansion is necessary to secure and maintain uniformity of the Board's decisions, the Commissioner for Patents or the Commissioner's delegate makes a request on a matter presenting an issue of first impression or the Commissioner for Patents or the Commissioner's delegate identifies a matter before the Board presenting an issue governed by a prior Board decision. In FY 2017, the Chief Judge expanded the panels in four cases: (1) *Neil Ziegmann, N.P.Z., Inc. v. Carlis G. Stephens*, Case IPR2015-01860 (PTAB Sept. 6, 2017) (Paper 13) (Ruschke, Boalick, Kim, DeFranco, Mayberry) (3-0 to 5-0); (2) *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, Case IPR2016-01357 (PTAB Sept. 6, 2017) (Paper 19) (Ruschke, Boalick, Lee, Zecher, Giannetti, Bisk, McShane) (3-0 to 7-0) (note that this decision addressed 5 cases: IPR2016-01357, IPR2016-01358, IPR2016-01359, IPR2016-01360, IPR2016-01361); (3) *HTC America, Inc. v. Virginia Innovation Sciences, Inc.*, Case IPR2017-00870 (PTAB Sept. 13, 2017) (Paper 11) (Lee, Kim, Jefferson, McNamara, Zado) (note that this is one of 10 separate decisions in which the panel was expanded in the same way: IPR2017-00870, IPR2017-00871, IPR2017-00872, IPR2017-00873, IPR2017-00874, IPR2017-00875, IPR2017-00876, IPR2017-00878, IPR2017-00879); and (4) *Facebook, Inc. v. Skky, LLC*, Case CBM2016-00091 (PTAB Sept. 28, 2017) (Paper 12) (Ruschke, Boalick, Arbes, Perry, Cherry) (3-0 to 5-0). In each case, the panel's vote remained unanimous. The PPAC urges that the PTAB to continue to exercise SOP1 in a judicious manner.

F. MULTIPLE IPR PETITIONS

In May 2017, the PTAB posted initial data on the filing of multiple IPR petitions. The data collection process is slowed by the inability of the current IT system to automate the analyses. The preliminary data from May 2017 suggests that 67% of the cases involve one petition for one patent and approximately 20% involve two petitions per one patent. The PPAC urges the USPTO to secure as soon as possible tools that can perform this important analysis, since there is a difference of perception between patent owners and patent challengers as to whether IPR petitions are being used as mechanisms to legitimately challenge patents or as a litigation tool to harass patent owners and to try and weaken their patents.

As mentioned above, the PTAB addressed multiple AIA trial petitions in the “informative” AIA decision, *General Plastic Indus. Co., Ltd., v. Canon Kabushiki Kaisha*, Case IPR2016-01357, slip op. at 9-10, 16 (PTAB Sept. 6, 2017) (Paper 19) (rehearing decision, expanded panel) (designated informative Sept. 18, 2017). The original panel decision denied institution of *inter partes* review of follow-on petitions pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a), after applying the seven factors set forth in *NVIDIA Corp. v. Samsung Electronics Co., Ltd.*, Case IPR2016-00134 (PTAB May 4, 2016) (Paper 9). On rehearing with an expanded panel, the original panel decision denying institution was affirmed on the basis that application of the seven factors was a proper exercise of the Board’s discretion under 35 U.S.C. § 314(a).

G. AMENDMENT PRACTICE

With regard to the issues of amendments and IPR proceedings, the PTAB continues to study its amendment process, particularly, in view of the Federal Circuit’s *en banc* decision in *Aqua Prods., Inc. v. Matal*, No. 2015-1177 (Fed. Cir. Oct. 4, 2017). The PTAB conducted an extensive study on amendment practice that is posted on its website and is updated regularly: <https://www.uspto.gov/patents-application-process/appealing-patent-decisions/statistics/aia-trial-statistics>. According to that study, over 80% of the motions to amend are not granted because the amendments do not meet the requirements of Sections 101, 112, 102, or 103.

The PPAC supports the belief of many stakeholders that the high rejection rate of motions to amend is problematic and discourages such motions from being filed and causes economically harmful problems for the stakeholders. Accordingly, the PPAC strongly recommends further study to determine whether modifications to the amendment process might help resolve the issue for patent owners. For example, the JPO and EPO permit multiple opportunities for amendments at various stages during opposition and/or validity trials based on paper submissions and/or at oral hearings and those opportunities occur in response to specific guidance from the JPO and EPO as to the patentability of the patent’s claims. As a result, amendments in JPO and EPO occur more frequently. The PTAB may want to make modifications to its amendment practice to provide for multiple opportunities for patent owners to amend, at various times during proceedings and provide patent owners specific guidance as to the patentability of their patents’ claims.

H. FEES FOR IPR TRIALS

Small and micro entities are not entitled to discounts for PTAB post-grant trial fees. The PPAC is concerned that small and micro entities may not be able to readily take advantage of the USPTO post-grant proceedings, in part, because of the cost. Section 10(b) of the AIA applies discounts only for “filing, searching, examining, issuing, appealing and maintaining patent applications and patents.” Post-grant trials are not included. In order to make the USPTO post-grant proceedings more accessible to small and micro entities, the PPAC recommends that the USPTO pursue legislation that will reduce the PTAB trial fees for small and micro entities.

RECOMMENDATIONS:

The PPAC commends the Board for the progress it has made under the AIA in the short period of five years since its inception. The PTAB's Programs play an important part in helping stakeholders, practitioners, and even other courts understand relatively new and ever-evolving patent laws post-AIA. The PPAC looks forward to new programs planned for FY 2018, particularly, the aforementioned PTAB judicial conferences involving participation by the Courts, as well as the live hearings held at law school venues in conjunction with the TTAB, and the joint international meetings and discussions with other IP5 Offices.

Issuing more precedential opinions is a welcomed policy that is highly supported by the PPAC and the user community. Also, the PPAC encourages and supports the PTAB's implementation of a process to review and update its decision archives as well as make them more accessible to practitioners and the user community through the PTAB's improved website.

Regarding amendment practice, the PPAC believes that this is a critical issue that requires the USPTO and the PTAB's undivided and immediate attention. Significant U.S. inventions that deserve protection are being abandoned with impunity. The PPAC recommends that the PTAB consider potential changes to the amendment process to enable patent owners to more easily make amendments to their claims and thereby protect their inventions, incentivize innovation, and bolster our economy.

According to the PTAB's statistics, there have been more than 7,500 petitions since the PTAB proceedings went into effect in 2012. The PPAC recommends that the PTAB remain vigilant in ensuring fair processes and proceedings before it, rendering well-grounded decisions, and proceeding with its engagement efforts to educate the Courts and the stakeholder and user communities on important practices and developments in the PTAB area.

III. PATENT QUALITY

A. INTRODUCTION

The United States Patent and Trademark Office Strategic Plan 2014-2018 identifies three strategic goals, the first of which is “Optimize Patent Quality and Timeliness.” Over the course of FY 2017, the USPTO has made great progress with respect to several of the specific objectives identified to meet this strategic goal. These metrics, which focus on statutory compliance, were in full use in FY 2017. The new quality metrics provide the USPTO with a searchable, multidimensional data set for use in quality tracking, trend identification, and predictive modeling.

The USPTO also made progress in the implementation of the Master Review Form (MRF), developed under the CCDC. The MRF provides a standard set of criteria to be used by reviews from the Technology Centers (TCs) and the Office of Patent Quality Assurances (OPQA) to consistently document and assess quality review data in a single place. The USPTO will leverage the insights gleaned from its Clarity of the Record Pilot to define clarity characteristics which will be incorporated as quality metrics in a future version of the MRF.

It goes without saying that nearly every facet of USPTO operations touches on the quality of the work product it produces. While this section specifically addresses the USPTO quality initiative, the developments, challenges, progress, and dependencies identified in other sections and discussed throughout this Annual Report will all have some bearing on the issue of patent quality. To deliver quality work product and top-notch customer service, the USPTO must have reliable access to sufficient financial resources, state-of-the-art information technology, and a highly-skilled and committed employee base.

The PPAC commends the USPTO for the progress it has made in the quality initiative and the on-going efforts to enhance patent quality, as discussed below. For more information on the patent quality programs and initiatives, visit <https://www.uspto.gov/patent/patent-quality>.

B. PROGRESS ON KEY QUALITY MEASUREMENT INITIATIVES

During FY 2017, the USPTO made significant progress in key quality measurement initiatives. As discussed below, the USPTO began reporting out the new quality metrics implemented under its Quality Metrics Program, completed its transition over to the MRF developed under the Correctness Data Capture Program (CCDC), and gained valuable insights from the Clarity of the Record Pilot.

1. New Metrics Reported in FY 2017 under Quality Metrics Program

The Quality Metrics program was developed to achieve greater accuracy, clarity, and consistency in measuring quality. The new approach, announced in a Federal Register Notice in March

2016, included metrics directed to the quality of the USPTO work product, the efficiency and consistency of the USPTO processes, and stakeholder perception of the USPTO work product and processes.

Under the new metrics for work product quality, the USPTO assesses the correctness of office actions under a framework of “statutory compliance.” A statutorily compliant office action is one that includes all applicable rejections and wherein any asserted rejection is correct in that the decision to reject is based on sufficient evidence to support the conclusion of unpatentability.

In FY 2017, the USPTO began using the new quality metrics to report current patent quality data to the public. As discussed in greater detail below, the quality metrics for the second quarter of FY 2017 show that the compliance rate was at or above the target rate set by the USPTO for each statutory category (35 U.S.C. §§ 101, 102, 103 and 112). This data was presented by the USPTO at the May 2017 PPAC public meeting. In the interest of transparency, the PPAC recommends that the USPTO make the quality data more readily available to the public by updating the Patent Dashboard of the USPTO Data Visualization Center to reflect the new quality metrics and keeping the data presented on the Patent Dashboard up-to-date. For more information on the Quality Metrics program, visit <https://www.uspto.gov/patent/initiatives/quality-metrics-1>.

2. Progress in Clarity and Correctness Data Capture Program

The CCDC was instituted to create an improved data capture system to enable all reviewers from OPQA and the TCs to consistently document and access quality review data in one place. As part of this program, the USPTO has replaced all previous review forms with a single, comprehensive review form, the MRF, which captures the correctness—i.e., statutory compliance—of the examiner’s determinations, as well as new inquiries on the clarity of each determination made in the office action under review. The data from the MRFs are stored in a consistent and minable manner to enable the use of “big data” analysis to analyze and enhance quality at a TC level. Since the initial launch of the MRF in the OPQA in November 2015, the OPQA has completed over 18,000 reviews. The USPTO uses this growing database of review information to identify quality trends and provide more precise quality metrics.

The USPTO is planning on releasing a third version of the MRF in early FY 2018 that will take into account stakeholder feedback, lessons learned from the Clarity of the Record Pilot (discussed below), and lessons learned from the case studies done as part of the Topic Submission for Case Studies program (also discussed below). In addition, the USPTO will continue to analyze the results of the reviews to ensure reviewers are answering questions consistently and will provide additional training for reviewers, if necessary. More information on the CCDC and the MRF can be found at <https://www.uspto.gov/patent/clarity-and-correctness-data-capture>.

3. Valuable Insights Derived from Clarity of the Record Pilot

The Clarity of the Record Pilot was designed to identify best examiner practices for enhancing the clarity of the various aspects of the prosecution record, particularly with respect to claim interpretation, reasons for allowance, and interview summaries; and to study the impact on the examination process of implementing the identified best practices. During FY 2017, the USPTO evaluated the pilot by conducting a statistical assessment of whether the best practices of the pilot improved the clarity of office actions. In addition the USPTO analyzed feedback from the quality enhancement meetings and training sessions.

Analyzing the data gathered in the Clarity of the Record Pilot, the USPTO identified the best practices that were key drivers of overall clarity. The best practices included providing, in an interview summary, a description of next steps that will follow the interview; particularly identifying the applicant's persuasive arguments in the reasons for allowance; and clearly addressing each specific limitation in each rejected claim that is anticipated by the prior art. In addition, the USPTO identified practices that did not appear to significantly impact overall clarity. Those practices included providing an explanation regarding the patentable weight given to a preamble, and providing an explanation of how relative terminology in a claim is being interpreted.

The USPTO is considering conducting a second pilot in FY 2018 to identify how various examination practices impact clarity of the record. More information on the Clarity of the Record Pilot, including the best practices identified from the pilot can be found at <https://www.uspto.gov/patent/initiatives/clarity-record-pilot>.

C. UPDATES ON ON-GOING QUALITY WORK PRODUCT INITIATIVES

1. Topic Submissions for Case Studies Program

In FY 2017, the USPTO reported on the case studies on several of the specific topics submitted by the public that related to compliance with regulations or policy, or other areas for quality enhancement. The top concern presented by stakeholders in their suggestions for case studies was whether examiners are correctly making SME rejections under USPTO examination guidance concerning 35 U.S.C. § 101, and whether the rejections clearly communicate the rationale for the rejection to the applicant. Compliance with USPTO examination guidance was analyzed at multiple levels of granularity, starting with the overall eligibility result followed by a review of the examiner's reasoning in the rejection.

The USPTO found that, in cases having a 35 U.S.C. § 101 SME rejection, 90% of the rejected claims are properly determined to be ineligible under USPTO 35 U.S.C. § 101 Guidance. In addition, where the rejected claim was properly determined to be ineligible, 75% of the

rejections were properly explained. So, in total, 68% of all studied rejections were properly made and properly explained.

The PPAC believes that this case study revealed important data on the quality of 35 U.S.C. § 101 SME rejections actually made. The data shows that 32% of the 35 U.S.C. § 101 SME rejections were defective due to either an improper rejection and/or a failure to properly explain the rejection. In many cases, a defective rejection places an undue burden on the applicant who must then overcome a rejection that was improperly made in the first place, and/or present a counterargument to an insufficient or unclear explanation of the rejection. While the compliance rate for 35 U.S.C. § 101 SME rejections is within the target range under the new quality metrics (discussed below), the PPAC urges the USPTO to focus on improving the quality of SME rejections actually made.

In another case study concerning 35 U.S.C. § 101 SME, the USPTO set out to determine how frequently a first office action includes an SME rejection but omits a prior art rejection under 35 U.S.C. § 102 and/or § 103 that could have been included in the first office action but is instead subsequently introduced in a second non-final office action. Based on an analysis of the relevant data, the USPTO determined that a prior art rejection was first introduced in a second office action that could have been introduced in the first office action in only about 0.26% of the applications having both prior art and 35 U.S.C. § 101 SME rejections during prosecution.

Additional information on all of the topics selected for the Case Studies program, can be found at <https://www.uspto.gov/patent/initiatives/selected-topics-case-studies-pilot>.

2. Post Grant Outcomes Program

The Post Grant Outcomes program was instituted to develop a process for providing post grant outcomes from various sources, such as the Federal Circuit and PTAB, to the examiner of record and the examiners of related applications. In early FY 2017, the USPTO reported on the results of the pilot with respect to whether prior art introduced in post-grant proceedings is relevant to related cases undergoing prosecution. The USPTO found that 44% of the examiners referred to at least one reference cited in the PTAB trial petition during the examination of the related case, either by citing it in a rejection or as pertinent prior art. The PPAC believes that it is important that an examiner of a pending application be provided with easy access to potentially relevant prior art in cited in a PTAB trial of a case related to the application. This will require sufficient IT resources to archive and index PTAB documents to be accessible by examiners, as well as to identify pending applications related to cases involved in a PTAB trial, and to notify the examiners of the related applications of prior art as it is cited in the trial. The PPAC recommends that the USPTO consider providing additional examination time for applications in which the examiner will be expected to review PTAB trial records of a related case.

The USPTO is planning on providing examiners with a periodic review of post grant outcomes focused on Supreme Court, Federal Circuit, district court, and PTAB decisions that relate to their

specific technological area. More information on the Post Grant Outcomes Initiative can be found at <https://www.uspto.gov/patent/initiatives/post-grant-outcomes>.

3. Examination Time Analysis

The USPTO initiated the ETA to reassess the current examination time goals in view of the USPTO's current quality and pendency goals. This assessment will take into consideration the significant changes to examination practices and tools that have come up since the last examination time assessment. Those changes include increased complexity of application subject matter, exponential growth of available prior art, increased demand for more detailed office actions, use of electronic tools and changes in interpretation of law due to court decisions, and the transition to the CPC. In FY 2017, the USPTO hosted a series of interactive roundtables at the Alexandria Headquarters as well as at the regional offices to solicit feedback from the public on the examination time goals and quality, pendency, and cost for services. As the ETA is still on-going, the PPAC urges the USPTO to engage in a higher-level analysis of the overall economic and societal tradeoffs of adding resources to examination compared to the benefits of higher quality patents. For more information on the ETA, visit <https://www.uspto.gov/patent/initiatives/eta-external-outreach>.

D. OUTREACH AND CUSTOMER SERVICE INITIATIVES

During FY 2017, the USPTO held or participated in numerous public meetings, roundtables and conferences to gather feedback, unveil initiatives and programs, offer training and guidance to the public, and engage in dialog with the public on patent issues of interest. In addition to the on-going Quality Chats, the USPTO hosted a series of Patent Quality Forums in different locations across the country, and a Patent Quality Conference at the USPTO Alexandria Headquarters. The USPTO also offered a three-day educational program to external stakeholders, the Stakeholder Training on Examination Practice and Procedures program (STEPP), in each of the four regional offices and at the Alexandria Headquarters. The training, provided by the USPTO trainers, was derived from training materials developed and delivered to examiners and the USPTO employees and focuses on the life of an application from docketing to allowance.

E. FY 2017 QUALITY DATA

As discussed above, the USPTO began publicly reporting the new quality metrics in FY 2017. Under the new review standard, the focus is not only on assessing the correctness of the examiner's ultimate decision to allow or reject under a particular statute, but also on whether the examiner's rationale for supporting the rejection is sufficient. While much useful information has already come of the new metrics, the historical data goes back only as far as eighteen months. For some metrics, more time may be required to reliably identify early trends or causal relationships.

To define the FY 2017 Statutory Compliance Targets, the USPTO took into account each metric’s statistical confidence level. The bounds of each range were set to project the impact of the new review standard that the USPTO implemented in FY 2017. The Statutory Compliance Targets for FY 2017 are shown in the following table.

Statute	FY 2017 Statutory Compliance Target
35 U.S.C. § 101	93 - 98%
35 U.S.C. § 102	90 - 95%
35 U.S.C. § 103	88 - 93%
35 U.S.C. § 112	87 - 92%

For the calculation of statutory compliance in each of the categories shown below, the total number of relevant reviews is constant for each statute and includes those reviews that OPQA conducted on randomly sampled office actions. As noted below, the reported statutory compliance rate for each category is within or above the target range. The PPAC recommends that the target ranges be upwardly adjusted for FY 2018. In addition, while the statutory compliance rates are within the target range for each separate category, the overall statutory compliance rate for all reviewed applications was only 80%. That means that 20% of all of office actions reviewed by the OPQA were non-compliant in at least one respect. Furthermore, over 10% of all allowances reviewed by the OPQA were non-compliant in at least one respect. Given the key role played by an allowance in prosecution, the PPAC recommends that the USPTO separately analyze the compliance data for allowances and consider whether any additional training or process changes may be warranted to improve the compliance rates for allowances.

1. 35 U.S.C. § 101

The USPTO 35 U.S.C. § 101 Statutory Compliance metrics are based on reviews assessing patent eligibility as well as utility, where the reviews were conducted by OPQA on every office action type from all technologies. An action that does not reject a claim under a given statute is considered to be compliant as long as the reviewer does not identify an omitted rejection. For example, the compliance metric for 35 U.S.C. § 101 includes as a compliant action many actions from technologies that are clearly patent eligible under current law because no 35 U.S.C. § 101 rejection was made and no rejection was warranted.

According to the FY 2017 Q2 data, the statutory compliance rates for 35 U.S.C. § 101 were within the target range of 93-98% for each office action type—e.g., non-final office action, final office action, and allowance. The compliance rate for non-final office actions was 96%; for final office action actions, 97%; and for allowances, 98%. The overall statutory compliance rate was 96%.

2. 35 U.S.C. §§ 102 and 103

The USPTO Prior Art Statutory Compliance metrics are based on reviews assessing patentability under 35 U.S.C. §§ 102 and 103, where the reviews were conducted by OPQA on every office action type from all technologies. An action that does not reject a claim under a given statute is considered to be compliant as long as the reviewer does not identify an omitted rejection. As such, the compliance metrics for 35 U.S.C. §§ 102 and 103 include as a compliant action any action in which no rejection was made and no rejection was warranted. As part of the review for prior art statutory compliance, it is unclear how often the reviewers perform de novo prior art searches to determine whether the best prior art that could reasonably be found has, in fact, been found. The PPAC strongly believe that patent quality is highly-dependent on the quality of the prior art search. As such, the PPAC suggests that data on this aspect of the prior art statutory compliance review be collected and analyzed for the purposes of measuring and improving the quality of prior art searches.

For 35 U.S.C. § 102, the FY 2017 Q2 statutory compliance rates were within or above the target range of 90-95% for each office action type. The compliance rate for non-final office actions was 93%; for final office action actions, 96%; and for allowances, 96%. The overall statutory compliance rate for 35 USC § 102 was 94%.

Turning to 35 U.S.C. § 103, the FY 2017 Q2 statutory compliance rates were within or above the target range of 88-93% for each office action type. The compliance rate for non-final office actions was 90%; for final office action actions, 89%; and for allowances, 98%. The overall statutory compliance rate for 35 U.S.C. § 103 was 92%.

3. 35 U.S.C. § 112

The USPTO 35 U.S.C. § 112 Statutory Compliance metrics are based on reviews assessing patentability under 35 U.S.C. § 112(a) written description, 35 U.S.C. § 112(a) enablement, and 35 U.S.C. § 112(b), where the reviews were conducted by OPQA on every office action type from all technologies. An action that does not reject a claim under a given statute is considered to be compliant as long as the reviewer does not identify an omitted rejection or an improper rejection. As such, the compliance metric for 35 U.S.C. § 112 includes as a compliant action any action in which no rejection was made and no rejection was warranted. Also, a single case that is non-compliant with respect to both 35 U.S.C. § 112(a) and 35 U.S.C. § 112(b) will be counted only as a single instance of non-compliance in the overall 35 U.S.C. § 112 metric.

The FY 2017 Q2 statutory compliance rates for 35 U.S.C. § 112 were within or above the target range of 87-92% for each office action type. The compliance rate for non-final office actions was 90%; for final office action actions, 90%; and for allowances, 95%. The overall statutory compliance rate for 35 U.S.C. § 112 was 92%.

4. Additional Statutory Compliance Insights

With the progress made under the CCDC, the USPTO is able to more easily analyze the captured data and glean useful information relevant to the quality objectives. The data from FY 2017 Q2 revealed that, while the overall statutory compliance rates are within the target ranges for each of the above statutory categories, the compliance rates varied between disciplines. In each case, however, the statutory compliance rate was within or above the target range. For example, the overall statutory compliance rate for 35 U.S.C. § 101 was 99% in the chemical discipline, 94% in the electrical discipline, and 98% in the mechanical discipline. The differential in compliance rates between these disciplines was between 3-4 percentage points for each of the statutory categories of 35 U.S.C. §§ 102, 103 and 112. The root cause of the differences in compliance rates among the disciplines is not evident from the data, but the PPAC recommends that the USPTO continue to monitor the statutory compliance rates on a discipline-by-discipline basis to ensure that each discipline falls within the target.

The importance of analyzing the data on multiple levels is evident when all cases are combined by office action type. As discussed above, the compliance rate for each statutory category, taken individually, falls within the target range for each action type. However, for each office action type, the percentage of cases reviewed by OPQA with at least one instance of non-compliance (i.e., at least one non-compliant rejection or omission of a proper rejection in any statutory category) warrants a close look by the USPTO. Out of all of the allowances reviewed by the OPQA, 10% had at least one instance of non-compliance. For non-final rejections, it was 23%; and for final rejections, 21%. Overall, of the cases reviewed for all office action types, 20% had at least one instance of non-compliance. Otherwise, for every five office actions mailed by the USPTO, one office action has at least one instance of non-compliance. In the era of compact prosecution, in which the applicant has limited opportunities to respond to any rejections or objections raised by the USPTO before the final disposition of the application, it is more important than ever that each office action, as whole, be compliant.

5. External Quality Survey

The USPTO has conducted External Quality Surveys (EQS) semi-annually since 2006, with the most recent being completed during March 2017. Survey participants are asked such question as whether they have experienced problems with the consistency of examination quality from one examiner to the next, how often they thought the rejections under specific patent statutes were reasonable in terms of being technically, legally, and logically sound, and how they would rate overall examination quality.

With the recent transition to the MRF and the focus on the rate of statutory compliance as a metric of patent quality, the USPTO compared the percentage of survey participants rating patent quality as “good” or “excellent” with the percentage of cases determined to be in statutory compliance. According to recent data, the perception of good or excellent quality appears to lag behind the percentage of cases determined to be in statutory compliance. In FY 2017 Q2, 50%

of survey participants rated USPTO quality as good or excellent, whereas 80% of cases were deemed to be in statutory compliance. However, the current EQS questionnaire asks the survey participant about rejections actually made in the participant's applications. The participant is not asked to take into account statutory rejections that were properly omitted from the office actions in the participant's application. The measurement of statutory compliance, on the other hand, counts the proper omission from an office action as a compliant action. The PPAC recommends that the EQS be updated to more readily allow a comparison of the data garnered from the new quality metrics with measurements or the public perception.

The most recently available data on customer perception of the frequency of technically, legally and logically sound rejections shows that about 64% of survey participants who experienced 35 U.S.C. § 102 rejections and about 59% of participants who experienced 35 U.S.C. § 112(b) rejections reported that the rejections were sound "most" or "all" of the time. For participants who experienced 35 U.S.C. § 103 rejections, about 45% of participants reported that the rejections were sound most or all of the time. In contrast, about 19% of survey participants who experienced 35 U.S.C. § 101 rejections reported that the rejections were sound most or all of the time. This was down from about 44% at the end of FY 2013.

The percentage of survey participants reporting "good" or "excellent" overall examination quality has hovered around 50% for the third quarter of FY 2013 through the third quarter of FY 2017. During that same period, the percentage of customers reporting "poor" or "very poor" overall examination quality was consistently about 10%.

Finally, the most-recently available data [FY 2017 Q2] indicates that perception among the survey participants of inconsistency of examination quality from one examiner to another. While about 20% of the participants reported "no" degree of inconsistency, about 40% of participants indicated a "small" degree of inconsistency and another 40% reported a "large" degree of inconsistency.

RECOMMENDATIONS:

A. Analyze Quality Metrics by Distinct Subsets

While the USPTO has already begun a data-mining effort to identify pockets of quality data that falls below or raises above the standard deviations, the PPAC recommends that the USPTO make systematic surveys of the data by defined subsets. For example, statute-by-statute for rejections improperly made. While the PPAC believes that the new quality metrics are an improvement over the Quality Composite Score, systematic surveys are a useful tool to further validate the metrics.

B. Focus on Quality of 35 U.S.C. § 101 Subject Matter Eligibility Rejections

The new quality metrics indicate an overall statutory compliance rate of 96.4% for 35 U.S.C. § 101. However, the compliance data is skewed by the vast majority of applications in which no

SME rejection is made or warranted. As discussed above, 32% of the SME rejections were either improperly made in the first place and/or the rejection was not properly explained. The PPAC urges the USPTO to examine the relevant data to determine whether, in fact, a quality issue exists with respect to SME rejections actually made. If an issue exists, the USPTO should identify the root cause and mechanisms to address the issue. Further, using the SME rejections as an example, the USPTO should ensure that the quality metrics are able to identify quality issues that may affect a discrete but significant subset of rejections that would otherwise be obscured by the majority data.

C. Provide Broader Access to Quality Metrics

The USPTO has made great progress in implementing the new quality metrics for work product review and reporting purposes. Yet, the latest quality data provided on the USPTO Patent Dashboard dates back to 2015. Without current information readily available, the public perception of the quality of the work product of the USPTO is based largely on anecdotal information and consensus opinion. The PPAC recognizes that the challenge inherent in distilling a tremendous amount of information for consumption by a diverse set of stakeholders. However, without that information, the public is more likely to undervalue USPTO work product when making business decisions, evaluating investment opportunities, defining commercialization strategies, outlining R&D programs, performing corporate valuations, and managing intellectual property assets. The PPAC urges the USPTO to provide public access to a meaningful set of current quality measurement data. In addition, the PPAC recommends that the USPTO share with the public a roadmap of the enhanced quality initiative and end goals, and provide periodic progress assessments on the initiative as a whole.

D. Consider Additional Sources of Quality Data

The PPAC recommends that the USPTO evaluate additional sources of data relevant to assessing the quality of work product. For example, data from Pre-Appeal Brief Conferences and Appeal Brief Conferences should be evaluated for an indication of the quality the final rejections be made based on the outcome (allowance, new rejection, or continuation to the PTAB). Similarly, an analysis of patents found to be invalid by the PTAB should be undertaken. Understanding the factors that lead to different outcomes in pre-appeal or at the PTAB would be an important step toward improving the consistency of quality work product.

IV. PATENT PENDENCY/RCE

A. INTRODUCTION

In this section, the PPAC reviews USPTO operations as they affect pendency for utility, plant, and reissue (UPR) filings and requests for continued examination (RCEs) and then presents its recommendations to reduce pendency and improve the USPTO experience for the applicant community and the public.

B. REVIEW OF USPTO OPERATIONS

The PPAC has made a number of observations about UPR filings and RCEs. These observations include UPR and RCE filing volumes, backlogs, and pendency metrics across the USPTO as a whole and by TC. These observations also include awards of patent term adjustment (PTA) to those patents for which the USPTO did not meet the American Inventors Protection Act (AIPA) prompt examination requirements. These observations further include the variety of pendency initiatives that the USPTO makes available to applicants. In this section, the PPAC summarizes the most salient of those observations.

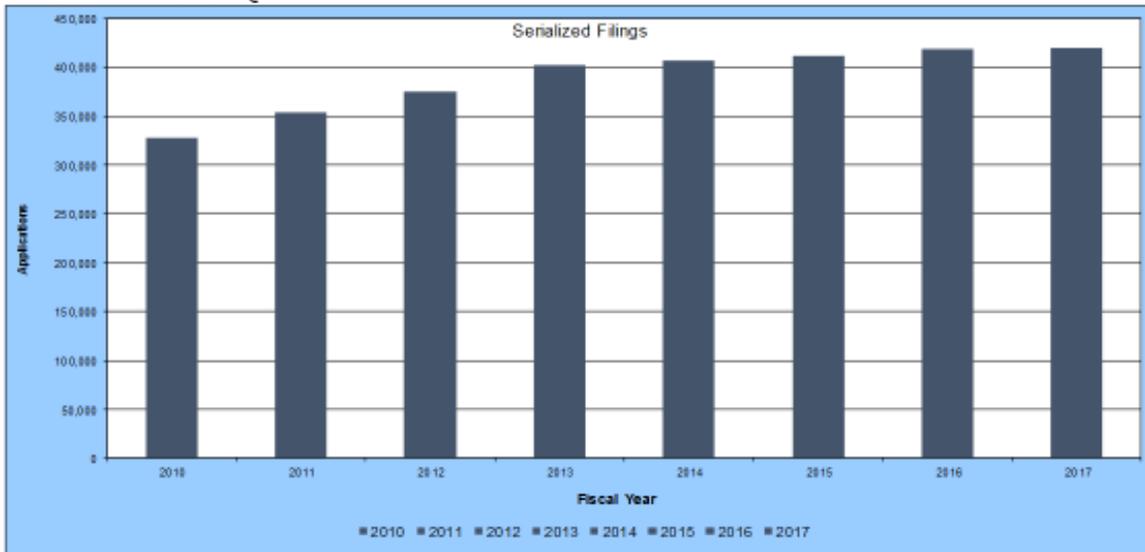
1. Filing Volumes and Backlogs

Far from being bland statistics, filing volumes and backlogs provide exceptional insight into the operations of the USPTO. Filing volumes are indicative of how the applicant community views the value of patents as an exclusionary right: increasing filing volumes over time indicate an increasing value of patents. Backlogs are indicative of how the USPTO marshals the Patent Examining Corps, its personnel bandwidth, to perform its core mission of examining applications and issuing patents. While the personnel bandwidth is impressive – the Patent Examining Corps had 8,100 examiners as of September 30, 2017 – the personnel bandwidth is also limited: each Examiner can be expected to examine only so many applications in a given year. The USPTO uses a system called Docket Management to manage the workflow for the Patent Examining Corps. The system classifies workflow into action types (e.g., amendments) and assigns completion targets in the form of expected average days to each action type. The system includes incentives for completing certain action types. A backlog results whenever the volume of applications filed in a given year exceeds the examination capacity of the Patent Examining Corps in the year. The USPTO employs targeted hiring and other creative workflow approaches to address backlogs.

The below charts provide filing statistics from FY 2010 to FY 2017 for UPR filings and RCEs. The volume of UPR filings has steadily increased in each fiscal year of the current decade. As shown below, serialized UPR filings steadily increased over this time period from approximately 325,000 in FY 2010 to approximately 420,000 FY 2017, resulting in a net increase of about 30%. In contrast, while the volume of RCE filings steadily increased over the early part of the current decade, it has leveled-off since FY 2015. As shown below, RCE filings increased from approximately 150,000 in FY 2010 to approximately 175,000 in FY 2014 and have remained at or about this level in the interim, with approximately 184,000 in FY 2017.

Serialized Filings

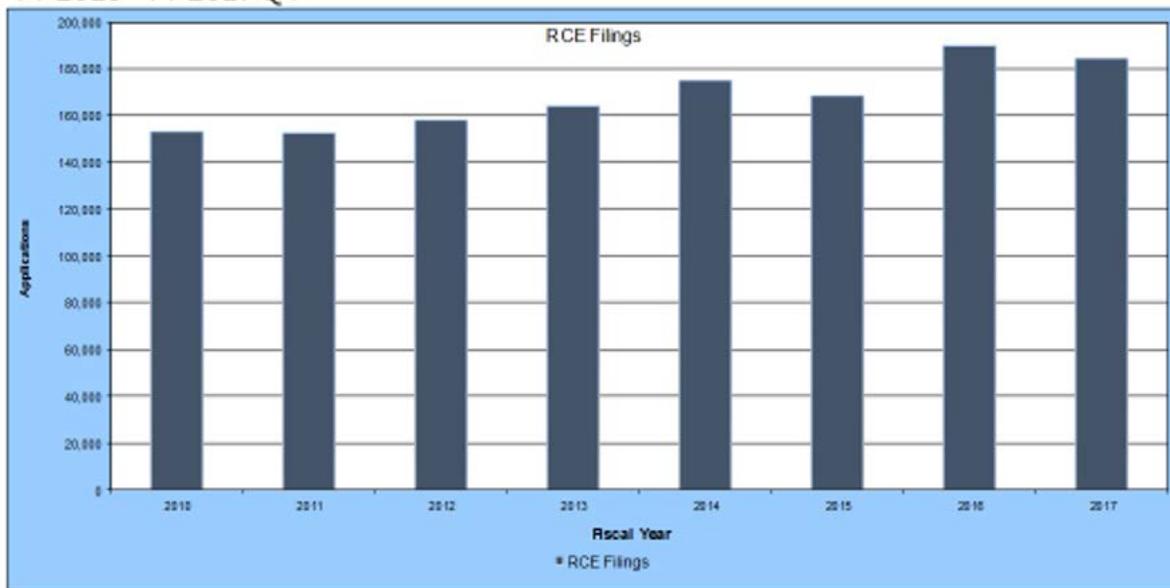
FY 2010 - FY 2017 Q4



2

RCE Filings

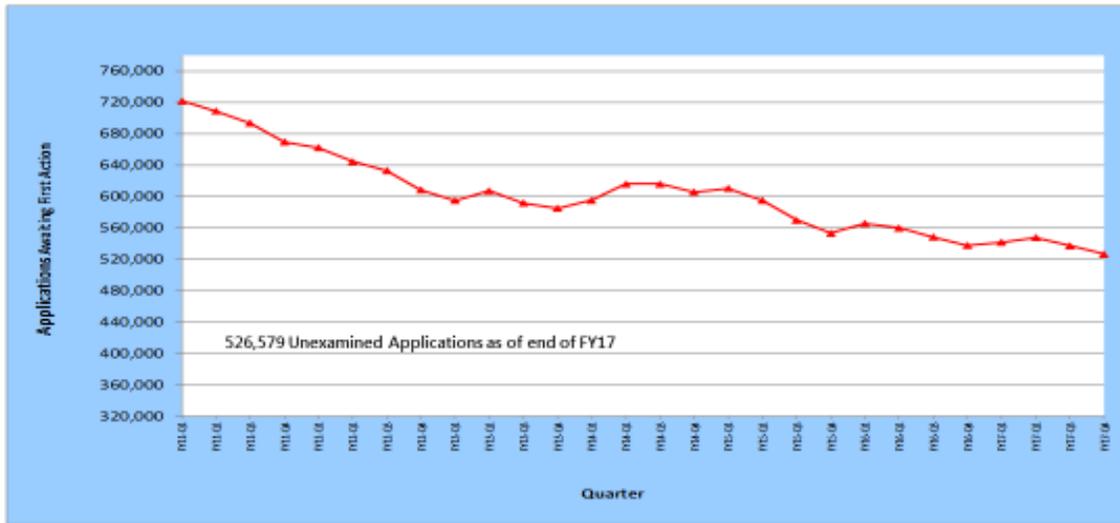
FY 2010 - FY 2017 Q4



The USPTO has experienced UPR filing backlogs in each year of the current decade, but has made exceptional progress in reducing those backlogs to modest levels. The chart below (Unexamined Patent Application Inventory) demonstrates that the USPTO has steadily reduced the UPR backlog from a high of approximately 720,000 applications in FY 2011 Q1 to about 527,000 applications in FY 2017 Q4, for a net decrease of about 27%. Assuming consistent UPR filing rates across the year, the UPR backlog represents about 15 months' worth of new

UPR filings. The PPAC recognizes that a net decrease of about 27% in the UPR backlog over the current decade is especially significant given the net increase of about 30% in UPR filing volume over the same time period. The PPAC lauds the USPTO for its exceptional efforts on reducing the UPR filing backlog.

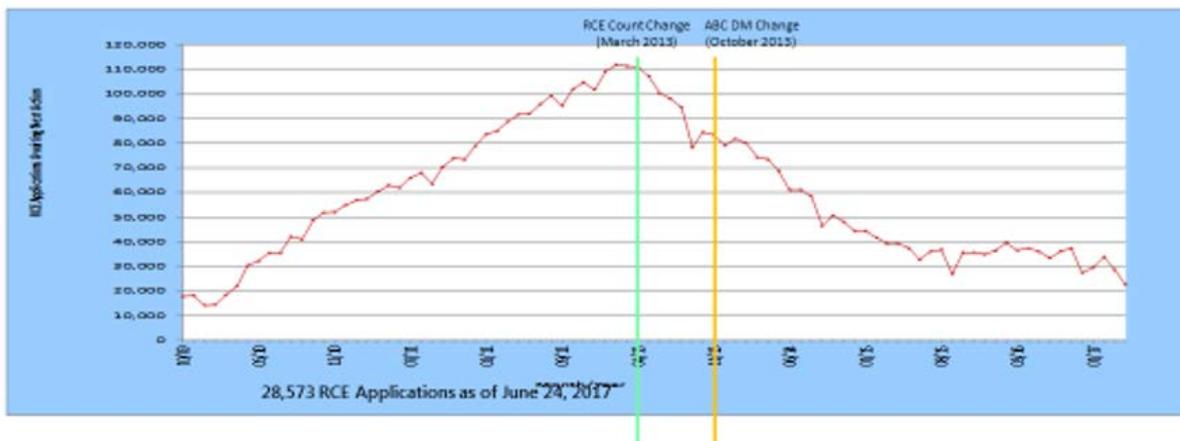
Unexamined Patent Application Inventory FY 2011 – FY 2017 Q4



The RCE backlog shown in the chart below (RCE Inventory) demonstrates how the USPTO can focus the bandwidth of the Patent Examining Corps on solving operation challenges. At the start of the decade, the RCE backlog hovered at approximately 20,000 filings. The RCE backlog then rapidly grew over a few years, from approximately 40,000 filings in September 2010 to a high of about 110,000 filings in February 2013, for a net gain of almost 300%. To address the rapidly growing backlog, the USPTO instituted a variety of changes to encourage the Patent Examining Corps to examine RCEs before other work, such as new filings. As a result of these changes, the USPTO quickly reduced the RCE backlog down: as shown in the RCE Inventory chart, the RCE backlog returned to September 2010 levels beginning in January 2015. The RCE backlog has remained at or below this level in the intervening time and is now less than 23,000 applications as of FY 2017 Q4. Assuming consistent RCE filing rates across the year, the RCE backlog represents about 2 months' worth of RCE filings. The PPAC lauds the USPTO for this operations achievement.

RCE Inventory

FY 2010 – FY 2017 Q4



The changes instituted by the USPTO to address the RCE backlog included an RCE count change in March 2013 and a Docket Management change in October 2013. The USPTO explained these changes during the May 4, 2017 PPAC Quarterly Meeting. The RCE count change encouraged the Patent Examining Corps to examine a greater number of RCEs than before. In the Docket Management Change, all of the incentives associated with new filings were re-associated with RCEs. Both the RCE count change and the Docket Management change are still in effect, even though the RCE backlog has remained relatively constant and low since 2015.

2. Pendency Metrics

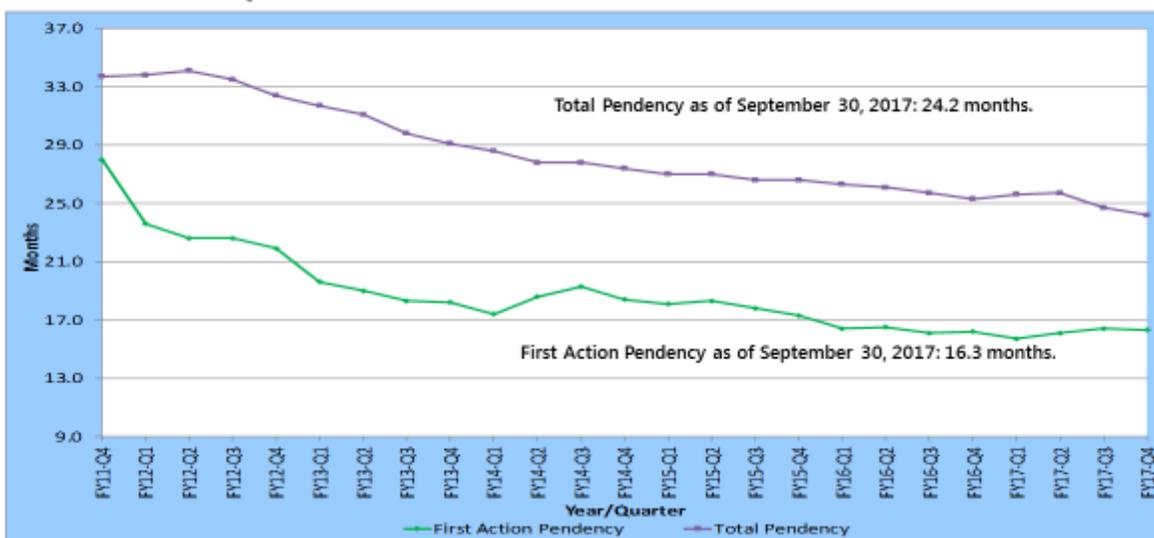
The USPTO generates and publishes a variety of pendency metrics for UPR filings and RCEs. The USPTO Patents Data Visualization Center (available at the USPTO official website <https://www.uspto.gov/dashboards/patents/main.dashxml>) provides a complete listing of these metrics. The PPAC considers four of these pendency metrics to be particularly instructive: the metrics for UPR filings are first action pendency and traditional total pendency, and the metrics for RCEs are pendency from RCE filing to next action and total pendency including RCEs. First action pendency is the average number of months for the issuance of a first office action on an application, as measured from the application filing date. Traditional total pendency is the average number of months for the final disposition of an application (e.g., issued or abandoned), as measured from the application filing date. Traditional total pendency excludes applications in which an RCE is filed. Pendency from RCE filing to next action is the average number of months for the issuance of an office action after the filing of an RCE, as measured from the RCE filing date. Total pendency including RCEs is the average number of months for the final disposition of an application, irrespective of any intermediate abandonments due to the filings of RCEs, as measured from the application filing date. All of these pendency metrics are available across the USPTO and by technology center.

The PPAC notes that these pendency metrics, while particularly instructive, should not be confused with the AIPA prompt examination requirements. These pendency metrics are average metrics across the USPTO, while the AIPA requirements are absolute per-application requirements.

The chart below, First Action Pendency and Total Pendency, shows first action pendency and traditional total pendency for UPR filings across the USPTO from FY 2011 Q4 to FY 2017 Q4. In its 2010-2015 Strategic Plan, the USPTO set two pendency goals for itself: reaching an average of 10 months for first action pendency and an average of 20 months for total pendency. As shown in this chart, the USPTO has made consistent progress towards its 10/20 goals: first action pendency decreased from an average of 28 months in FY 2011 Q4 to an average of 16 months in FY 2017 Q4, and traditional total pendency decreased from an average of 34 months in FY 2011 Q4 to an average of 24 months in FY 2017 Q4. As previously noted, these decreases are all the more impressive because they occurred during a time when UPR filing volumes increased by about 30%. The PPAC lauds the USPTO for its exceptional efforts on reducing pendency for UPR filings over the current decade.

First Action Pendency and Total Pendency

FY 2011 – FY 2017 Q4



Pendency from RCE filing to next action across the USPTO follows the rise and fall of the RCE backlog. This metric began the decade at a low level (under 3 months on average), rapidly grew over a few years to a maximum in FY 2013 (8 months on average), and then quickly receded to its original low level in FY 2015 and has remained at or below this level in the interim: pendency from RCE filing to next action has hovered at or below 3 months on average since FY 2015. This trend can be directly attributed to the RCE-focused operations changes instituted by the USPTO in FY 2013 to encourage the Patent Examining Corps to examine RCEs before other

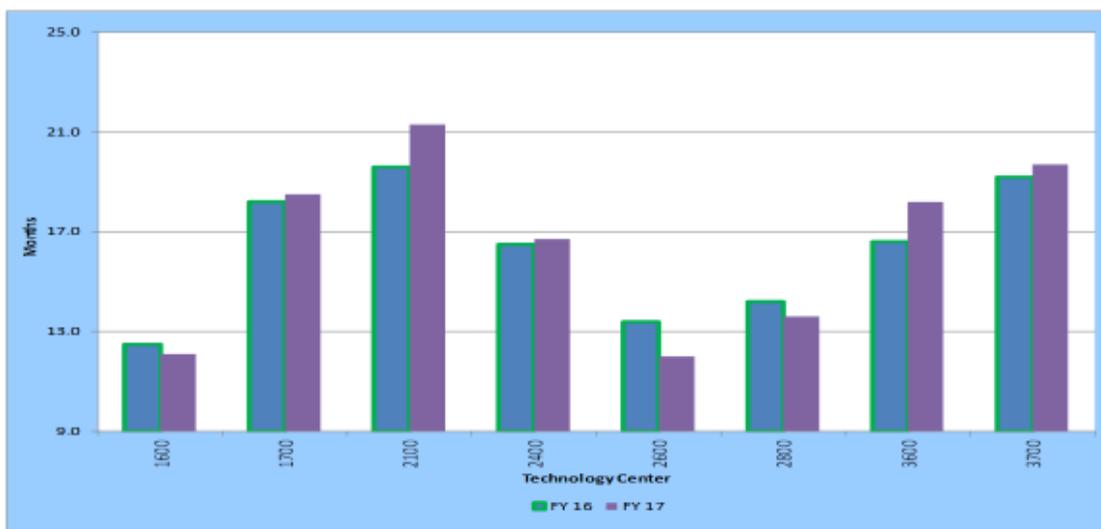
work, such as new filings. The PPAC lauds the USPTO for its exceptional efforts on reducing pendency for RCEs over the current decade.

Total pendency including RCEs across the USPTO has steadily, albeit slowly, decreased over the current decade. Total pendency including RCEs began the decade at an average of 40 months in FY 2011 Q4, steadily decreased to an average of 33 months in FY 2016 Q1, and has hovered at or below this level in the interim.

The PPAC observes wide variations in all but one of these pendency metrics when observed by TC. For example, the chart below, First Action Pendency by TC, shows first action pendency for UPR filings by technology center for FY 2016 and FY 2017 through August 2017. As shown in the chart, the averages range from 12 to 21 months depending on technology center. Similarly wide variations are present in traditional total pendency, for which the averages range from 24 to 30 months, and total pendency including RCEs, for which the averages range from 26 to 38 months. The trends for all of these pendency metrics are similar: TCs 1600 and 2600 tend to be the quickest, while TCs 2100 and 3700 tend to be the slowest.

First Action Pendency by TC

FY 2016 and FY 2017



In contrast, pendency from RCE filing to next action falls within a narrow range of 2 months to 4 months on average across all technology centers. In this regard, the PPAC observes that applications with RCEs tend to take the Patent Examining Corps less time than average to examine, as noted by the USPTO in its ETA presented at the August 3, 2017 PPAC Quarterly Meeting. The PPAC lauds the USPTO for the exceptional level of consistency in pendency from RCE filing to next action across technology centers.

3. Patent Term Adjustment

The USPTO is required to award PTA to any patent whose examination does not meet the AIPA prompt examination requirements, subject to deductions for applicant delays and other

limitations. These requirements are codified at 35 USC § 154(b) and 37 CFR §§ 1.702-1.705 and are often referred to by the shorthand 14/4/4/4/36. They include 14-month first action pendency; 4 months to respond to an amendment or other reply (including an RCE); 4 months to act on an appellate disposition; 4 months to issue a patent after payment of the issue fee; and, 36-month total pendency.

The PTA table below shows the performance of the USPTO on meeting the AIPA requirements. The table lists the percentage of patents for which the USPTO failed to meet each of the individual AIPA requirements. The table gives the percentage for FY 2017 and the average historical percentage over the past 5 years.

Patent Term Adjustment (PTA)		Current (FY17)	Average Historical % Over in Past 5 Years
Percentage Over Statutory Time Frame			
CATEGORY	First Action Pendency % Over 14 Months	54.4%	65.9%
	Responses to Amendments % Over 4 Months	6.2%	7.7%
	Actions after Appeal Decisions % Over 4 Months	3.6%	4.7%
	Grant after Payment of Issue Fee % Over 4 Months	1.5%	1.2%
	Total Pendency % Over 36 Months	18.0%	32.2%

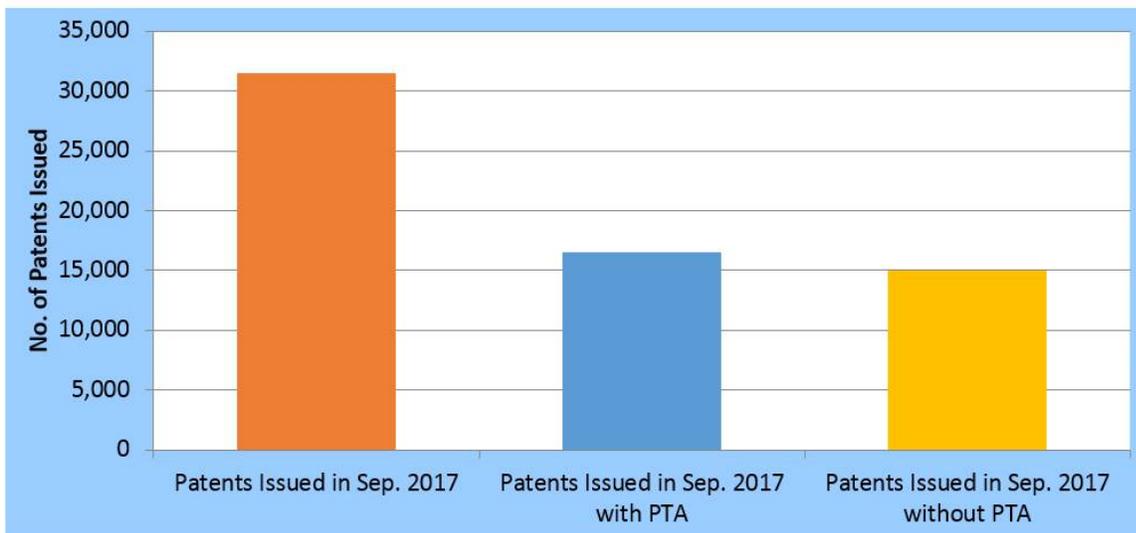
As shown above, the USPTO has an excellent track record of meeting the AIPA 4/4/4 requirements in FY 2017. The USPTO has consistently met the 4-month requirement to issue patents and the 4-month requirement to act on appellate dispositions within percentage variations of 1.5% and 4.7% or less, respectively. The USPTO has also consistently met the 4-month requirement to respond to amendments within percentage variations of 7.7% or less. The PPAC lauds the USPTO for these operations achievements.

As also shown in the PTA table, the USPTO has made significant improvements on meeting the AIPA 14/36 requirements in FY 2017 compared to the average historical percentage over the past 5 years. Indeed, the USPTO has improved its AIPA 14/36 performance from the average historical percentage deviations of 65.9% and 32.2% to the current percentage deviations of 54.4% and 18.0%, respectively. The PPAC lauds the USPTO for these improvements.

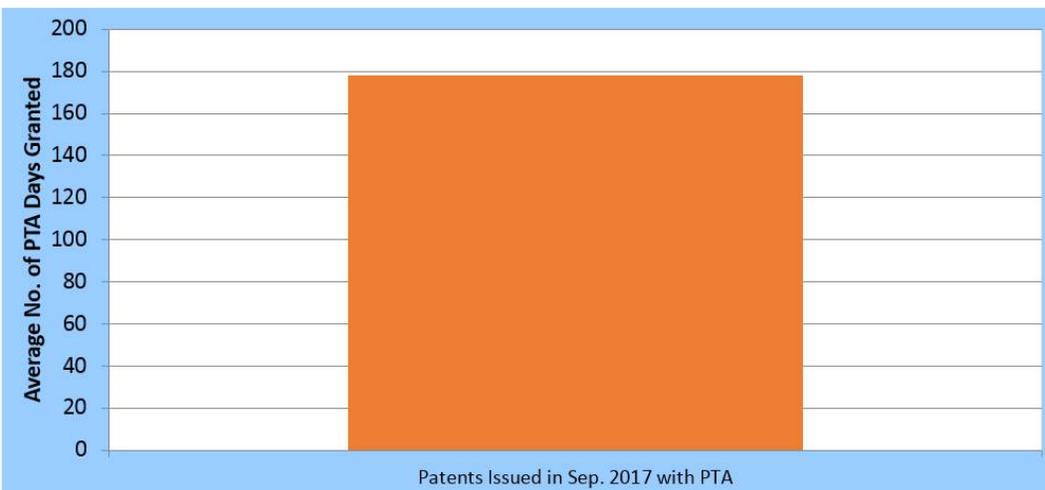
Notwithstanding these improvements, the USPTO still fails to meet the AIPA 14/36 requirements in FY 2017 by wide margins, resulting in frequent awards of PTA. The USPTO fails to meet the AIPA 14 requirement in more than one out of two issued patents and the AIPA

36 requirement in just under one out of five issued patents. The below charts (PTA Breakdown of Patents Issued in Sep. 2017 and Average No. of PTA Days Granted for Sep. 2017 Patents having PTA) translate the data from the Patent Term Adjustment (PTA) table for September 2017 into awards of PTA. The PTA Breakdown of Patents Issued in Sep. 2017 chart demonstrates that the USPTO awarded PTA to approximately 17,000 issued patents out of a total of approximately 32,000 issued patents in September 2017, or more than one out of two issued patents. The Average No. of PTA Days Granted for Sep. 2017 Patents having PTA chart shows that the average award of PTA for each affected patent issued in September 2017 is approximately 175 days.

PTA Breakdown of Patents Issued in Sep. 2017



Average No. of PTA Days Granted for Sep. 2017 Patents having PTA



4. Pendency Initiatives

The USPTO offers a variety of pendency initiatives for applicants to consider. These initiatives include initiatives prior to examination, during examination, after close of prosecution, after notice of appeal, and after payment of issue fee. The USPTO provides a complete description of these initiatives at the USPTO Patent Application Initiatives Timeline (available at the USPTO official website <https://www.uspto.gov/patent/initiatives/uspto-patent-application-initiatives-timeline>).

During its review of USPTO operations, the PPAC has focused on the prioritized examination program known as Track One. An applicant can seek to take advantage of Track One for a new utility filing or a new RCE by filing a simple administrative petition, paying a program fee, and agreeing to comply with certain prosecution restrictions, such as limiting the total number of independent claims. Under Track One, the USPTO endeavors to provide an applicant with a qualifying petition a final disposition on the merits of its application within 12-months of the grant date of the petition. The USPTO limits Track One to 10,000 qualifying petitions per year.

The applicant community is consistently subscribing to the program, and the USPTO is consistently meeting or exceeding its disposition goal. For example, in each of FY 2014, FY 2015, and FY 2016, more than 9,000 petitions were filed; in FY 2017, more than 9,000 petitions are likely to be filed as well, based on petitions filed through June 2017. Also, as of FY 2017 through August 2017, the average time for the USPTO to move from petition grant to final disposition is only 6.5 months, which is far below the goal of 12 months.

RECOMMENDATIONS:

Based on the foregoing review of USPTO operations as they affect pendency, the PPAC makes four recommendations to enhance the USPTO experience for the applicant community and the public. These recommendations do not alter the burden on the USPTO to examine applications. The PPAC believes consideration and implementation of these recommendations will improve the perception of the USPTO by the applicant community and the public as an efficient government agency.

A. The PPAC recommends that the USPTO formally adopt as its pendency goals the AIPA 14/4/4/4/36 prompt examination requirements. The PPAC believes that formal adoption of the AIPA requirements as the pendency goals will significantly improve the perception of the USPTO by the applicant community as an efficient government agency.

Certainly, the PPAC lauds the USPTO for its steady progress in reducing pendency towards its average 10/20 goals. But, in the view of the PPAC, applicants base their perception of the efficiency of the USPTO on the timeliness of the examination of their own applications, not applications on the whole. Indeed, the USPTO shares the PPAC's view, as indicated by the comments of the USPTO at the August 3, 2017 PPAC Quarterly Meeting. Average USPTO-wide pendency goals like 10/20 are helpful in reducing pendency, but they are not a substitute for the certainty provided to the applicant community by the absolute per-application AIPA

requirements. In this regard, the PPAC notes that, while the USPTO has made exceptional progress on reaching the AIPA 4/4/4 requirements, the USPTO needs to make substantial improvements on reaching the AIPA 14/36 requirements.

Also, the PPAC recognizes that delays in examination can be highly detrimental to those applicants who need promptly issued patents to secure financial support for commercialization of their technologies. These applicants include solo inventors, start-ups, small businesses, and universities. While prioritized examination initiatives like Track One are available, they are not a substitute for reducing pendency across the USPTO, as only a small fraction of the applications filed every year are able to take advantage of these initiatives.

Further, the PPAC recognizes that PTA awarded by the USPTO for its failure to meet the AIPA requirements is a significant detriment to the public. By postponing the expiration dates of patents, PTA prevents patented technologies from falling into the public domain at the conclusion of their ordinary terms. PTA thus requires the public to pay royalty rents on patented technologies – and prevents future innovators from using patented technologies for research and experimentation – for extended periods. These periods can run for thousands of days, effectively extending the patent monopoly for years beyond the statutory term.

B. The PPAC recommends that the USPTO evaluate the current balance in incentives for the Patent Examining Corps between examining RCEs and new filings and solicit the input of the public on whether now is the right time to adjust the balance.

The PPAC recognizes that the current balance in incentives favors examining RCEs before new filings. The PPAC well understands the motivation of the USPTO behind the current balance: the USPTO observed an operations challenge posed by a rapidly increasing backlog of RCEs in the early part of the current decade, made RCE-focused operations changes to address the backlog, reduced the backlog to acceptable levels mid-decade as a result of these changes, and maintains these changes today to prevent a recurrence of a rapidly increasing backlog. Indeed, the PPAC lauds the USPTO for this operations achievement – and shares the goal of the USPTO to avoid such a recurrence. The PPAC also understands that applicants with RCEs are well situated to be favored because they are closer to patent issuance and typically have invested larger sums in prosecution than applicants with new filings.

At the same time, the PPAC observes that the current balance has imposed costs on applicants with new filings. Currently, the UPR backlog represents about 15 months' worth of UPR filings, while the RCE backlog represents about 2 months' worth of RCE filings. Also, as shown in the First Action Pendency and Total Pendency and the First Action Pendency by TC charts, an applicant with a new filing can expect a first action within 16 months on average, while an applicant with an RCE can expect a next action within 3 months on average. Moreover, an applicant with a new filing can expect to wait considerably longer in certain TCs (21 months on average in TC 2100), while an applicant with an RCE can expect to wait about the same time across TCs. The PPAC finds such a disparity to be striking. In this regard, the PPAC notes that

an applicant with an RCE has already received the benefit of one office action (and sometimes two or more office actions) from the USPTO, while an applicant with a new filing has not.

Also, the PPAC observes that the current balance in incentives has imposed costs on the public. Indeed, in spite of its success on examining RCEs, the USPTO awarded PTA to more than one out of every two patents issued in September 2017. As previously discussed, these awards can be largely attributed to the USPTO's failure to meet the AIPA requirements of 14-month first action pendency (54.4% deviation) and 36-month total pendency (18.0% deviation).

The PPAC therefore recommends that the USPTO determine whether the RCE-focused operations changes can be relaxed in favor of changes focusing on achieving the AIPA requirements without risking a recurrence of a rapidly increasing RCE backlog. If, as the PPAC believes, the changes can be so relaxed, the PPAC recommends that the USPTO solicit comments from the public on the right balance of incentives for the Patent Examination Corps between examining RCEs and new filings.

C. The PPAC recommends that the USPTO continue to offer and consider expanding the Track One prioritized examination program.

The PPAC believes Track One is a welcome and simple vehicle for motivated applicants to obtain expedited examination and quick issued patents. Such patents can be highly beneficial to those applicants who need financial support from investors for commercialization of their patented technologies. These applicants include solo inventors, start-ups, small businesses, and universities.

The PPAC recognizes, however, that Track One is not a panacea for reducing pendency across the USPTO. Indeed, the qualifying petitions that are granted prioritized examination under Track One represent a very small fraction of the total applications filed every year: only 10,000 qualifying petitions out of more than about 420,000 UPR filings and 184,000 RCEs in FY 2017, or approximately 1.5%. The PPAC also recognizes that prioritizing Track One qualifying petitions for examination disturbs the Patent Examining Corps' approach to orderly and predictable docket management. Nonetheless, the PPAC encourages the USPTO to consider expanding the number of qualifying petitions that can be examined under the Track One program, as long as the program remains subscribed at or above the current level of 10,000 qualifying petitions per year.

D. The PPAC encourages the USPTO to achieve a consistent pendency experience across technology centers.

The PPAC observes wide variations in pendency metrics for UPR filings and RCEs across technology centers. Many factors can contribute to one technology center's being quicker or slower to examine applications. Some of these factors can be the natural result of applicant filing patterns. Others can be harder to discern. The PPAC notes that the USPTO recently undertook an Examination Time Analysis; the USPTO presented some of the results of this analysis at the August 3, 2017 PPAC Quarterly Meeting. The PPAC encourages the USPTO to

review the Examination Time Analysis to determine whether systematic operations-based factors can explain the varying pendency metrics across technology centers. (For example, are applications in certain technology centers more or less time consuming than average to examine?) In this regard, the PPAC understands that the bandwidth of the Patent Examining Corps, while impressive, is limited in two respects: an Examiner can be expected to examine only so many applications in a given year, and an Examiner can be expected to examine only those applications that fall within his or her range of technical expertise to ensure a quality examination.

The PPAC recognizes that the USPTO is working diligently towards a consistent pendency experience, as indicated by the comments of the USPTO at the May 4, 2017 PPAC Quarterly Meeting. The PPAC supports the USPTO's targeted hiring efforts and creative approaches to adjusting the workflow of the Patent Examining Corps to achieve this goal.

V. SECTION 101

A. INTRODUCTION

The Section 101 patent eligibility requirements continue to be of keen interest to the USPTO and to the patent community. In FY 2017, for the first time, the PPAC formed a Section 101 Subcommittee to more closely focus on the Section 101 patentability requirements and to work with the USPTO to ensure they understood the importance of this issue from the patent community's perspective, to assist the USPTO in facilitating outreach to the patent community on this important topic, and to encourage the USPTO to ensure the new Administration and Congressional staff were aware of the patent community's Section 101 concerns.

B. BACKGROUND

To be entitled to a patent, a claimed invention must satisfy certain patentability requirements. The Section 101 patentability requirements are directed to one of the core aspects of the patent statute, namely whether the claimed subject matter of the invention sought to be patented is in fact eligible for patent protection. The claimed invention must meet other patentability requirements, including Section 102 novelty, Section 103 non-obviousness, and Section 112 written description and enablement requirements. Although the Sections 101, 102, 103, and 112 requirements are established by Congress and codified in Section 35 of the U.S. Code, the United States Supreme Court has carved out certain exceptions to Section 101 patent eligibility for abstract ideas, laws of nature, and natural phenomena.

Between 2010 and 2014, the U.S. Supreme Court issued four decisions (*Bilski*, *Mayo*, *Myriad*, and *Alice*) that shifted the dividing line between eligible and ineligible subject matter. Specifically, the U.S. Supreme Court articulated a new *Mayo/Alice* two-step test to distinguish eligible subject matter from subject matter that falls within one of the exceptions. The Federal Circuit and the USPTO have worked to understand and apply the U.S. Supreme Court's test. However, the impact of that test and its application by the Federal Circuit and the USPTO has sparked considerable discussion in the patent community, both critical and favorable, of the U.S. Supreme Court's jurisprudence.

USPTO Roundtables and Section 101 Report:

On October 17, 2016, the USPTO issued a Federal Register Notice seeking public input on patent eligible subject matter in the wake of the decisions by the U.S. Supreme Court. In the Notice, the USPTO announced the convening of two roundtables. The first roundtable was focused on the examination guidance developed by the USPTO to implement the U.S. Supreme Court and subsequent Federal Circuit decisions. The second roundtable was focused more broadly on the current state of the law of patent eligibility and whether the Section 101 statute needed to be amended.

The first roundtable, Roundtable 1, took place at the USPTO's Alexandria, Virginia headquarters

on November 14, 2016. This roundtable focused on soliciting stakeholder views on ways of improving the USPTO's subject-matter eligibility guidance for patent examiners and how that guidance was being applied by examiners. There were 20 industry representatives and 15 intellectual property practitioners at the first roundtable; for those speakers that provided presentations, their presentations are available on the USPTO's website at <https://www.uspto.gov/patent/patent-subject-matter-eligibility-roundtable-1>. In general, the USPTO received a variety of comments from the public. For example, on a positive note, some commenters mentioned that the USPTO issued memorandums promptly after Section 101-related court cases became public. However, on a negative note, other commenters mentioned that the USPTO's guidance was disposed in half a dozen different places on the USPTO's website and was difficult to find. The USPTO also received specific guidance with respect to several examples provided in their guidance memos. The USPTO is in the process of updating Section 2106 directed to "Patent Subject Matter Eligibility" in the next revision of the USPTO's Manual of Patent Examining Procedure (MPEP). Updates were made in view of public comments received to date, while also consolidating previously issued training materials and guidance to examiners and new Federal Circuit decisions not mentioned in prior guidance.

The second roundtable, Roundtable 2, took place at Stanford University on December 5, 2016, to solicit input on the impact of the U.S. Supreme Court's recent Section 101 jurisprudence, including legal, policy, or economic analyses. The Federal Register notice announcing the second roundtable set forth a series of questions. Many of the questions focused on two technology areas believed to be especially affected by recent law: life sciences and computer-related technologies. The second roundtable included seven interactive panels that included speakers who participated locally, as well as those that spoke remotely from the USPTO's headquarters in Alexandria, Virginia, and each of the USPTO regional offices. There were over 250 participants from across the country representing a broad cross section of the patent community, including industry, private practice, academia, associations, inventors, and small businesses.

Following the second roundtable, 26 written comments were submitted to the USPTO. Commenters confirmed that the U.S. Supreme Court cases had significantly changed the standards for determining patent subject matter eligibility. A diverse group of representatives from academia, industry, law firms, and legal associations proposed legislative changes aimed at reversing the trend in the law and restoring, in their view, a more appropriate dividing line between eligible and ineligible subject matter. In contrast, a significant portion of representatives from the software industry argued that the U.S. Supreme Court's two-step test analysis provided an appropriate standard for patent subject matter eligibility. The software group cautioned against legislative redress and instead recommended that the case law be allowed to evolve. The USPTO issued a report in July 2017 that provided a summary of the second roundtable including a comprehensive review of patent eligibility law, a record of public views on the impact of the U.S. Supreme Court's patent eligibility jurisprudence, and public recommendations for a path forward. The July 2017 report can be found on the USPTO's website at https://www.uspto.gov/sites/default/files/documents/101-Report_FINAL.pdf.

RECOMMENDATIONS:

A healthy patent system that fuels research and development of innovative technologies is a critical component of our nation's robust system of intellectual property rights. Given the link between a healthy patent system and our nation's economy, the contours of patent subject matter eligibility are of great concern to the USPTO and to the stakeholder community.

The PPAC makes the following recommendations to the USPTO to improve the Section 101 landscape. The PPAC requests that the USPTO continue to update the stakeholder community and examiner corps on recent Section 101 U.S. Supreme Court and Federal Circuit jurisprudence and where appropriate, continue to issue memoranda that describes the relevant court decision. Moreover, the PPAC asks the USPTO to finalize the MPEP updates in Section 2106 directed to "Patent Eligible Subject Matter," so the stakeholder community has one central repository on the USPTO's website to receive the latest updates. The PPAC also urges the USPTO to continue stakeholder outreach programs and workshops on Section 101 developments due to the critical nature of this area.

The PPAC believes that the Section 101 USPTO training materials are helpful. Therefore, the PPAC requests that the USPTO review Section 101 training materials to ensure the consistent training and application of the Section 101 guidance to all the group art units. On this specific point, the PPAC recommends that every group art unit has, or has access to, a Section 101 specialist to ensure the consistent application of the Section 101 guidance provided by the USPTO. Lastly, the PPAC requests that the USPTO keep the new Administration and congressional staff apprised of Section 101 developments.

VI. INTERNATIONAL COOPERATION, WORK SHARING, POLICY DEVELOPMENT AND OUTREACH

A. TECHNICAL AND PROCEDURAL HARMONIZATION: INTERNATIONAL COOPERATION AND WORK SHARING PROGRAMS

1. Global Dossier – Update

Launched in November 2015 by the IP5 Offices,¹ Global Dossier is a set of business services that gives users and stakeholders a web-based interface to view related patent applications filed in multiple patent offices around the world. The information available via the Global Dossier platform at <https://globaldossier.uspto.gov/#/> provides stakeholders and users the ability to search, track and access the file history information regarding a patent application family from all IP5 Offices – at no charge. USPTO examiners are able to use Global Dossier services to review the search results for these related patent applications in other patent offices, which arguably creates a more complete patent record and increases patent examination quality and efficiency.

In FY 2017, the number of accesses to the Global Dossier services exceeded the total number of accesses in 2016 with over 70,000 average daily public accesses and over 14,000 average daily USPTO examiner accesses. These numbers, however, do not represent individual users of the platform but rather the number of different application data requests made to the platforms. In FY 2017, the USPTO also received over 3.5 million requests for data from examiners in the other IP5 Offices compared to over 2.8 million requests in FY 2016.

The USPTO's Global Dossier services continues to be accessible 24 hours a day/seven days a week. However two years since its launch, other IP5 Offices, such as Japan Patent Office (JPO) and State Intellectual Property Office of the P.R.C. (SIPO), still do not provide 24/7 access to their patent data for global users or USPTO examiners.

In FY 2017, the USPTO continued to update the Global Dossier's functionality and services. In December 2016, Global Dossier's coverage was increased by providing application data from WIPO CASE (World Intellectual Property Organization Centralized Access to Search and Examination) member offices. This increase in coverage was the result of a proposal by WIPO, IP Australia, and others to link the Global Dossier platform to WIPO CASE as a way to accelerate the inclusion of additional patent offices. In September 2017, the USPTO deployed a beta release of a "Citation List," which provides all available citation data in a patent family in a single list accessible via Global Dossier – again at no charge to users.

2. Access to Relevant Prior Art

In continuing its efforts to expedite and improve the overall patent examination process, the

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

USPTO is exploring how to utilize electronic resources to provide USPTO examiners with information (e.g., prior art, search reports, etc.) from applicant's other related applications as early as possible during examination as another way to increase patent examination quality and efficiency. The USPTO is evaluating this process from both the examiner's and the applicant's perspectives. For example with regard to examiners, the USPTO is looking at how to increase examiner awareness of relevant prior art and ensure that they have access to it at the earliest point in the examination process. This involves exploring how the prior art can be provided in a manner that increases search and examination efficiency and overall quality, while at the same time ensuring that the examiner can determine the relevance of the prior art.

An automated solution to deliver relevant information to the U.S. application file will enhance the examiner's ability to identify the most relevant prior art as early as possible and likely increase efficiency of prosecution procedures. Of course, it will be critical to ensure examiners are provided with the most relevant information without being overburdened with immaterial and marginally relevant information.

On the applicant side, applicants must currently obtain the information necessary to meet their duty of disclosure obligations and assist the examiner in making a proper patentability determination. This is costly and inefficient and requires time consuming efforts to monitor prosecution in related or counterpart applications in other countries that may or may not have electronic access to documents. Extensive internal and external stakeholder outreach is ongoing to better understand the needs of examiners and applicants, such as how such a system should be designed and controlled, and what information should be documented relative to the imported information. Application case studies have been conducted to consider what effects an automated system to import prior art for applicant's related applications would have on prosecution and the patent examiner's work as well as how such importation would affect and meet the applicant's duty of disclosure obligations under 37 CFR 1.56.

USPTO research is also being conducted regarding the electronic resources available and how they can be leveraged to automatically import relevant information (e.g., prior art and search reports) into pending U.S. applications from sources, such as domestic parent and counterpart foreign applications. The goal is to determine through research and outreach whether developing and implementing a tool to automatically import relevant prior art and supplemental information from sources, such as related U.S. applications and counterpart foreign applications, into pending U.S. applications at the earliest possible point in the examination process would increase patent quality and examination efficiency as well as reduce applicants' prosecution costs.

3. Collaborative Search Pilot Programs

In 2015, the USPTO launched two initial Collaborative Search Pilot (CSP) programs – one with the JPO and the other with the Korean Intellectual Property Office (KIPO). In the JPO pilot program, the USPTO and JPO exchanged search results and produced a work product that contained both offices' input. In the KIPO pilot program, the USPTO and KIPO

contemporaneously and independently searched the common claims and the first correspondence from the USPTO included both the U.S. examiner's pre-interview communication and the KIPO search report. These programs ended in July 2017 for JPO and August 2017 for KIPO with very limited applicant usage. An initial evaluation of the allowed applications using these programs was subsequently conducted and the results of this evaluation along with applicant and examiner feedback lead to the creation of an "Expanded CSP" with a focus on increasing applicant usage of these programs.

Expanded CSP commenced November 1, 2017, again with JPO and KIPO, but open to the inclusion of partner intellectual property (IP) offices, and will run for a period of three years. Some of the differences between the initial CSP and the Expanded CSP include: (i) the pilot program structure for both applicants and examiners are the same for both programs regardless of which partner IP offices are selected; (ii) applicants will receive a first action on the merits (FAOM), and will not require use of the First Action Interview program; (iii) all references cited by the partner IP office(s), which are timely received by the USPTO, will be reviewed by the examiner and included in the FAOM; (iv) applicants can participate in multiple office collaboration (e.g., JPO and KIPO simultaneously on the same U.S. application); and (v) only independent claims need to correspond between corresponding counterpart applications filed in each office.

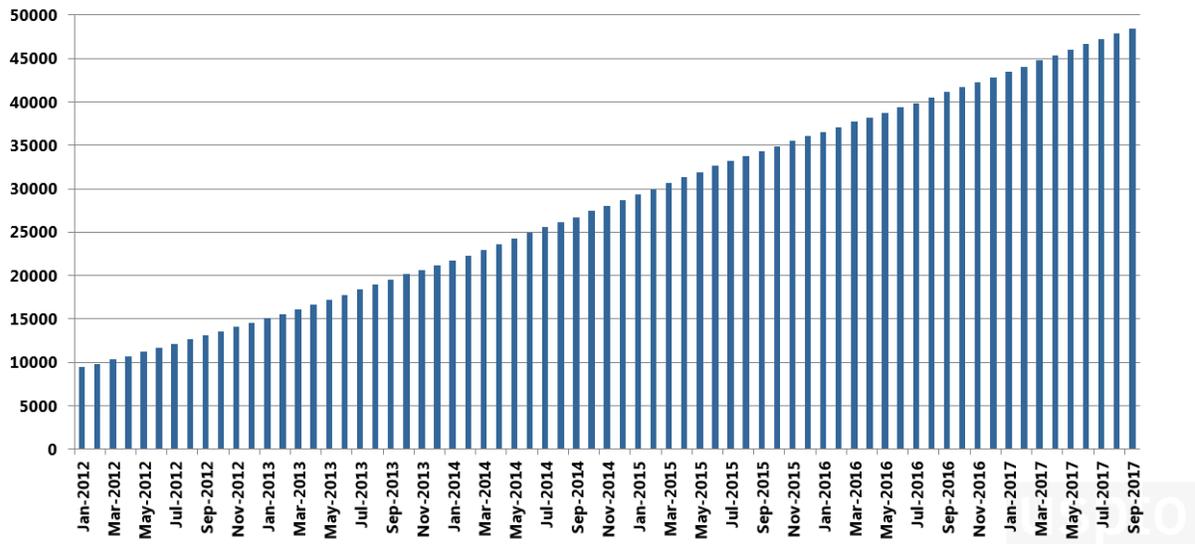
Some advantages of using these programs during Expanded CSP are: (i) there is no fee for filing a CSP petition and, if granted, initial prosecution of the application will be expedited at no charge; (ii) greater consistency in examination across partner IP offices leading to more certainty of intellectual property rights; (iii) early examination of applications in participating offices; (iv) the need for RCEs may be reduced as prior art is identified earlier in the pendency of the examination; (v) costs are reduced as prosecution may be shortened; and (vi) potentially quicker access to the Patent Prosecution Highway (PPH) process in other offices. The USPTO along with the PPAC will be paying close attention to the changes in this program to see how applicants respond and participate thus assisting the USPTO in determining whether and how such a program should be expanded to include other IP offices.

4. Patent Prosecution Highway (PPH)

As of September 2017, the number of PPH applications with petitions reached approximately 47,500 with the USPTO, which is a little over a 1.5% filing increase from last year. The chart below sets forth the PPH application filings since 2012, which illustrates a steady growth rate of filings and an apparent continued acceptance and support by the stakeholder and user community of this program.

PPH Program Growth

Cumulative Filing from June 2012 to September 2017



During FY 2017, the IP5 PPH pilot program was extended for a period of three years effective January 6, 2017 and the Colombian Superintendence of Industry and Commerce (SIC) and the Intellectual Property Office of New Zealand (IPONZ) agreed to join the Global PPH Pilot program with the USPTO on July 6, 2017.

Challenges, however, face the USPTO with regard to the popularity of this program since there remains an ongoing backlog of undecided PPH requests pending before the Office.

5. Cooperative Patent Classification

During FY 2017, the USPTO continued to develop CPC automation tools to provide examiners with increased ability to collaborate between offices, tools to maintain and revise schemes and publish revisions, enhanced classification data exchange systems as well as continued updates to classification and search tools for examiners.

As of September 2017, 19 patent offices classify in CPC, up from 12 offices last year, and over 45 offices use CPC for searching. As of June 29, 2017, over 47.9 million documents (including 46.4 million patent documents and 1.5 million non-patent literature) were classified in CPC and approximately 98% of all USPTO, European Patent Office (EPO), and WIPO documents are classified in CPC. Along with this ever-increasing access to more documents from 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 worksharing capabilities across multiple patent offices now and in the future, which helps advance patent quality globally. At the same time, such datasharing provides ever increasing

demands on the responsiveness and stability of the USPTO IT structure and system in maintaining its 24/7 access for examiners.

6. PCT Systemic Improvements – PCT Collaborative Search and Examination Pilot Project

The IP5 Offices have agreed to launch a pilot project on collaborative search and examination under the Patent Cooperation Treaty (PCT). The objective of the project will be to allow examiners from different International Search Authorities (ISA) in different regions and with different working languages to work together on one PCT application with the aim of establishing a high quality international search report and written opinion. The selected ISA will perform a search and prepare a draft International Search Report (ISR) and Written Opinion (WO). The draft ISR/WO and a record of the search will be shared with the other offices (i.e., peer offices). The peer offices will then review the draft ISR/WO, perform additional searching as deemed necessary, and provide comments back to the main ISA, which will then prepare the final ISR/WO, taking into account the peer contributions. The sharing of documents and applications between offices will be done through WIPO's ePCT system. The pilot is scheduled to begin in May 2018 and will treat 500 applications (100 applications per office in their capacity as the main ISA, 400 applications per office in their capacity as a peer office) over approximately two years.

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

As of August 2017, approximately 413 applications have been filed by U.S. applicants with the USPTO as an office of indirect filing and approximately 3,634 applications with U.S. designation have been forwarded to the USPTO from WIPO for examination. The number of applications forwarded from WIPO for examination in FY 2017 is already 25% more than in the previous year, with over a month left in the fiscal year. 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 2016, there were 5,562 international applications filed worldwide with a combined total of 17,601 designs. This is an increase of 35% in the number of application compared to filings in 2015.

B. POLICY DEVELOPMENT AND OUTREACH

1. USPTO - Development of Intellectual Property Policy in Trade Agreements

Throughout FY 2017, the USPTO provided extensive policy advice and technical expertise on domestic and international intellectual property matters, including patents and protection for undisclosed test and other data as well as trade secrets, to multiple federal agencies in the new administration. Such agencies included the Office of the United States Trade Representative (USTR), the Office of the U.S. Intellectual Property Enforcement Coordinator, and other bureaus

of the DOC. The USPTO also advised the USTR in the negotiation of trade agreements, on Trade Policy Reviews undertaken at the World Trade Organization (WTO) and on the proposed accessions of over 20 countries to the WTO. In addition, the USPTO assisted the USTR in the preparation of its annual review of global developments on trade and intellectual property called the Special 301 Report. This Report identifies U.S. trading partners who have not provided appropriate intellectual property protection and enforcement or market access for U.S. rights holders. The USPTO assisted in its preparation by providing extensive information on the state of intellectual property protection and enforcement in many countries.

2. IP Attaché Program - Update

The USPTO IP Attaché Program expands the Office's ability to improve intellectual property systems internationally for the benefit of U.S. stakeholders by serving at U.S. embassies, consulates and missions throughout the world to seek improvements in laws and regulations, educate host government officials on intellectual property matters and to build grass roots support for US policy positions.

The OIG closed out an audit of the IP Attaché Program during FY 2017. After extensively reviewing all of the management controls of the Attaché Program, including travel and finances, the OIG recommended the establishment of "baselines and targets for each of the quantifiable performance measures to assess the effectiveness and efficiency of the Attaché Program." The USPTO concurred with this recommendation but noted that quantifiable performance measures should not be the sole measure of effectiveness and efficiency of the Attaché Program. As a follow-up to this audit, the IP Attaché Program expanded its use of baselines and targets for its quantifiable performance measures to include the number of: (i) attaché meetings with foreign government officials; (ii) training programs conducted; (iii) foreign officials trained; (iv) public awareness programs conducted; (v) participants in public awareness programs; (vi) weekly activity reports submitted; (vii) same-day reports about intellectual property-related developments; and (viii) U.S. stakeholders assisted regarding intellectual property issues.

Based on additional feedback from the PPAC and the TPAC during FY 2017, the IP Attaché Program has been reaching out to the corporate community, academia and other U.S. stakeholders to raise awareness of the availability and services of the Attaché Program and to learn what issues and concerns were paramount to the community. U.S. Industry has also been working with members of Congress to find a way to change the designation of the diplomatic rank of individual attachés serving abroad so that these individuals may have proper recognition during meetings with other officials in foreign offices.

RECOMMENDATIONS:

The PPAC commends the USPTO in its international cooperation, collaboration, worksharing initiatives, and outreach with multiple patent offices as well as stakeholders and users around the world during the past year. The continued development and expansion of Global Dossier services for the public and U.S. examiners are examples of how such efforts are beneficial for both the individual patent offices as well as the stakeholder and user community. However, such efforts require varied and diverse input on how such data should be exchanged and shared across patent offices. Implementation of such input and proper utilization and security of the data for and by an increasing global community of users requires a secure, stable and reliable IT infrastructure. The PPAC strongly supports the ongoing financial needs of the USPTO regarding its IT infrastructure and recommends that it continue to be supported, maintained and managed by the USPTO, especially for these important international initiatives, that will shape the future of our patent system.

VII. INFORMATION TECHNOLOGY

A. OVERVIEW

The Information Technology (IT) organization within the USPTO serves the Office in a supporting role. However, for many users, most of the interactions with the Office are driven by functions administered by the IT group. It is further noted that in a continual effort to improve patent quality, the IT group works to insure that both the public and the examining corps have rapid access to the relevant prior art. To date, there are over 60 million pieces of prior art for rapid access and reference. This increase in available prior art, when combined with an increase in user demand and the global nature of IP, make it mandatory that the IT components function effectively and efficiently.

The IT functions within the USPTO can be broken two distinct areas – the infrastructure and the user interface. The infrastructure describes those necessary hardware and software functions that cannot necessarily be seen, but which are vital to the functioning of a robust IT system. The user interface refers to the many search tools, screen shots, forms, linkages with foreign offices, correspondence with the inventors, attorneys, patent examiners, and the public, that are seen and used.

The infrastructure elements that are important to this report include the electrical system, security measures, hardware, and the data input and processing of user information.

1. Electrical System

At the end of December 2015, the IT hardware system of the USPTO received bad or ‘dirty’ electrical power, due to the peculiarities of the power feed to the building. The USPTO had to resort to alternative filing methods in order to effectively process various transactions, filings, and office actions. In FY 2017, improvements were made to the electrical system to the USPTO campus to insure that the power supplied and used by the various computers and storage devices will be clean and will flow without interruption.

2. Security Measures

The security measures refer to the manner in which a practitioner (inventor, agent or attorney) user can access the various filings that have been made in regards to a particular application. The intent here is to insure that only the inventor or the registered practitioner can view the filings, to the exclusion of anyone else. In this regard, the IT organization within the USPTO relies on guidance from personnel from the National Institute of Standards & Technology (NIST). NIST requires that IT systems within the civilian side of the U.S. government comply with data standards they have put forth. The IT group has met and continues to meet the continually heightened NIST requirements for user verification.

The USPTO can state unequivocally that the authentication of users for purposes of restricting access to intellectual property filings meet NIST requirements. In addition, all cryptographic requirements put forth by NIST are met or exceeded by USPTO hardware. And finally, collection of fees is also secured by NIST required protocols.

3. Hardware

The IT system within the agency still relies on some legacy systems, which essentially means that the hardware is aged and very difficult to service. Similarly, some software is peculiar to the legacy computers and cannot be ported to other processing platforms. This undesirable situation continues to be improved upon, with legacy computer systems being replaced by modern processing platforms.

Hardware systems can be vulnerable to being crippled by outside attack or natural disasters (floods, tornadoes, earthquakes). The agency works with other federal partners to insure that the hardware is both robust and resistant to issues that could arise from both natural disaster and intentional physical assault.

4. Data Input and Processing

The present data input for most of a new patent application is in the form of an optical image. This optical format is used for the abstract, specification, claims, and drawings. When received by the USPTO, the optical image is then changed to character form. This translation (OCR, or Optical Character Recognition) is both inefficient and error-prone. The IT organization in collaboration with the business liaison is moving towards character based input for the user community. This change in technology will result in less errors being generated, and also bring about greatly increased throughput for the processing hardware.

The user interface describes the manner in which the user community (examiners, inventors, practitioners and the public) interacts and makes use of software in the application and examination process. The various software tools relate to the examination of applications, office correspondence, access to foreign filings, patent classification, management tools, and search of prior art. Described here are major changes to the user interface, with the goals always being those of both improving patent quality and streamlining the filing, application and examining processes. All of the new user interface products are essentially a combined and linked system known as Patents End to End (PE2E). The various portions of this entire suite of software are all interrelated, and can communicate easily from module to module. The various modules are listed below:

5. PE2E: Examination Products

PE2E Examination Products actually consist of 4 products, known as Docket and Application Viewer (DAV), Official Correspondence (OC), Search, and CPC. These modules have been partially or fully released, and are in use within the Office. These modules replaced or continue

to replace legacy software, and have resulted in improvements in the manner in which the examining corps operates. The IT organization has gone to great lengths to allow the users of these tools to provide feedback so as to improve both operation and acceptance by the Patent Examining Corps.

6. PE2E: Patent Center

Patent Center is being designed to replace Electronic Filing System (EFS), Public and Private PAIR. This improvement will also allow text filing. In essence, it will allow ‘one stop shopping’ for users who in the past have had to enter the various filing tools through different avenues.

7. PE2E: Global Dossier

Global Dossier allows public access to foreign IP offices, as well as allow foreign IP offices to view US filings. This will work to improve patent quality by allowing a user to see foreign prior art.

8. PE2E: CPC Management Tools

This user interface module is aimed to manage CPC, which requires working with the EPO. This program seeks to improve the process of reclassifying of patents, as well as working interactively with the EPO.

9. PE2E: CPC IP Office Collaboration Tools

This user interface is also aimed to collaborate with the EPO. In particular, it is working on classification issues, as well as to recommend future revision products.

10. PE2E: Content Management Systems

This part of the PE2E program aims to combine several databases with the USPTO to one large database. This task will include gathering data from Information File Wrapper (IFW), which has been a slower part of the legacy systems in use.

The work done by the IT organization is essentially a revamping of a system that has run on various pieces last generation (or earlier) hardware, with the software coding for various programs being captive to a particular computer. Moreover, the myriad of databases and antiquated hardware made operation of the system operation very unstable. The new software utilized will have the ability to be used on both present and future computers. All of this will result in a user interface that is easy to use, can be easily expanded, and its stability and responsiveness will aid the examiner in producing a work product that falls under the definition of being a quality patent.

RECOMMENDATIONS:

In regards to Enterprise Services, which is discussed elsewhere in this Annual Report, the USPTO's mission is unique in its needs and functioning. In addition, the mixture of both legacy systems and state of the art processing and software make the Agency an unlikely candidate to benefit from Enterprise Services. The requisite training and familiarization of new programmers and analysts would hinder the USPTO in timely fulfilling its charge. It is recommended that the IT function of Enterprise Services not be implemented.

Over the last several years, the USPTO has invested heavily in the IT functions that are utilized within the USPTO. The PPAC commends this foresight on the part of the USPTO, and sees the delivery and implementation of effective IT components as playing a key role in the USPTO fulfilling its mission. The PPAC recommends that the USPTO continue on the path of IT modernization, realizing that timely delivery and utilization of IT improvements will benefit all members of the IP community.

VIII. FINANCE

A. INTRODUCTION

Although the USPTO is a part of the Department of Commerce within the executive branch of the federal government, it employs a distinct funding model. The USPTO is entirely funded by user fees rather than taxes. By statute, these user fees must not be diverted to other needs. The USPTO has been granted temporary authority to set its own fees. Congress however continues to set the authorized level of spending by the USPTO as part of the federal budget process. Funds that are appropriated but not spent accumulate in the USPTO's Operating Reserve. User fees that are collected in excess of the USPTO's authorized appropriations collect in the Patent and Trademark Reserve Fund and await a congressional reprogramming resolution before returning to the USPTO for use. Further details of the USPTO's funding model were presented at the public PPAC meeting in May 2017.²

B. BUDGET STATUS

In FY 2017, the USPTO's budget was set by three Continuing Resolutions passed on September 28, 2016, December 9, 2016, and April 28, 2017 and the Consolidated Appropriations Act that was passed into law in May 2017. The full year appropriation provided the USPTO the authority to spend \$3.23B of FY 2017 collections, comparable to the FY 2016 appropriated level of \$3.27B. As of the fiscal year end, the USPTO collected \$2.772B in patent fees and earned \$32.7M in other income, translating to an operating reserve balance totaling \$252.9M. The USPTO provided input to the President's Budget for FY 2018 that was released in May. The proposed FY 2018 budget would authorize the agency to spend \$3.18B in budgetary requirements and allow the USPTO to add \$98M in the patent operating reserve.

C. FY 2017 IN REVIEW AND HISTORICAL TRENDS

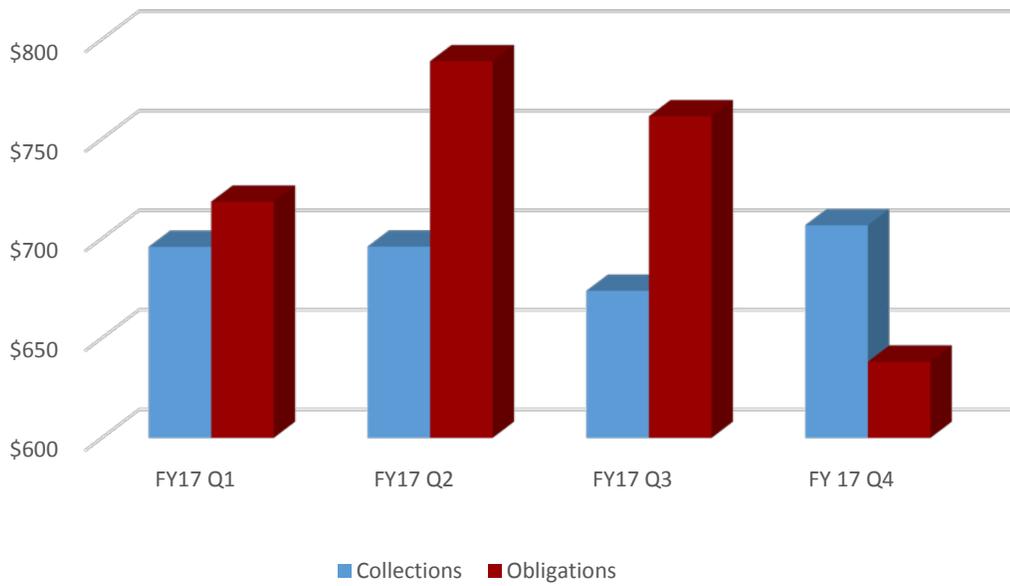
In the FY 2018 President's budget, the USPTO forecasted, for FY 2017, patent fee collections of \$2.852B and patent expenditures of \$2.98B which would have resulted in a year-end operating reserve of \$245M.

Fee collections ended the year largely consistent with forecasts levels, although anticipated fee increases resulting from implementation of the Setting and Adjusting Patent Fees for Setting FY 2017 Final Rule were not realized. As of September 30, 2017 patent fee collections were \$2.772B, representing a 2.8% decrease from the levels forecasted in the FY 2018 President's Budget. For FY 2017, the USPTO spent \$2.907B which is fairly close to what was forecast. This nonetheless represents a 1.4% increase from the levels of FY 2016. The close tracking of expenditures and collections to forecast in FY 2017 speaks well of the USPTO's ability to control expenditures and accurately predict collections in an uncertain environment.

² See https://www.uspto.gov/sites/default/files/documents/20170504_PPAC_Budget_Update.pdf. There is also an explanation of the USPTO's budgeting process at pp. 57-58 of the 2016 PPAC Annual Report

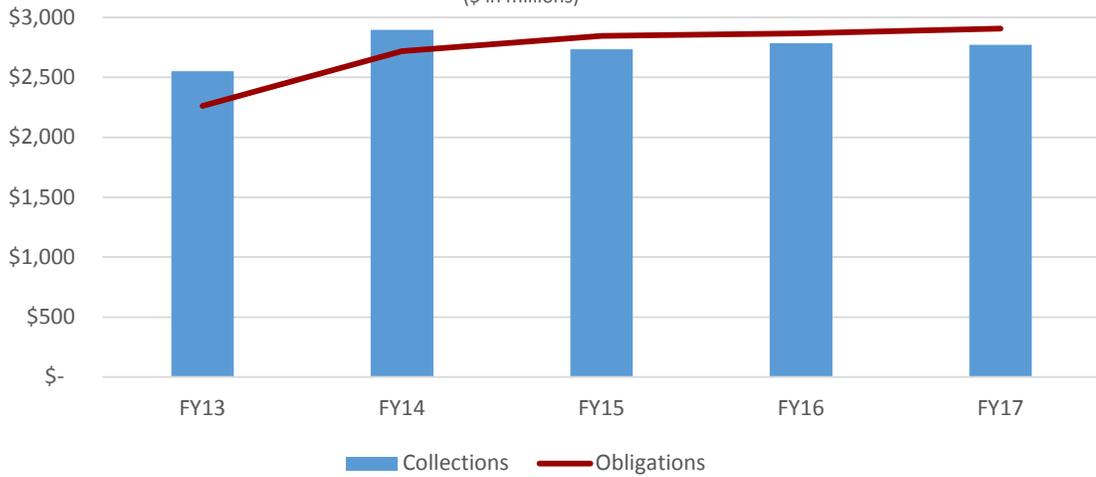
Quarterly Patent Collections and Obligations

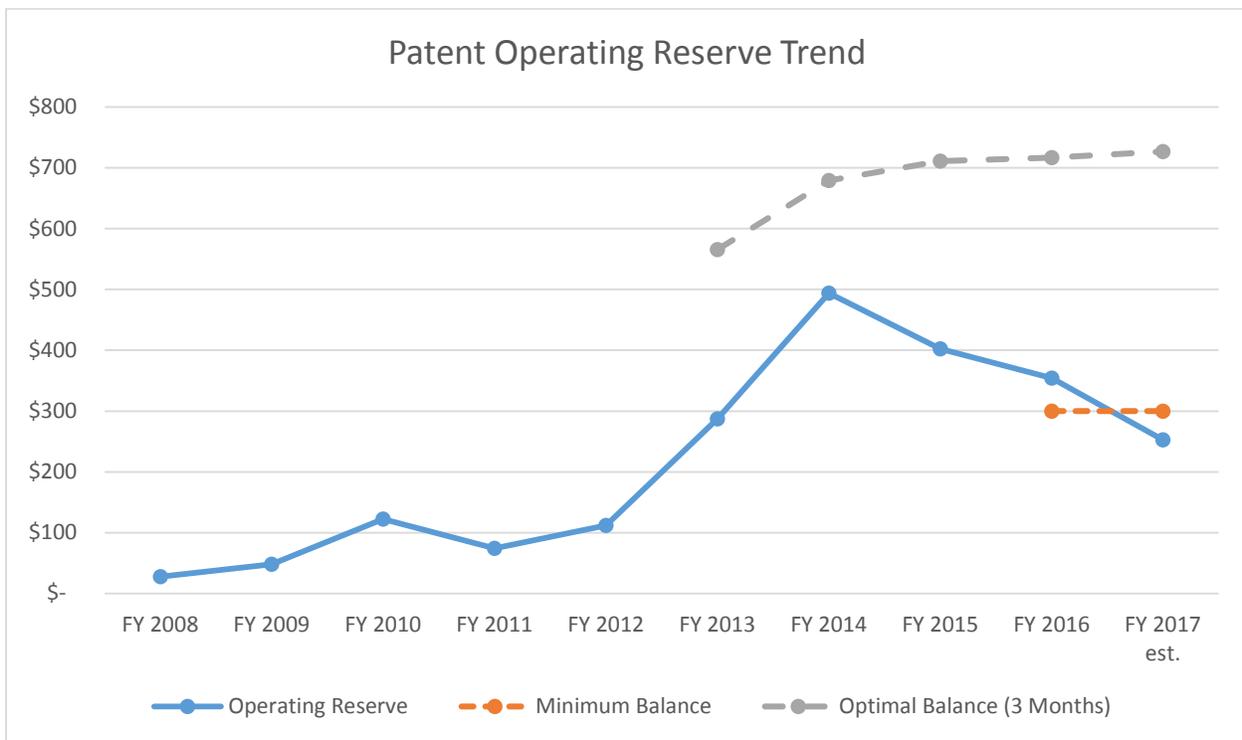
(\$ in millions)



Historical Patent Collections and Obligations

(\$ in millions)





FY 2017 showed continued growth in expenditures, consistent with authorized levels. There was a modest reduction of fee collections. The reduction of fee collections is attributed to slightly lower than expected maintenance fee payments as well as slightly lower than expected serialized patent application filings. The reduction of maintenance fee collections reflects renewal rates that are slightly lower than forecasted, yet viewed by the USPTO as being well within historical renewal rates. Spending continued to exceed collections in FY 2017 and the USPTO continued to draw on the operating reserve. The expenditure level reflects the USPTO’s efforts highlighted elsewhere in this report particularly in its ongoing patent examination operations and continuing investments in IT infrastructure.

The operating reserve dipped from \$354M to \$252.9M thus falling below the minimum level of \$300M that had been previously set for FY 2016 and FY 2017. Over a period of 3 fiscal years, more than \$150M will have been reinvested into USPTO requirements from the operating reserve. Unfortunately, the goal of achieving an optimal operating reserve balance equating to 3 months of expenditures, approximately \$727M seems to be receding for the time being.

RECOMMENDATIONS:

The USPTO's fee setting authority was provided by the AIA of 2011 and will expire in September 2018. Congress should extend this authority so that the USPTO retains its autonomy in setting fees, leveraging its expertise on its own operations and its demonstrated ability to solicit and respond to public input. Congress should also consider reinforcing the Agency's financial autonomy by removing it from the federal budget process entirely and allowing it to set its own expenditure level in alignment with its needs and user fee collections. In any event, Congress and the Administration should continue to recognize the importance of the USPTO's mission and authorize the necessary spending levels in the FY 2018 and FY 2019 budgets.

The USPTO has recognized the gap in funding that is illustrated by the declining operating reserve. The Agency continues to work to prioritize initiatives based on their impact on its goals. The ongoing drawdown of the operating reserve also highlights the necessity of patent fee adjustments which were first proposed by the USPTO in October 2015. After collecting stakeholder community feedback comments through the PPAC, the USPTO refined the patent fee adjustment proposal and published a notice of proposed rulemaking in the Federal Register (Setting and Adjusting Patent Fees During FY 2017, 81 FR 68150 (October 3, 2016)). The thoughtful review and analyses of public comments and the final rule by the USPTO and the Administration has delayed the publication and implementation of proposed patent fee adjustments but the USPTO should move ahead with publishing and implementing the final rule's planned fee adjustments to assure adequate funding of USPTO operations, long-term investment in critical capabilities, and increases in the operating reserve.

The PPAC is also highly concerned about the impact of the DOC Enterprise Services initiative on the USPTO's finances. The PPAC communicated these concerns and others about the initiative in a letter to the Secretary of Commerce on August 24, 2017. Senators Grassley and Coons expressed similar concerns in a letter to the Secretary on July 6, 2017.

From the PPAC's perspective aside from the operational concerns which are raised elsewhere in this Annual Report, the Enterprise Services initiative violates the statutory restrictions on the usage of fee collections. The AIA prescribes that fees may be set or adjusted only to recover the aggregate estimated costs to the Office for processing, activities, services, and materials relating to patents, including administrative costs of the Office with respect to such patent fees.³ Yet it is our understanding that the USPTO has already been assessed start-up fees for Enterprise Services even though there may be no benefit to the agency. The USPTO should only participate in the Enterprise Services initiative if and to the extent that it represents the best combination of costs and benefits (e.g., quality) available to the USPTO for whatever services are procured.

Finally, the PPAC notes with some caution the FY 2017 shortfall in maintenance fees compared to projections. Although the decline in renewal rates is viewed by the USPTO as a return to

³ See Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-29 § 22(3)(A).

historical levels, alternative explanations should continue to be considered and explored. Many factors lead patent owners to forego the expense of renewals including renewal cost, expected value of the patent, and the general legal environment for patent enforcement. Particularly for the third and final maintenance fee, one can imagine that changes in patentable subject matter requirements and the AIA invalidation procedures could be putting downward pressure on renewal rates. Future projections of collections should take into account the possibility of continued depressed renewal rates.

IX. PATENT MANAGEMENT AND ORGANIZATION STRUCTURE

A. PATENT EXAMINER RETENTION

The primary mission of the USPTO is to issue patents and register trademarks. To this end, the Patents Organization must attract and retain a cadre of patent examiners with scientific backgrounds and an ability to work in an independent environment. When examiners leave the USPTO, significant costs are incurred to hire and train new examiners. The ability to retain this sophisticated workforce of professionals is important to the USPTO's financial success and greatly contributes to its ability to expend funds for other purposes, such as enhanced information technology and international outreach.

The Commissioner for Patents and the Chief Administrative Officer have done an outstanding job putting in place programs that retain this workforce. The number of examiners leaving the USPTO for other jobs is at historic lows. The attrition rate through July 2017 is 3.26%. The chart below depicts the attrition rate over the last 16 years.

Fiscal Year	Patents Attrition Rate
2017*	3.26%
2016	4.21%
2015	5.60%
2014	4.11%
2013	4.91%
2012	3.78%
2011	3.36%
2010	4.27%
2009	6.38%
2008	9.54%
2007	9.92%
2006	10.60%
2005	10.08%
2004	8.61%
2003	8.30%
2002	7.04%
2001	8.17%
2000	13.77%

*Through July.

B. PATENT EXAMINER TIME AND ATTENDANCE CONTROLS

In August, 2016, the OIG issued a report OIG-14-0990-I titled "Analysis of Patent Examiners' Time and Attendance." The OIG undertook a review of time and attendance data related to the USPTO workforce. Some have questioned the OIG's methodology and the validity of the

findings in the report. In any event, the OIG found that only approximately 2% of the time reported was not supported by the data. Yet the OIG made 6 recommendations many of which impose new controls on employees. The Inspector General who made these recommendations is no longer at the DOC.

The PPAC recognizes that the USPTO has implemented many, if not most, of the OIG's recommendations, and that more controls were needed regarding examiner time and attendance. For example, the USPTO already has conducted supervisor training and has taken other actions. The PPAC also recognizes that the USPTO has limited, if any, options not to implement an OIG recommendation.

One of the recommendations is that “[t]he USPTO should reinstate the USPTO requirement that employees use their USPTO-issued ID badges to exit the USPTO facilities through the controlled-access turnstiles during weekday working hours.” This requirement had been abolished by then Under Secretary and Director Jonathan Dudas because it was deemed unnecessary and had a negative effect on employee morale. The PPAC notes that the employees at the DOC headquarters are not required to badge out of the building. The PPAC is concerned that this requirement for USPTO employees who work on campus to “badge-out” could negatively affect employee morale, especially since the USPTO employees are being treated less favorably than employees in other agencies.

The PPAC is concerned that although some new controls are warranted, they could have a negative effect on employee morale. In 2013 and 2014, the USPTO was the #1 and #2 best place to work in the Federal Government. The PPAC believes that it is important for the USPTO to retain a dedicated patent examiner workforce that is motivated to conduct a quality examination.

C. MANAGEMENT-UNION RELATIONSHIPS

The PPAC commends the Commissioner for Patents and the Chief Administrative Officer on the management-union relationship. There currently are no formal negotiations with either the Patent Office Professional Association (POPA) or NTEU 243. The reason is that management and the unions have agreed on the terms for management changes without having to resort to the time and expense of conducting formal negotiations. This has saved needed USPTO resources for other activities.

The PPAC notes that the USPTO has been moving toward a more electronic workflow environment and this has reduced the need for clerical staff in the future. The USPTO has taken steps to obtain early retirement authority and has looked for other positions for employees that will no longer be needed in their current positions.

RECOMMENDATIONS:

The PPAC will continue to review the USPTO's implementation of new time and attendance controls. The PPAC commends the collaboration with the unions and focus on finding other positions for the clerical workforce that will not be needed in the future. We emphasize the need for continued management-union collaboration on management changes so that needed improvements can be quickly implemented without the need for protracted formal bargaining.

X. LEGISLATION

A. INTRODUCTION

Congressional efforts to address abusive patent litigation practices with broad-based legislation, supported by Senate Judiciary Committee leadership, which stalled in the 114th Congress (2015-2016), were not revived in the first session of the 115th Congress (2017-2018). However, proposed legislation from Senator Coons, offered as an alternative to the leadership bill, was updated and reintroduced earlier this year. The House also discussed patent issues in two hearings conducted by the House Judiciary Subcommittee on Courts, Intellectual Property and the Internet and are the subject of a bill pending in the Senate Judiciary Committee.

The first hearing addressed the issue of venue for patent infringement cases and the impact of the U.S. Supreme Court's decision in *TC Heartland*. The second hearing focused on the economic impact of low patent quality and to a lesser extent conduct of the USPTO's post-grant review proceedings. Adjustments to venue law and post-grant review proceedings, along with clarification of what constitutes patent-eligible subject matter, are subjects of possible future legislative proposals.

The PPAC believes that any forthcoming legislative action should provide for extension of the USPTO's fee setting authority pursuant to AIA and its authority to conduct test programs pursuant to the Telework Enhancement Act of 2010.

B. CONGRESSIONAL HEARINGS

On July 13, 2017, the House Judiciary Subcommittee on Courts, Intellectual Property and the Internet, held a hearing captioned "The Impact of Bad Patents on American Businesses." Three of the four private sector witnesses testified that abusive litigation practices continue to cause problems for American entrepreneurs and businesses who are trying to play by the rules. They generally agreed that while the provisions of the America Invents Act and recent U.S. Supreme Court decisions have done much to address abusive patent litigation practices, some problems remain. They praised the effectiveness of the USPTO's post-grant review procedures as a means of addressing patent validity issues. While none of the witnesses advocated for any immediate legislative action, one witness, the former Chief Judge of the Federal Circuit, suggested that should Congress decide to act, it may wish to consider clarification of patent subject matter eligibility and venue requirements, as well as refinements to the conduct of the post-grant review proceedings at the USPTO.

On June 13, 2017, the House Judiciary Subcommittee on Courts, Intellectual Property and the Internet, held a hearing captioned "Examining the Supreme Court's *TC Heartland* Decision." The purpose of the hearing was to discuss the anticipated impact of the decision, and whether further legislation may be needed to curb abusive patent litigation practices. Based on statements and questioning, some members of the Subcommittee and most of the private sector witnesses providing testimony believe that additional patent litigation reform may be necessary,

including adjustment of the venue statute with respect to clearly defining what constitutes a “regular and established place of business.” Other reform proposals related to issues including customer and discovery stays, Section 101 subject matter eligibility, and expanding the patent pilot program, a law passed in 2011⁴ addressing the assignment of patent cases in certain U.S. district courts, were also discussed.

On December 7, 2016, the USPTO’s Deputy Director testified before the Government Operations Subcommittee of the House Oversight and Government Reform Committee at a hearing captioned “Time and Attendance Abuse at the U.S. Patent and Trademark Office.” The Deputy Director described the array of programs, tools, training and procedures undertaken by the USPTO to ensure that employees and supervisors have a clear understanding of their responsibilities to accurately report time and attendance information. Since this hearing, the PPAC understands that USPTO/Office of Governmental Affairs staff has updated the committee on the USPTO’s new time and attendance policy and responded to questions for the record related to this policy as well.

C. PENDING LEGISLATION

Senator Coons, along with cosponsors Senators Cotton, Durbin and Hirono introduced S. 1390, the “Support Technology and Research for Our Nation’s Growth and Economic Resilience (STRONGER) Patents Act of 2017” on June 21, 2017. The STRONGER bill is an updated and expanded version of a comparable bill (the “STRONG” Patents Act) that was introduced in the 114th Congress by Senator Coons, which was intended to serve as an alternative to the broad-based patent reform bill (S. 1137) reported by the Senate Judiciary Committee in 2015. The PPAC will monitor any progress of S. 1390 and related discussions on Capitol Hill.

Key provisions of S. 1390 (STRONGER Act) include significant changes to PTAB *Inter Partes* and Post-Grant Review Proceedings (such as requiring use of district court claim construction and burden of proof standards, establishing a standing requirements for IPRs and PGRs and modifying the appeals process), creating a revolving fund for all USPTO fee collections that is not dependent on annual appropriations, and directing the Federal Trade Commission and State Attorneys General to take action against bad faith demand letters. The PPAC received a more comprehensive summary from Governmental Affairs staff at its August 3, 2017 public meeting.

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

⁴ Pub. L. No. 111-349 (January 2011) <https://www.fjc.gov/content/316142/patent-pilot-program-five-year-report>.

Other Issues

The USPTO's IP Attaché Program includes employees positioned in eleven countries around the world who work to promote U.S. Government IP policy internationally, engage with local IP officials, and encourage strong IP protection and enforcement by U.S. trading partners. Senate appropriators, in their most recent FY 2018 Committee report language, expressed concern that USPTO's IP Attachés did not have adequate access to their foreign government counterparts and directed the Departments of State and Commerce to consider increasing the rank of these employees. This proposal has been under discussion for several years and is supported by former Ambassadors, Congress, and industry.

The PPAC shares this concern and supports raising the current mid-level rank of these employees by one level (from First Secretary to that of Counselor) which would give the USPTO's IP Attachés greater access to senior host government officials, to the Ambassadors at their respective embassies, and to senior industry representatives which will allow them to more effectively accomplish their mission.

RECOMMENDATIONS:

The PPAC recommends that the USPTO continue to engage decision makers and other stakeholders to help ensure that any proposed legislative or administrative changes are appropriately crafted and narrowly targeted without adversely affecting the overall patent system. To that end, the USPTO should consider the effect of such changes in terms of balance and fairness to all stakeholders, the efficient operation of the examination process, the quality of patents issued, and the overall costs and burdens to patent owners and other participants in the patent system. The PPAC also recommends that the USPTO stay abreast of potential suggested legislative changes regarding SME (35 U.S.C. § 101).

The USPTO fee setting authority expires in 2018, and the PPAC strongly urges that the USPTO work within the Administration and with Congress to ensure that it continues to retain its fee setting authority beyond the 2018 expiration date, as well as access to all future fee collections, regardless of any government-wide sequestration or other limitation(s).

In addition, as previously noted, the Telework Enhancement Act of 2010 (TEAPP) ends or expires on December 8, 2017. The PPAC strongly recommends that legislative action be taken to extend this program and to continue to support, promote, and expand the Patent Hoteling Program and other telework programs, which permit examiners to work from remote locations. TEAPP has been very successful in attracting and retaining talent, and the loss of this additional tool will not only be disruptive to ongoing USPTO operations, but will have significant negative consequences for the USPTO and its user community.

The PPAC supports elevating the ranks of IP Attachés for the reasons discussed above and further to demonstrate the Administration's commitment to promoting strong intellectual property protection and enforcement throughout the world.

APPENDIX I: LETTER REGARDING THE DEPARTMENT OF COMMERCE'S
ENTERPRISE SERVICES INITIATIVE



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

Voting Committee Members: August 24, 2017

Marylee Jenkins, Chairman
Arent Fox LLP

P. Michael Walker, Vice Chairman
Retired, DuPont

Peter Thurlow
Polsinelli PC

Mark Goodson
Goodson Engineering

Dan Lang
Cisco Systems

Julie Mar-Spindola
Fijian Holdings, Inc.

Jennifer Camacho
Torque Therapeutics

Dernard Knight, Jr.
McDermott Will & Emery

Jeffrey Sears
Columbia University

Non-voting Representatives:

Pamela Schwartz
President
Patent Office Professional
Association (POPA)

Vernon Ako Towler
Vice President
National Treasury Employees
Union (NTEU, Chapter 243)

Catherine Faint
Vice President
National Treasury Employees
Union (NTEU, Chapter 245)

VIA FEDERAL EXPRESS AND E-MAIL

The Honorable Wilbur L. Ross, Jr.
Secretary
United States Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

The Honorable Joseph Matal
Performing the Functions and Duties of the
Under Secretary of Commerce for Intellectual Property
And Director of the United States Patent and Trademark Office
United States Patent and Trademark Office
600 Dulany Street
P.O. Box 1450
Arlington, VA 22313

Dear Secretary Ross and Mr. Matal:

I am writing as Chairperson of the U.S. Patent and Trademark Office's Patent Public Advisory Committee ("PPAC" or "Committee") regarding the Department of Commerce's Enterprise Services initiative (the "Initiative"). The PPAC unanimously urges the Department of Commerce to exempt the U.S. Patent and Trademark Office ("USPTO") from mandatory participation in this Initiative, including any payments for start-up costs. The Committee believes that the U.S. patent and trademark systems and thereby American innovation and the economy will be harmed, if the USPTO is required to participate in this Initiative. We note that the major

intellectual property bar associations and trade organizations have expressed similar concerns in separate letters to the prior Secretary of Commerce.

As you know, the PPAC was formed by Congress to represent the diverse interests of the patent community and the users of the USPTO's patent services. The Committee members represent the interests of all users, including small businesses, independent inventors, large companies, academia, and nonprofit organizations. As such, our views represent the collective needs and expectations of America's innovation community and we speak out on their behalf.

We understand that the Initiative would transfer certain information technology, human resources, and procurement functions from the USPTO to Enterprise Services. The PPAC's concerns are as follows:

- Unlike other Department bureaus, the information technology services handled by the USPTO's Chief Information Officer must meet the needs of a complex patent system, including protecting the legal rights of patent applicants and patent owners. Particularly, these systems must meet the unique needs of the patent examiners in searching and examining numerous technologies as well as protecting the legal and confidential rights of applicants before their inventions are made public. Further, the USPTO's Patent Trial and Appeal Board ("Board") is an administrative tribunal with its own unique information technology demands. The user community expects that these various and unique systems will be robust, reliable, secure, and responsive to their needs and subject to timely management response, when required, by the USPTO Director. It cannot be disputed that the USPTO is the repository of some of the nation's most proprietary and economically competitive information that must be managed efficiently, processed quickly, and secured effectually in its IT operations. Such can only be accomplished by the Examining Corps and the Board having state-of-the-art technologies and tools and installing a highly specialized team of IT professionals focused - first and foremost - on meeting the USPTO's singular objective of issuing high quality, enforceable IP assets to IP stakeholders. Simply stated, because the success of the USPTO is paramount to the success of our nation's economic health and security, implementing general Enterprise Services on the USPTO would be unwise. As such, the PPAC strongly believes that all USPTO IT management should remain exclusively with the USPTO.
- Human resources is another area where the USPTO has specialized and unique requirements upon which the patent system depends. Patent examiners must meet certain technological requirements that are best understood and assessed by USPTO officials with intimate knowledge of, not only the needs of the USPTO, but also specific technological subject matter expertise in more than 500 art units. Moreover, in order to achieve patent pendency and quality goals, hiring needs are often adjusted and the USPTO is in the best position to manage its work force to make certain that these goals are met in a timely and efficient manner. The Board is also a unique agency tribunal with its own human resources' demands and hiring needs. The Board judges must understand patent law and procedure as well as have scientific backgrounds. These

highly specialized jobs are not at all like those in other bureaus. The PPAC is concerned that any general Enterprise Services under the Initiative will not be able to fully understand the unique aspects of each of these positions and be responsive - in real time - to the needs of the Commissioner for Patents and the Board.

- The USPTO has unique procurement authorities. Unlike other Department bureaus, the USPTO is not subject to the Federal Acquisition Regulation. Instead, the USPTO has developed the USPTO's Patent and Trademark Acquisition Guidelines to conduct acquisitions in an efficient and innovative manner, including using performance based contracts, contracting for commercial items, reverse auctioning, and oral proposals. The PPAC believes that the USPTO is in the best position to exercise these unique authorities in a manner that saves the user fees of the patent system.
- The Initiative will divert user fees and abrogate the USPTO Director's independent control of management and administrative functions. It is our understanding that the start-up fees for the Initiative are being assessed, even though the USPTO may have no need for such services. This results in an unnecessary and harmful diversion of needed fees and is contrary to the Leahy-Smith America Invents Act, which requires that all fees collected by the USPTO be used exclusively for the expenses of the USPTO. See Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-29 § 22(3)(A). By statute, the USPTO Director is vested with "independent control of ... personnel decisions and processes, procurements, and other administrative and management functions. . . ." 35 U.S.C. § 1. The Initiative violates the letter and spirit of these statutes. Indeed, the PPAC questions whether the USPTO may legally even participate in this Initiative.

The PPAC thus has significant concerns that the Initiative will dilute the current level of service being provided by the USPTO to the patent user communities. A failure of a critical IT system, or a decrease in the quality of newly hired patent examiners or Board judges, are examples of the significant risks that this Initiative poses to the settled expectations and varying needs of the user community, who demands quality and timely examination and review of their patent rights. Our immediate concern is that this Initiative will harm American innovation and the economy and the jobs that they create. The PPAC recommends that the USPTO not be required to expend user fees for so-called start-up costs and that the USPTO only be required to participate in the Initiative to the extent that it seeks to purchase commercial items that Enterprise Services can offer at a lower cost and on a more timely basis.

We thank you in advance for considering these comments.

Sincerely,



Marylee Jenkins
Patent Public Advisory Committee
U.S. Patent and Trademark Office



MARYLEE JENKINS, CHAIRPERSON

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



P. MICHAEL WALKER, VICE CHAIRPERSON

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



PETER THURLOW

Mr. Thurlow is a patent attorney and partner at Polsinelli law firm in New York. He has significant experience in all aspects of domestic and international patent prosecution, including Patent Trial and Appeal Board (PTAB), reissue and reexamination proceedings. As a patent prosecution attorney, his experience includes drafting, filing, and prosecuting United States patent cooperation treaties and international patent applications. Mr. Thurlow provides litigation support for patent litigation in the District Courts, the International Trade Commission, and before the U.S. Court of Appeals for the Federal Circuit. Mr. Thurlow is the current Second Vice President for the New York Intellectual Property Law Association (NYIPLA). Mr. Thurlow has been active in the implementation of the America Invents Act (AIA), representing the NYIPLA's views before the USPTO. Mr. Thurlow received his bachelor's degree in marine engineering from the United States Merchant Marine Academy; his master's in business administration from Pace University in New York; and his law degree from Brooklyn Law School. Mr. Thurlow is serving his second term as a PPAC member.



MARK GOODSON

Mr. Goodson is the founder and principal engineer of Goodson Engineering in Denton, Texas, where he leads a team of professional engineers with specialties in electrical, mechanical, fire protection, and forensic engineering. Mr. Goodson is a consultant for public sector agencies, as well as commercial and industrial concerns. He is experienced in electrical death and injury analysis, CO death analysis, and mechanical and electrical fire causation. He has authored more than 40 professional articles. He was the first engineer to serve on the State of Texas Electrical Board. Mr. Goodson served as a Court Special Master from 1989-1991. He was recently named editor of the new journal JFire. He is the engineer serving on the Texas Fire Marshal's Science Advisory Workgroup, where fire-related criminal convictions are being reviewed for veracity of scientific evidence. In 2014, Mr. Goodson was appointed to the US Dept. of Commerce NIST panel on forensic sciences (NIST – OSAC). In 2015, UL named him as the electrical engineer serving on the Nat. Inst. of Justice research team on fire forensics. He has testified in excess of 450 instances as an expert witness. Mr. Goodson holds a BSEE from Texas A&M, and attended UT Southwestern where he studied forensic medicine. He is a licensed engineer in 14 states. Mr. Goodson is an independent inventor, holds eleven patents and has twenty 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.



JULIE MAR-SPINOLA

Julie Mar-Spinola is Finjan Holdings, Inc.'s Chief Intellectual Property Officer and Vice President of Legal Operations. Ms. Mar-Spinola oversees the Company's revenue-based and legal operations, including the Company's IP and cyber technology innovations, enforcement programs, best practices, public policy initiatives, and mentorships. Ms. Mar-Spinola is also a member of the Board of Directors for product subsidiary, Finjan Mobile, Inc.

Ms. Mar-Spinola has dedicated nearly 30 years of her career in intellectual property law, with emphasis on patents, technology, and policy. She has successfully represented high technology companies of all sizes and business models, including individual inventors, with significant knowledge and experience in all things patents, including litigation, M&A's, IP portfolio development, acquisition, divestitures, and licensing, as well as preservation and monetization of proprietary technologies and patents. Ms. Mar-Spinola has served as General Counsel or VP of Legal for several Silicon Valley companies, including Kleiner Perkins-backed thin-film solar start-up, Alta Devices, Inc.

Ms. Mar-Spinola is a co-founder of ChIPs Network, Inc. (ChIPs), a global 501(c)(3) non-profit corporation dedicated to advancing women at the confluence of law, technology, and regulatory policy. Now Board Chair Emeritus, she served as ChIPs' Chair from 2005 to 2016 and is currently the President of Diversity and Inclusion. Since 2011, Ms. Mar-Spinola serves as a court-appointed Mediator specializing in complex patent disputes, for the US District Court for the Northern District of California. In 2014, she joined the High Tech Advisory Board at her Alma Mater, Santa Clara University School of Law. In 2015, Ms. Mar-Spinola was appointed by the then Secretary of Commerce to serve on the prestigious Patent Public Advisory Committees (PPAC), which reviews the policies, goals, performance, budget, and user fees of the United States Patent and Trademark Office (USPTO) operations and advises the USPTO Director on

these matters. Most recently, Ms. Mar-Spinola was named A Women of Influence 2016 by the Silicon Valley Business Journal, and the 2017 Recipient of Santa Clara University School of Law's Special Achievement Award. She is a member of the California State Bar and a licensed Patent Attorney.



JENNIFER CAMACHO

Ms. Camacho is the Chief Legal Officer for Torque Therapeutics, an immunotherapeutics company. She is responsible for all aspects of the company's legal affairs and intellectual property. Before joining Torque Therapeutics, she was the Chief Legal Counsel for Gen9, Inc. from 2014 until its acquisition by Ginkgo Bioworks, Inc. in January 2017. Previously, Ms. Camacho was a partner in the international law firms of Proskauer Rose, LLP and Greenberg Traurig, LLP where she represented multiple clients in the life sciences industry, including biotechnology and synthetic biology

companies, pharmaceutical and medtech companies, investment banks, venture capital firms, and other industry stakeholders. Ms. Camacho has been recognized for her work in the fields of intellectual property and life sciences law and has multiple awards and honors, including the Tech Luminary and Innovation All-Star Award from Boston Business Journal and Mass High Tech. She received her bachelor's degree in Cell and Structural Biology from the University of Illinois, and her law degree from Boston College Law School. Ms. Camacho is currently serving her first term as a PPAC member.



JEFFREY SEARS

Mr. Sears is Associate General Counsel and Chief Patent Counsel for Columbia University. His practice encompasses all aspects of patent law, including prosecution, strategic counseling, licensing and post-licensing compliance, litigation, and legislative, regulatory, and policy matters. Mr. Sears manages the university's global patent portfolio and works closely with faculty inventors, technology transfer officers, and executive leadership on commercialization activities. Mr. Sears is also an Adjunct Professor at Columbia's School of Engineering and Applied Science, where he co-teaches

Intellectual Property for Entrepreneurs and Managers. He holds an S.B. in physics from MIT, an M.A. and Ph.D. in physics from SUNY Stony Brook, and a J.D. from NYU. Mr. Sears is serving his first term as a PPAC member.



BERNARD J. KNIGHT, JR.

Mr. Knight is a partner at McDermott Will & Emery. His practice focuses on complex patent litigation, including, patent, trademark and copyright issues. He has advised on intellectual property cases before the United States Supreme Court and provided oversight on patent and trademark cases before numerous Federal courts. Mr. Knight served as General Counsel at the USPTO from 2010 to 2013. Additionally, he served as Acting General Counsel of the U.S. Department of Treasury leading the Treasury legal team during the Administration’s financial markets crisis response efforts, and as Deputy General Counsel at the USPTO from 2001 to 2006. Mr. Knight has also been granted recognition by the USPTO to appear as counsel in inter partes proceedings before the Patent Trial and Appeal Board. As a result of his accomplishments, Mr. Knight was recently named an “Intellectual Property Trailblazer” by the National Law Journal. Mr. Knight is serving his first term as a PPAC member.



United States Patent and Trademark Office



Patent Public Advisory Committee Annual Report

ppac@uspto.gov